Final Statewide Programmatic GRIZZLY BEAR (*Ursus arctos*) Biological Assessment

United States Department of Interior

Wyoming State Office

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ACRONYMS AND ABBREVIATIONS

ACEC	Area of Critical Environmental Concern
ACHP	Advisory Council on Historic Preservation
APD	Application for Permit to Drill
AMP	Allotment Management Plan
AUM	Animal Unit Month
BA	Biological Assessment
BLM	Bureau of Land Management
BMP	Best Management Practice
BOR	Bureau of Reclamation
CBM	Coal Bed Methane
CFR	Code of Federal Regulations
C&MU	Classification and Multiple Use
DEQ	Department of Environmental Quality
DPS	Distinct Population Segment
DPC	Desired Plant Communities
EA	Environmental Assessment
EIS	Environmental Impact Statement
EPA	U.S. Environmental Protection Agency
ERMA	Extensive Recreation Management Area
ESA	Endangered Species Act
FEIS	Final Environmental Impact Statement
FLPMA	Federal Land Policy and Management Act
FO	Field Office
GML	General Mining Law
GTNP	Grand Teton National Park
GYA	Greater Yellowstone Area
HMP	Habitat Management Plan
HMU	Habitat Management Unit
IMP	Interim Management Policy
MMBF	Million Board Feet
NEPA	National Environmental Policy Act
NPS	National Park Service
NRHP	National Register of Historic Places
NSO	No Surface Occupancy
NWSRS	National Wild and Scenic River Suitability
OHV	Off-Highway Vehicle
OMARD	Open Motorized Access Route Density
ORV	Off-Road Vehicle
PCA	Primary Conservation Area
PLO	Public Land Order
PSD	Prevention of Significant Deterioration
RAMP	Recreation Area Management Plan
RMP	Resource Management Plan
ROW	Right of way
R&PP	Recreation and Public Purpose
RPS	Rangeland Program Summary
SHPO	State Historic Preservation Office
SRMA	Special Recreation Management Area

SRP	Special Recreation Permit
T&E	Threatened and Endangered
TMARD	Total Motorized Access Route Density
USDA	U.S. Department of Agriculture
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VRM	Visual Resource Management
WDEQ	Wyoming Department of Environmental Quality
WGFD	Wyoming Game and Fish Department
WHHMA	Wild Horse Herd Management Area
WSA	Wilderness Study Area
WSR	Wild and Scenic Rivers
WY	Wyoming
WYNDD	Wyoming Natural Diversity Database
YNP	Yellowstone National Park

1.0 INTRODUCTION

PURPOSE

The purpose of this programmatic biological assessment (BA) is to assess the potential effects to the grizzly bear (*Ursus arctos horribilis*) from management actions included in 6 Resource Management Plans (RMPs) of the Wyoming Bureau of Land Management (BLM). Specific objectives of this biological assessment include the following:

- Summarize the biology of the grizzly bear, including distribution in Wyoming;
- Review pertinent RMPs and identify proposed actions with the potential to affect the grizzly bear;
- Assess the potential effects of management actions proposed in the RMPS on the grizzly bear; and
- Prepare an effects determination for the grizzly bear for each management action in each RMP.

The analysis area for each management action is based on the boundaries specified in the individual RMPs for the field office (FO). These boundaries are described in the analysis section for each RMP and shown in **Maps 1** and **3 - 6**. The determination for each management action is based on the nature of that action and on the available grizzly bear data for the area that is affected by the management action.

REPORT ORGANIZATION

This report is organized into four sections, including the following:

1.0 Introduction – describes the purpose of the analysis, the scope of the biological assessment, the action area, and the methods.

2.0 Species Information – summarizes the current listing status, and the ecology, abundance, distribution, and threats to the grizzly bear in Wyoming.

3.0 Analysis of Resource Management Plans – presents a summary of all the management actions at the front of the chapter, thus eliminating the need to repeat this information in the discussion of each FO; existing impact minimization measures; for each FO, a list of Existing Impact Minimization Measures, an analysis of effects from each of the management prescriptions, and a determination specific to each management action for each RMP.

4.0 Conservation Strategies – provides a list of binding Conservation Measures and non-binding Best Management Practices.

METHODS

Each management action within 6 RMPs (**Table 1)** was reviewed to identify those with the potential to affect the grizzly bear. For the Snake River Resource Area of the Pinedale Field Office (FO), the Biological Opinion (BO) for the RMP was reviewed. There is no grizzly bear habitat in those lands managed under the Snake River RMP, so no further analysis will be conducted. Each of the BLM FOs

was contacted in regard to available occurrence and habitat data for the grizzly bear. Grizzly bear distribution was obtained as shapefiles from Mark Haroldson of the U.S. Geological Survey and Interagency Grizzly Bear Study Team (Schwartz et al. 2002). For the purposes of this document, occupied grizzly bear habitat is defined as the areas within the distribution maps adapted from Schwartz et al. (2002). However, this distribution will change in time as grizzly bears expand to areas not presently occupied. Grizzly bear information was evaluated and potential effects from the management actions were analyzed. Management actions were evaluated in terms of their potential to directly and indirectly affect the grizzly bear. Because of the variability of the expanding habitat for grizzly bears, habitat delineation is complex and difficult to define on a map. Grizzly bears are generalists and their habitat use areas range from lowland grasslands and sagebrush to alpine tundra within Wyoming. As a consequence, the effects determinations (explained below) will vary by specific RMP (Field Office). State, private, local, and tribal activities were also evaluated to assess their potential to cumulatively affect the grizzly bear.

TABLE 1 RMPS ANALYZED IN GRIZZLY BEAR BIOLOGICAL ASSESSMENT

Field Office	***Resource Management Plan (Year Published)***
Cody	Cody Resource Area Resource Management Plan (1990)
Kemmerer	Kemmerer Resource Management Plan (1986)
Lander	Lander Resource Management Plan (1987a)
Pinedale	Pinedale Resource Management Plan (1988)
Rock Springs	Green River Resource Management Plan (1997)
Worland	Grass Creek Resource Management Plan (1998)

After potential effects were identified, the results were used to establish a determination for each management action under each RMP. Determination categories considered as part of this BA include the following:

- **No effect**;
- May affect, but is **not likely to adversely affect** due to:
    - Beneficial effects,
    - Discountable effects, and/or
    - Insignificant effects; or
- May affect, **is likely to adversely affect**.

These determinations are further defined in the U.S. Fish and Wildlife Service (USFWS) Endangered Species Consultation Handbook (USFWS 1998), as summarized in the following text.

“No effect” means there are absolutely no effects to the species and its critical habitat, either positive or negative. A “no effect” determination does not include small effects or effects that are unlikely to occur. If effects are insignificant (in size) or discountable (extremely unlikely), a determination of “not likely to adversely affect” is appropriate.

“Not likely to adversely affect” means that all effects to the species and its critical habitat are beneficial, insignificant, or discountable. Beneficial effects have contemporaneous positive effects without adverse

effects to the species or its critical habitat. (For example, there cannot be “balancing,” where the benefits of the action would outweigh the adverse effects.) Insignificant effects relate to the size of the impact and should not reach the scale where take occurs. Discountable effects are extremely unlikely to occur. Based on best judgment, a person would not: (1) be able to meaningfully measure, detect, or evaluate insignificant effects; or (2) expect discountable effects to occur (USFWS 1998). Determinations of “not likely to adversely affect, due to beneficial, insignificant, or discountable effects” require written concurrence from the USFWS.

“Likely to adversely affect” means that the action would have an adverse effect on the species or its critical habitat. Any action that would result in take of an endangered species is considered an adverse effect. A combination of beneficial and adverse effects is still considered “likely to adversely affect,” even if the net effect is neutral or positive. Adverse effects are not considered discountable because they are expected occur. The probability of occurrence must be extremely small to qualify as discountable effects. Likewise, an effect that can be detected in any way or that can be meaningfully articulated in a discussion of analysis results is not insignificant: it is an adverse affect. This determination requires formal consultation with the USFWS.

2.0 SPECIES INFORMATION

LISTING STATUS

The grizzly bear was listed as threatened in the lower 48 States under the Endangered Species Act by the U.S. Fish and Wildlife Service in 1975 (Fed. Reg. 40:145, 31734-31736). A "threatened" species is likely to become "endangered" in the foreseeable future throughout all or a significant portion of its range. An "endangered" species is a species whose numbers are so few or declining so quickly that it may soon become extinct. As a threatened species, grizzly bears are protected wherever they occur in the lower 48 States. In addition, federal and state agencies are required to consult with the Fish and Wildlife service on any actions that may affect the species. The federal designation supersedes all other classifications.

The grizzly bear Recovery Plan (USFWS 1993) outlines the conditions required for grizzly bears to reach recovery, and establishes several demographic (population) recovery targets that must be achieved for a recovered grizzly bear population. Recovery targets are currently being met. The Interagency Grizzly Bear Committee produced a Final Conservation Strategy for the Grizzly Bear in the Yellowstone Ecosystem (ICST 2003) that defines the Primary Conservation Area (PCA), formerly the Recovery Zone, and outlines a cooperative management strategy to be implemented by state and federal agencies upon delisting of this population of grizzly bears; this plan is a necessary precursor to delisting. The PCA encompasses 9,200 square miles in southeast Idaho, southwest Montana, and northwest Wyoming. The National Park Service (NPS) and the U.S. Forest Service (USFS) manage the majority of lands within the PCA.

The Wyoming Grizzly Bear Management Plan (Moody et al. 2002) was adopted by the Wyoming Game and Fish Commission February 22, 2002. It is in consensus with the Conservation Strategy, and provides management plans for areas outside the PCA to:

- Ensure the long-term viability of grizzly bears and preclude re-listing;
- Support expansion of grizzly bears beyond the PCA, in areas that are biologically suitable and socially acceptable; and
- Manage grizzly bears as a trophy game animal – including allowing regulated hunting when and where appropriate.

Subsequently, and in response to concerns by segments of the public that the original plan included significant amounts of private property where social tolerance for bear occupancy is low, an addendum management proposal was issued (Moody and Anderson 2004) which, once approved, would will be appended to the Wyoming Management Plan and the Conservation Strategy.

DESCRIPTION

The grizzly bear is large and powerful with a massive head, prominent nose, small rounded ears, small eyes, and short tail (Pasitschniak-Arts 1993). The species is recognized in the field by its dished facial profile; prominent shoulder hump; and long, slender, slightly recurved foreclaws twice the length of the hind claws (Pasitschniak-Arts 1993, Wilson and Ruff 1999). Dorsal guard hairs of some individuals from western North America are variegated and show a silver tipped or grizzled appearance, hence the name grizzly. In North America, pelage color varies from nearly yellow to black and may be any shade of brown (Kays and Wilson 2002, Wilson and Ruff 1999).

HABITAT USE

Grizzly bears occupy a variety of habitats throughout their range. They are highly adaptable and are capable of exploiting different landscapes given their omnivorous generalist lifestyle and intelligence. This indication is further reinforced by the wide range of habitats utilized by any one population.

Occupied grizzly bear habitat in the lower 48 States is characterized by extensive forest cover often interspersed with grasslands and meadows; in Wyoming these habitats are generally above 1,500 m Schwartz et al. 2002). Though grizzly bears do not intrinsically require such cover, populations living near developed areas may require the isolation provided by forest cover. Home ranges must encompass a complex of habitat types because the animals move among these habitats seasonally to take advantage of various food items as they become available. In addition, home ranges must include sites suitable for hibernation. Denning sites are most commonly located in the subalpine fir stands on north-facing exposures (Craighead et al. 1995).

The general pattern of seasonal habitat use in Yellowstone National Park (YNP) followed plant phenology (Mealy 1977). Prior to the growing season, grizzly bears congregated on ruminant wintering grounds. As succulent herbaceous material became available, bears concentrated activity at feeding sites in open areas near cover. After the growing season, bears moved to moist sites where succulent grasses and forbs remained available. As valley vegetation desiccated, bears moved to the lodgepole pine forests to exploit late season foods such as whitebark pine seeds, berries, mushrooms (*Russula* spp.), and smilacina rhizomes.

Estimated mean home ranges of males and females in the Greater Yellowstone Area (GYA) are 874 square km and 281 square km, respectively (Schwartz et al. 2002). It is interesting to note that the 23,300 square km area available to Yellowstone grizzly bears is roughly six times the size of the average male lifetime home range and 26 times the size of the average female lifetime range (Mattson and Reid 1991).

In addition, Yellowstone grizzly bear habitat is characterized by sporadic and widely fluctuating food production primarily controlled by weather. As a result, the natural carrying capacity of the overall habitat fluctuates (Picton et al. 1985). During years of low productivity, bears compensate by using a larger area. Mortality is also higher during these periods and fecundity decreases.

Diet

Grizzly bears in the GYA utilize a variety of foods including whitebark pine seeds, army cutworm moths, ants, earthworms, rodents, spawning cutthroat trout (*Oncorhynchus clarki*), ungulates (winter-killed or weakened animals, young in the spring and summer, bull elk weakened by the rut in the fall, and wolf kills), gut piles of hunter killed elk and moose, fungal sporocarps, horsetails (*Equisetum arvense*), graminoids, forbs, berries, roots (especially roots of the biscuitroot) and anthropogenic foods such as garbage, pet food, and livestock (Kendall 1980, Mace et al. 1997, Mattson 2001, Mattson et al. 1991a, Mattson et al. 1991b, Mattson et al. 2002a, Mattson et al. 2002b, Mattson and Reinhardt 1995, Mattson and Reinhardt 1997, Schwartz et al. 2003). Of these items, ungulates and whitebark pine seeds appear to be the two most important foods for Yellowstone grizzly bears, followed by army cutworm moths and spawning cutthroat trout (Mattson et al. 1991a, Mattson et al. 1991b, Mattson et al. 1992).

Ungulate meat is a major food source for Yellowstone grizzly bears especially in spring when pine seeds and herbaceous biomass are often unavailable. Mattson et al. (1991a) found that ungulate remains constituted a major portion (nearly one half) of early-season scats. Though in some years grizzly bears may ignore this food source in favor of an unusually good crop of some preferred plant, in other years

grizzly bear survival may depend largely on this spring use of ungulates. On average, ungulate meat comprises nearly half of the annual energy intake for adult females and more than half for adult males (Reinhardt et al. 2001).

Whitebark pine seeds are critical to the Yellowstone grizzly bear where they occur within occupied range. These seeds are particularly important because of their high fat content and potential abundance during pre-hibernation hyperphagia. Grizzly bears feed on whitebark pine seeds almost exclusively when available. In fact, use of this food item can have a significant influence on fecundity; female grizzly bears who use whitebark pine seeds extensively reproduce at an earlier age, produce litters more frequently, and produce more three-cub litters than females who do not utilize this food item (Reinhardt et al. 2001). Seeds are acquired primarily by extraction from whitebark pine cones excavated from red squirrel (*Tamiasciurus hudsonicus*) middens. Unfortunately whitebark pine has been eliminated or significantly reduced over some of its former range by an exotic fungus, white pine blister rust (*Cronartium ribicola*) (Schwartz et al. 2003). Though most stands in the GYA persist, white pine blister rust is present and appears to be spreading. Pine beetles have been a source of whitebark mortality as well and may be a more significant factor than blister rust.

The grizzly bear diet varies seasonally and yearly depending on the availability of high-quality foods. When preferred foods are not available, grizzly bears will shift to eating lower quality foods. For instance, grizzly bears consume ants more heavily during years when known high-quality foods are scarce. Ants generally are not an important source of energy for Yellowstone grizzly bears (averaging <5% of fecal volume at peak consumption) but are likely to become a more important food as currently important foods decline because of disease and regional climate warming. Army cutworm moths are also an important food item for some grizzly bears during July and August.

Foraging Areas

Foraging areas for grizzly bears are comprised of a mosaic landscape containing the different seasonal foods. These areas include elk wintering grounds, calving areas, tributaries of Yellowstone Lake for trout, and whitebark pine forests inhabited by red squirrels. Lush meadows with sedges and equisetum, and areas of shrubs for berries are important. For ants, grizzly bears tend to select large ants nested in logs, mostly at low elevations or on southerly aspects where there are abundant, large-diameter, well-decomposed woody debris under an open forest canopy. Grizzly bears feeding on army cutworm moths in the Shoshone National Forest are most often observed feeding on aggregated moths at elevations above 3350 m on or near alpine talus with slopes greater than 30 degrees and south and west facing aspects.

Denning Sites

In North America, grizzly bear dens may be located in treeless alpine areas, the forest-alpine ecotone, or forest, depending on availability. Grizzly bears select den sites with stable snow conditions for the duration of time required. Stable snow conditions are most often present at middle elevations where slope and aspect offer protection from prevailing wind and sun exposure (Linnell at al. 2000). These requirements generally result in avoidance of valley bottoms and high peaks for den site selection. The typical den documented for grizzly bears in North America is excavated under trees where root systems provide stability for the roof. Such dens are rarely reused. Natural cavities on the other hand are reused with varying frequency. Successive excavated dens for individual bears tend to be within the same region, roughly 1.7-8.8 km apart (Linnell et al. 2000). Females show greater den-area fidelity than males. Grizzly bears likely use the most suitable denning habitat within their home range but local tradition may play a role in site selection and den construction. Den grouping may occur because of restricted availability of suitable denning habitat or learning of, and returning, to suitable sites through experience.

The most frequently used denning habitat in the GYA is located in subalpine fir forest (Craighead et al. 1995). Dens examined by Craighead and Craighead (1972) were commonly dug in timbered, secluded areas away from development and human activity. All dens, but one, were located on northern slopes with the den entrance facing north. The prevailing southwest winds in the Yellowstone area force accumulation of snow on northern exposures. This deep snow insulates the chamber and reduces the risk of snow melt in the event of a Chinook wind. Natural shelters were not utilized as dens though matted windfalls and rock caves were available. Seven of 11 dens were dug at the base of trees with large downward and outward sloping roots, three were situated at the base of stumps or with entrances beneath horizontal logs, only one den was located in open habitat. Mean elevation of den sites was 2,696 m for females that emerged from dens with cubs, and 2581 m for other females and males (Haroldson et al. 2002).

Movement

Movement and activity patterns are influenced by a number of factors including weather, key food items, breeding, reproductive status, security, and human disturbance, and therefore can be extremely variable within and among populations of grizzly bears.

Grizzly bears engage in five kinds of movements: movement to an abundant or preferred food source, localized movement, intensive feeding prior to denning, movement to a den site (Servheen 1987), and natal dispersal. Rates of movement are moderate when averaged per day. For example, the average rate of movement for male grizzly bears in the Greater Yellowstone Area (GYA) is only 4 km/day. Grizzly bears living in one geographic area tend to remain in the same general area throughout the active seasons and typically have smaller annual rates of movement. Individuals living in home ranges comprised of two geographic units separated by a corridor typically shift ranges with the food seasons, traveling more often and significantly greater distances. Movement to an abundant or preferred food source, particularly fall food sources, and movement to a den site are typically abrupt and rapid. Craighead et al. (1995) observed a number of bears with summer ranges in Hayden Valley, YNP, and fall ranges and wintering sites outside the park. Some of these bears moved 40-60 air km between sites; others moved significantly farther. Duration of such treks is usually several hours to a few days.

Intensive feeding occurs in autumn prior to denning. Grizzly bears spend one to three weeks near the den site before entering winter dormancy. In the years of their investigation, all or most grizzly bears observed by Craighead and Craighead (1972) entered dens to hibernate simultaneously four to five hours before a snowstorm. Haroldson et al. (2002) found no weather pattern association; rather, they found that the mean week of den entry of female grizzly bears in the GYA was the first week in November and ranged from the fourth week in September to the third week in December. Mean den entry for males was the second week in November and ranged from the second week in October to the second week in December. Mean den emergence among females was the third week of April and ranged from the third week in March to the fourth week in May. Females who emerged from dens with cubs typically denned longer than other sex and age classes. Mean den emergence among males was the fourth week in March and ranged from the first week in February to the fourth week in May. Following emergence females with cubs restricted their movements to within 3 km of den sites until late May. All other bears likely moved to snow-free elevations soon after emergence.

Natal dispersal of weaned male offspring is common. In the GYA, subadult males are known to disperse 45-105 km through “relatively friendly” habitat, moving on average 70 air km away from the maternal range (Blanchard and Knight 1991). Females, on the other hand, generally exhibit natal philopatry and establish a home range that overlaps somewhat with the maternal range and includes habitat never used by the mother. Though grizzly bears exhibit home range fidelity, adults, especially males, are known to

wander beyond and occasionally abandon home ranges. These behaviors are more common when important food items are scarce.

Roads may function as significant behavioral and/or structural barriers to dispersal. Such barriers are the product of behavioral responses of individual bears to certain human altered habitats. However, a certain behavioral barrier for one individual bear is not necessarily a barrier to all or even most other individuals.

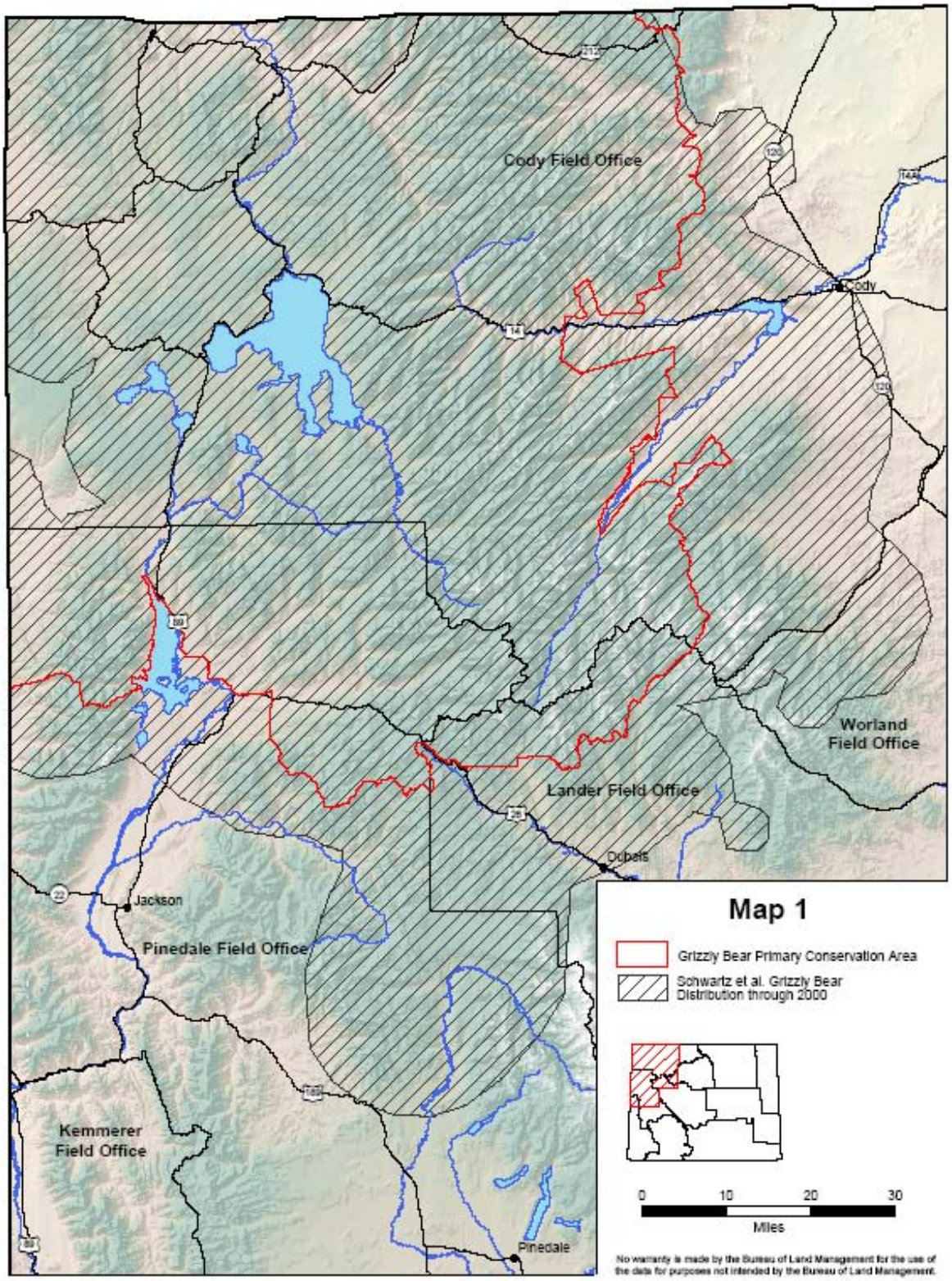
DISTRIBUTION

The range of grizzly bears in North America before European settlement extended south from Alaska to northern Mexico and east from the Pacific coast to the Canadian Prairies and U.S. Great Plains west of the Mississippi River (Hall and Kelson 1959, Schwartz et al. 2003). Historically, grizzly bears occurred throughout most of Wyoming (Long 1965). Unfortunately, grizzly bear populations have been eliminated from more than 98% of their historic range in the lower 48 States and their distribution is patchy and fragmented. Only five remnant populations remain below the Canadian border: the Cabinet-Yaak population in extreme northwest Montana and northeast Idaho, the Selkirk population in extreme northwest Idaho and extreme northeast Washington, the northern Cascades population in Washington, the Northern Continental Divide Ecosystem (NCDE) population in northcentral Montana, and the GYA population in eastern Idaho, southwestern Montana, and northwestern Wyoming (Servheen 1999). In Wyoming and elsewhere the grizzly bear has expanded its range in the past two decades and has reoccupied historic habitats. Current range expansion of the GYA population is particularly evident in the southern portion of the ecosystem in Wyoming (Schwartz et al. 2002).

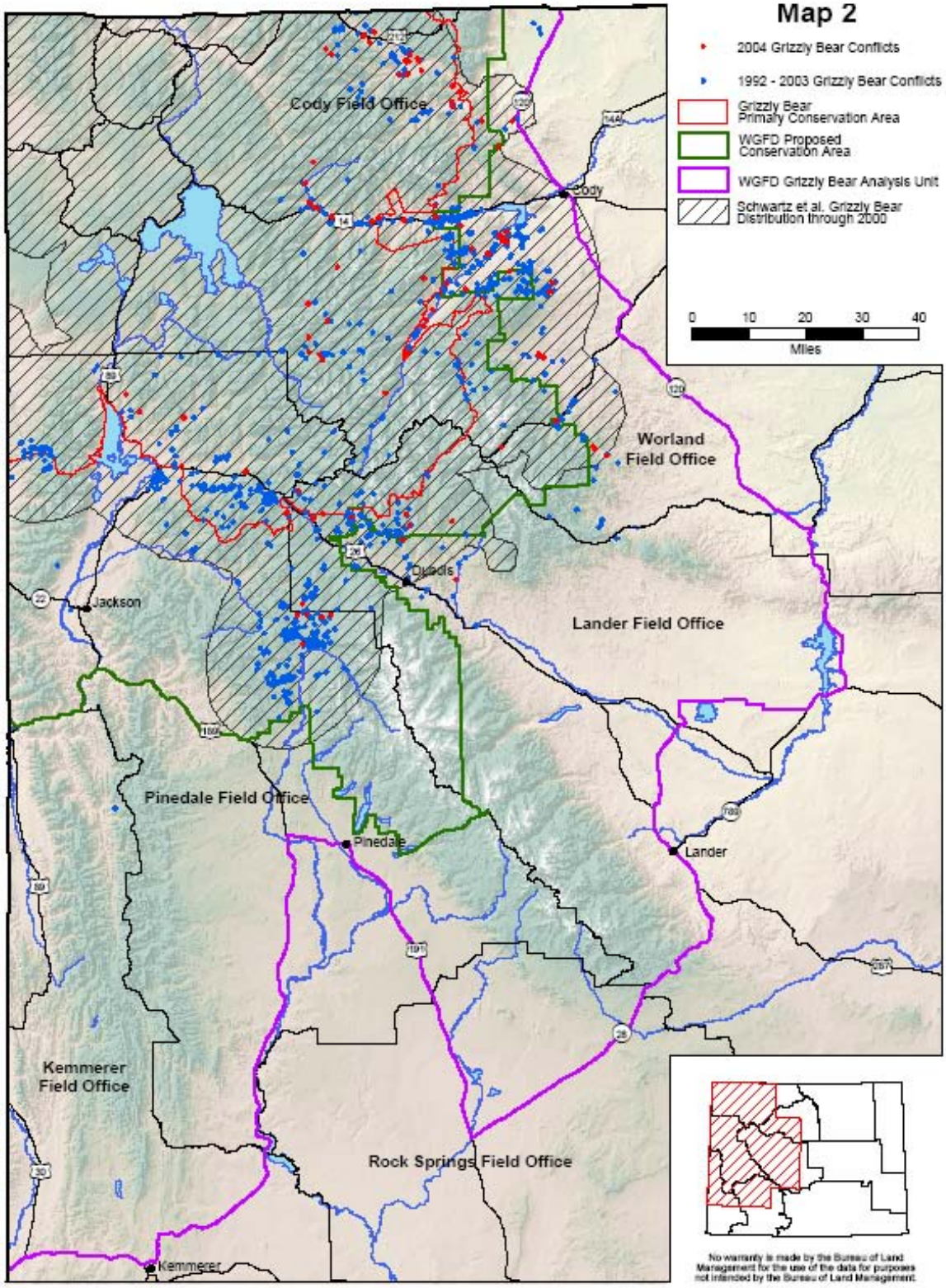
The Primary Conservation Area (PCA) of the Yellowstone grizzly bear, previously known as the Recovery Zone, encompasses 23,833 square km centered on YNP and includes Grand Teton National Park, John D. Rockefeller Memorial Parkway, contiguous portions of the Shoshone, Bridger-Teton, Targhee, Gallatin, Beaverhead, and Custer National Forests, and over 222 square km of State and private lands in southeast Idaho, southwest Montana, and northwest Wyoming (**Map 1**). The distribution in **Map 1** is shown as the outer edge of a composite polygon constructed by overlaying fixed kernel ranges constructed from (1) observations of unique unduplicated females with cubs-of-the-year, (2) locations of radio-collared bears, and (3) locations of grizzly bear–human conflicts, confrontations, and mortalities (taken from Schwartz et al. 2002, with permission). The blank white area in the southwest corner is due to the ruggedness of the terrain and lack of roads for capturing grizzly bear locations rather than a lack of bears. The Wyoming Game and Fish Department has established an outer boundary for grizzly bear occupancy by natural dispersal that is generally delimited by highways (**Map 2**). This latter mapping, and grizzly bear management in Wyoming, has been revised in the Grizzly Bear Occupancy Management Proposal Following Delisting as a Threatened Species (Moody and Anderson 2004) (online at gf.wy.state.us). That document outlines a proposed Grizzly Bear Conservation Area and Grizzly Bear Data Analysis Unit and, if accepted, will be appended to the Wyoming Grizzly Bear Management Plan.

The general current extent of the grizzly bear's range in Wyoming includes Grand Teton National Park, YNP, and portions of adjacent national forest and private lands to the south and east extending to the eastern edge of the Absaroka Mountains, the western portion of the Owl Creek Mountains, south in the Gros Ventre Range to the Pinnacle Peak area, and south in the Wind River Range to the Green River Lakes area (Moody et al. 2002, Schwartz et al. 2002).

Map 1 Grizzly Bear Distribution (1990-2000) and Primary Conservation Area in Wyoming (from Schwartz et al. 2002).



Map 2 Proposed Outer Boundary of Grizzly Bear Occupancy within Wyoming (from Moody et al. 2002).



THREATS

The key reasons for decline of grizzly bears in North America are excessive human-caused mortality and habitat loss (Schwartz et al. 2003). **Map 2** portrays the large number (over 1,600) of human-grizzly conflicts compiled by the Wyoming Game and Fish Department from 1992-2004. Stochastic environmental events also pose significant threats to long-term persistence of small isolated populations and are therefore real threats to persistence of the grizzly bear population in Wyoming. A stochastic environmental event can impact a population of grizzly bears via direct mortality of bears or indirectly by impacting important food sources and carrying capacity. Researchers are particularly concerned about impacts of future climate warming on two very important foods, seeds of whitebark pine and aggregated army cutworm moths. These two species occur at high elevations (>2500 m and >3100 m, respectively) and are therefore particularly susceptible to climate warming. Worst-case scenarios predict total elimination of these food sources in the GYA. Replacement sources of high quality foods are unknown.

Large area requirements, low reproductive potential, and sensitivity to human disturbance contribute to intrinsic vulnerability in this species. Throughout their range, documented human disturbances include helicopter and fixed-wing aircraft flying overhead, hydrocarbon exploration and development, hydroelectric development, timber extraction, recreational activities, and roads and highways. These disturbances may result in displacement and/or disruption of normal behavior patterns such as copulation, movement, denning, foraging, physiological arousal without overt behavioral response, and even direct loss of habitat via avoidance. However, many of these disturbances are not factors for the GYA population of grizzly bears as they do not occur there.

Motorized access is one of the most influential factors affecting grizzly bear use of habitats (ICST 2003). Highly sensitive to disturbances associated with roads and developments, grizzly bears avoid areas within 3 km of developments and within 4 km of roads (Mattson et al. 1986). Displacement from quality habitats in these areas may prevent dispersal, force bears to use poorer quality sites, increase intraspecific competition by further forcing more bears into limited remote habitat, and may cause social disruption in areas away from developments and roads (Kasworm and Manley 1989, McLellen 1989). Road avoidance may result in higher mortality and lower fecundity of displaced individuals (Mattson et al. 1986). Much of this research, however, is several years old and was based on lower density populations. It may not be the case for current densities of grizzly bears in the GYA. In fact, it is now generally understood that there is great individual variation in road avoidance.

Mapping and protection of secure habitat (defined as that area greater than 500 meters from an open or gated motorized access route or high use non-motorized trail and areas where open motorized access route density, or OMARD, is 1 mile per square mile or less) was important and necessary for recovery of the grizzly bear and for maintenance of a stable population base in the PCA. Bears have proven to be very adaptable and have expanded to areas with many human influences including roads, houses, and utility and transportation corridors.

3.0 ANALYSIS OF RESOURCE MANAGEMENT PLANS

INTRODUCTION

In the introduction, under "Programs and Action" we describe all the management actions as a compilation of these actions in all the FOs. This will prevent and reduce their repetition under each FO. Rather, in each FO we will only mention those programs unique to that FO. The next section, "Existing Mitigation", addresses mitigation actions that are prescribed and followed as part of ongoing activities in the RMP.

In subsequent sections each FO is listed separately and the management actions in the RMP for each FO are reviewed. If there are no additional, specific management actions for a particular FO, then no text is entered and only the heading is present. The analysis involves evaluation of management actions for their potential to affect grizzly bears and their known habitats, including management actions or impact minimization measures that are unique to the particular RMP. A determination of potential effects is made and is shown in a separate table of all the individual management actions and determinations for each FO. In addition, there is a section on cumulative effects.

Programs and Actions

Access Management Actions

The objective for access management is to provide suitable public access to BLM-administered public lands. This may include acquiring new access where needed, maintaining existing access and expanding existing access facilities, or abandoning and closing access where it is not compatible with resource values and objectives.

Access across private lands will be pursued as needed through a variety of methods including, but not limited to, purchase of rights-of-way or easements, land exchange, reciprocal rights-of-way, and other statutory authorities. Specific routes and acquisition procedures for securing access are determined through route analyses and environmental analyses as part of specific project and activity planning. Access acquisition needs (typically for roads) are most commonly identified for public access for recreational use. This may be for hunting, sightseeing, rockhounding or general exploring. Acquisition of access to public lands has been identified in locations that would provide the public with an opportunity to utilize resources that have previously been unavailable because the public lands had no public access. An increase in access could result in an increase in human activity in an area that previously had little activity, development of roads, trails, parking areas and other facilities to enhance the public's use of the area. The construction of access roads, trails, parking areas, and other associated facilities would require the use of heavy equipment and machinery, as well as surface disturbance at the site.

Where appropriate, land exchanges or cooperative agreements are considered to provide access needs.

A detailed evaluation of areas with a high density of roads may be completed to determine needs for specific road closures or rehabilitation. Specific impact minimization measures and design requirements for roads are developed through environmental analyses as part of specific project or activity planning. Access closure, abandonment, and acquisition are considered and established through activity planning and environmental analysis processes. Road or trail closure and abandonment is based on desired road or trail densities, demands for new roads, closure methods (e.g., abandonment and rehabilitation, closures by

signing, temporary or seasonal closures), type of access needed, resource development or protection needs, and existing uses.

Air Quality Management Actions

The objective of air quality management is to maintain or enhance air quality, protect sensitive natural resources and public health and safety, and minimize emissions that cause acid rain or degraded visibility. Typical air quality management program activities include dust control, weather monitoring, and air quality data monitoring. The air quality management program may evaluate or restrict surface development activities. The BLM ensures that operators cover conveyors at mine sites, restrict flaring of natural gas, limit emissions, and restrict spacing on projects.

BLM-initiated actions or authorizations are planned in accordance with Wyoming and national air quality standards. This is accomplished through the coordination of activities with the Wyoming Department of Environmental Quality (WDEQ) and the U.S. Environmental Protection Agency. Laws controlling air pollutants in the United States are the Clean Air Act of 1970 and its amendments, and the 1999 Regional Haze Regulations. The concentrations of air contaminants in the planning area need to be within limits of Wyoming ambient air quality standards (WAAQS) and national ambient air quality standards (NAAQS). Both WAAQS and NAAQS are legally enforceable standards for particulate matter (PM_{10}), nitrogen dioxide (NO_2), ozone, sulfur dioxide (SO_2), and carbon monoxide (CO). Air quality stations used to monitor particulates, if located in grizzly bear habitat, could cause disturbances to grizzly bears through the building/construction of the station and associated access roads, maintenance and upkeep, and equipment reading and repair. No known monitoring stations are currently in grizzly bear habitat on BLM lands in Wyoming, although additional Federal and state funded stations are being placed in western Wyoming annually.

In addition to NAAQS and WAAQS, major new sources of pollutants or modifications to sources must comply with the New Source Performance Standards and Prevention of Significant Deterioration (PSD). The PSD increments measure PM_{10}, SO_2, and NO_2. The PSD program is used to measure air quality to ensure that areas with clean air do not significantly deteriorate while maintaining a margin for industrial growth.

Areas of Critical Environmental Concern Management Actions

The objectives of special management areas, such as Areas of Critical Environmental Concern (ACECs) are to ensure continued public use and enjoyment of recreation activities, while protecting and enhancing natural and cultural values; improving opportunities for high quality outdoor recreation; and, improving visitor services related to safety, information, interpretation, and facility development and maintenance.

Special Management Areas are those areas where a decision to focus a special emphasis management of some kind was made in the RMPs. Not all of the RMPs specified in detail the kinds of management needed in the ACECs. For some ACECs a plan was to be developed at a later date that would outline and specify management actions. The designation of ACECs in an RMP is simply a designation, and does not automatically convey specific management or protections, although with designation, some resource management protections are spelled out and implemented. If access roads or other types of facilities are specifically required, then these will be described within the appropriate activity section in this document. Generally, ACEC status is a beneficial impact on wildlife and plant species.

Cultural Resources Management Actions

The objective of cultural resource management is to protect, preserve, interpret, and manage significant cultural resources for their informational, educational, recreational, and scientific values. Site-specific inventories for cultural resources would be required before the start of surface-disturbing activities, or if BLM-administered lands are proposed to be transferred out of federal ownership.

The BLM performs inventory activities as well as land management activities. During inventory activities, the BLM inventories, categorizes, and preserves cultural resources; conducts field activities; performs excavations; maps and collects surface materials; researches records; and photographs sites and cultural resources. Inventory data collection activities are used for documentation and development of impact minimization plans before other resource program surface-disturbing activities may take place. Inventory activities commonly entail the use of hand tools, power tools, heavy machinery, vehicle use and localized human activity. Inventories are divided into Class I, Class II, and Class III inventories. The BLM does cultural resource inventories normally in response to surface-disturbing projects. Intensity varies between inventories. Inventories may involve 2-7 individuals and trucks, and may last from one day to several weeks.

Cultural resource land management activities involve managing sites for scientific, public, and sociocultural use; developing interpretive sites; restricting certain land uses; closing certain areas to exploration; prohibiting some surface-disturbing activities; preparing interpretive materials; and allowing the collection of certain invertebrate fossils. The cultural resource program may propose installation of protective fencing of trail segments, stabilize deteriorating buildings, acquire access to sites when necessary, perform certain surface-disturbing activities, pursue land withdrawals, pursue cooperative agreements, protect sites with avoidance stipulations or conditions of approval, and identify and interpret historic trails. Cultural resource interpretive sites, such as historic trails or rock art sites, may be developed to provide public benefits such as scenic overlooks, signs, and walking trails.

Adverse effects on significant cultural resources are mitigated. Surface-disturbing activities are avoided near significant cultural and paleontological resource sites and within ¼ mile or the visual horizon of significant segments of historic trails and canals. Sites listed on, or eligible for, the National Register for Historic Places (NRHP) are protected and would be managed for their local and national significance and in compliance with the National Historic Preservation Act, the Archaeological Resources Protection Act, the American Indians Religious Freedom Act, and the Native American Graves Protection and Repatriation Act, as appropriate.

Fire Management Actions

The objectives of fire management are to restore the natural role of fire in the ecosystem, and to protect life, property, and resource values from wildfire. The two major activities involved with the BLM's fire management activities are prescribed burning and wildfire suppression.

Prescribed fire objectives are to restore natural fire regimes and enhance rangeland habitats for livestock and wildlife. The prescribe fire program writes fire plans for prescribed burns and vegetative treatments and coordinates with interested publics. Some prescribed fires are conducted to dispose of slash and residue from timber sales, improve wildlife habitat and grazing potential, or to reduce hazardous fuel loads.

Wildfires threatening higher resource values, including commercial timber areas, developed recreation sites, and areas of wildland/urban interface, or fires with potential to spread to private, state, or other federal lands are suppressed. Fire suppression activities vary with the intensity of the wildfire and are

conducted on an emergency basis. However, wildfire planning is done in advance to determine what kinds of suppression activities will be allowed in a planning unit, where they will be allowed, and what kinds of equipment will be used. In the event of a wildfire and immediate suppression is required, as many conservation measures as possible will be applied that do not hinder safety or property protection. The USFWS will be contacted and emergency consultation will take place at the earliest possible time if T&E species or their critical habitats are affected or impacted. Fire plans also identify any special concerns or values that need to be protected. Fire lines are constructed to contain the wildfire. Water is withdrawn from nearby sources to suppress fires. Chemical fire suppression agents containing chemical dyes may be used, if needed. The use of aerial fire retardant is restricted near water resources. After a fire is extinguished, the BLM may use rehabilitation techniques to restore a burned or suppression area to its previous vegetative cover. The BLM uses a technique called Analysis of Burned Area Emergency Rehabilitation (BAER) on all areas damaged by fire. This technique is used to evaluate the impact of restoration efforts on the ecosystems involved.

Activities authorized by this program include tree thinning, construction of roads and fire lines using hand tools to heavy equipment, application of fire-suppressing chemicals by hand and aerial application, and revegetation and mulching stream banks for rehabilitation. Activities often employ the use of off-road vehicles, hand tools, and heavy equipment such as bulldozers.

Geology and Minerals Resource Management Actions

The lands administered by the Wyoming BLM contain some of the most prolific oil, gas, coal and trona producing areas in the Rocky Mountain region. Mineral development is subject to leasing, location, or sale based on the Federal mineral law (such as the Mineral Leasing Acts and amendments) covering a particular commodity. Conditions under which the development of these minerals can occur are determined through land use planning. The planning area will be open to consideration for exploration, leasing, and development of leasable minerals including oil, gas, coal, oil shale, and geothermal.

The objective of minerals management actions is to make public lands and federal mineral estate available for orderly and efficient development of mineral resources. BLM's minerals program is divided into salable minerals, leasable minerals and locatable minerals.

Salable Minerals

Deposits of salable minerals are scattered throughout Wyoming. Salable minerals include common varieties of sand, gravel, sandstone, shale, limestone, dolomite, and granite rock. Historical use of these materials includes building materials, road surfaces, and tools. Today salable minerals are mainly used for maintaining roads on public lands and also for activities associated with the oil and gas industry.

BLM provides sand, gravel, and stone from federal mineral deposits as necessary to meet the needs of federal, state, and local road construction and maintenance projects in the planning areas. Before issuing contracts or free use permits for salable minerals, the BLM conducts the appropriate environmental analyses including special studies or inventories of cultural values, threatened or endangered plant and wildlife species, and other resources. Stipulations or conditions may be included in the terms of the contract or permit to ensure protection of the natural resources present and reclamation of the land following project completion. Sand and gravel, scoria, flagstone, moss rock, and other minerals are available for free use or sale but are subject to conditions and stipulations developed on a case by case basis. Generally salable minerals are extracted using heavy equipment and moved using large haul trucks.

Site reclamation is required following any surface disturbing activity by mining for salable minerals.

Reclamation includes removing all surface debris, recontouring, reducing steep slopes, and planting vegetation, all requiring the use of heavy equipment. All reclamation proposals must conform to State agency requirements and must be approved by BLM.

Salable minerals are disposed of (sold) under the Materials Act of 1947, as amended, and are discretionary actions.

Leasable Minerals

Leasable minerals include fluid (oil, gas, geothermal) and solid minerals such as coal, trona, and phosphate. Bentonite and Uranium are leasable on acquired lands.

Current use of coal is primarily for electric generation. Coal in Wyoming is most generally extracted using surface mining methods although in the past some coal was mined underground. Underground mining method is proposed for some future operations. Surface mining requires a federal coal lease from the BLM, mining permits from the State, mine plans approved by OSM. Surface mining involves the use of large equipment such as draglines, shovels, haul trucks, etc. Small drill rigs are used for exploration to determine the location, thickness, and obtain cores (for determining quality). Extracting coal using surface mining methods often results in large areas of surface disturbance from road construction, removal of topsoil and overburden, and stockpiling of these materials. Once an area is mined out, reclamation begins and includes recontouring as closely to the original landscape as possible the reconstruction of drainages, reseeding and monitoring to assure the habitat is returned to pre-mining vegetative composition and condition. Coal is leased under the Mineral Leasing Act of 1920 and the Federal Coal Leasing Amendments Act of 1976.

Current uses of trona include baking soda, in paints, glass, toothpaste, soaps, ceramic tiles, porcelain fixtures, paper, water softeners and pharmaceuticals. Wyoming is the largest producer of trona in this country and has the largest known reserve of trona in the world. Trona is generally mined underground by the long-wall mining method. Surface facilities are generally processing plants, offices, and maintenance buildings along with associated roads.

Current uses of uranium are as a nuclear fuel for generation of electricity; nuclear explosives; in medicine, agriculture and industry as radiation for diagnostic tools, to detect welding problems, in the manufacture of steel products, or used to reduce the spoilage of certain foods. Uranium is generally categorized as a locatable, but becomes leasable on acquired lands. Uranium is generally mined underground. Surface facilities include processing plants, equipment maintenance buildings, parking areas and offices.

Leasable bentonite also occurs on acquired lands. Bentonite is surface-mined with heavy equipment including: shovels, haul trucks, etc. Drilling is used to locate the bentonite. Large areas of surface disturbance occur through removal of the overburden, overburden stockpiles, surface facilities and roads. Surface facilities include processing plants, equipment maintenance buildings, parking areas and offices.

Fluid leasable minerals include oil, gas, and geothermal steam. Leasing of oil and gas resources is under the authority of the Mineral Leasing Act of 1920 as amended. Leasing is administered by the BLM through a competitive and non-competitive system. BLM receives nominations of lands to be put up for sale at the bimonthly competitive oil and gas sales. These nominations are gathered together into a parcel list and are sent to the respective field offices for the attachment of stipulations. These stipulations are derived from the Land Use Plan. The parcel list is returned to the BLM state office and once verified, is put together into the Notice of competitive oil and gas sale booklet. This Notice must be posted for the public 45 days before the lease sale is held. Once the parcel is sold, it is then issued as a lease.

Initial exploration for oil and gas resources is often conducted using geophysical methods. Geophysical exploration involves the use of ATVs and vehicles to lay geophones and drill holes for shot charges, or the use of vibroseis trucks (weighing 50-64,000 lbs.) to create sound waves instead of using charges, and then the removal of the geophones and reclamation of shot holes if used. Exploration for oil and gas (including coal bed natural gas) may also include the drilling of one or more wells to test for a reservoir and its productive viability. During the exploration phase of drilling, surface disturbing activities include the construction of roads, well pads, well drilling, reserve pits, and other facilities.

Prior to conducting site-specific drilling activities, a site specific EA is completed for each APD, or group of APDs. APDs are subject to site-specific conditions of approval which may be more restrictive than lease stipulations. Based on the environmental review, further timing and location restrictions may be added to protect local resources. Once an APD is approved, ground operations may begin. In traditional oil and gas operations, a minimum road capable of handling a well drill rig is constructed to the site. Roads may be two track unimproved roads to crown and ditched roads designed by an engineer. A level 'pad' ranging in size from 1-5 acres is constructed for drill rig and ancillary facility (e.g., pipe racks, production pits, parking areas, etc.) setup. Generally, there is an average of 3 acres of disturbance for each drill pad and 1 mile of road and 1 mile of pipeline for each drill site. This can vary widely with each project. Directional drilling requires a larger pad than required for conventional vertical wells. Size is dependent on the number of wells drilled from each pad.

A drillhole is started (i.e., spudded) and drilling continues until the targeted geologic formation is reached. One day to over a month may be required to drill the well depending on the type of well (vertical or directional), depth and type of rock strata encountered. If a well is not capable of producing economic quantities of oil or gas, it is shut in and plugged and marked and the surface is reclaimed to its previous condition. If a well is a producing well, production facilities (e.g., pipelines and/or storage tanks, water treaters, pipeline compressor stations, powerlines, pumpjacks, fencing, etc.) will be constructed, and road upgrades may occur to accommodate tank trucks used to haul the oil to a terminal or local refinery. Discovery of a producing area may result in additional wells being drilled and a pipeline system established to transport the oil or gas to a storage facility or terminal. Other localized surface uses associated with oil and gas development include construction of storage tank batteries and facilities to separate oil, gas and water. Compressor engines (can be gas/diesel powered or electric) may be required to move gas to a pipeline, and diesel, gas, or electric pumps and other related equipment may be needed to lift the oil, gas, or water from the well to the surface. If extensive reserves of oil are located field development may occur which would result in additional wells and transport systems with well spacing determined by the Wyoming Oil and Gas Conservation Commission. Development of oil and gas fields includes construction of the same types of facilities used during exploration, but in addition it may be necessary to obtain federal rights of ways for product pipelines and power lines. Drilling and production operations and facilities are inspected and maintained regularly, and varying amounts of human and vehicle activity is present with all the above actions.

Water is often produced concurrently with oil and gas production and disposal methods can range from subsurface re-injection to direct surface discharge to discharge into a containment pond or pit. Some fields may have large volumes of water or very little water. Water that cannot be discharged to the surface because of its chemical makeup may be treated before surface discharge or may be reinjected.

When oil and gas wells are no longer capable of producing economic quantities of product, the field is closed out and abandoned. At each well location, all the "down-hole" and surface facilities are removed and the drillhole is plugged. The pad and production pits are reclaimed to existing standards, and a hole marker is placed at the well site. Reclamation involves revegetation by reseeding or planting and the recontouring of unneeded roads and unneeded portions of the well pads. Various types of heavy

equipment and vehicles are used for these activities. Finally, the site is inspected, bonds are released as appropriate, and the site is declared closed.

Geothermal resources are available for exploration, development, and production and are subject to the same surface disturbing and other restrictions applied to oil and gas exploration, development and production. Similar to oil and gas leasing, the BLM administers geothermal leases through a competitive and non-competitive system. The Geothermal Steam Act of 1970 authorizes leasing. There are currently no geothermal steam leases in Wyoming at this time.

Locatable Minerals

Locatable minerals include gypsum, silver, gold, platinum, cobalt and other precious and base minerals. Bentonite and uranium are also locatable except on acquired lands.

Minerals are locatable under the 1872 Mining Law. Most public lands are open to location with the exception of lands withdrawn for other special management uses. The Mining Law of 1872 sets the requirements for lode claims, placer claims, and mill sites as well as discovery, location, annual filings, assessment work, and mineral examinations to establish validity.

BLM has no jurisdiction (non-discretion) over split estate lands for locatable minerals (private surface, federal subsurface) in the event the mining claimant receives *written* permission to proceed with operations from the surface owner, or the mining claimant owns the surface lands and wishes to mine their lands. This exception applies to Stockraising Homestead Act (SRHA) lands. These lands are those patented under the former provisions of the Taylor Grazing Act (TGA), U.S.C. 315 (p) and Homestead Act (HA) lands that were patented under the provisions of the SRHA, as amended.

Forest Resources Management Actions

The objective of forest management is to maintain and enhance the health, productivity, and biological diversity of forest and woodland ecosystems and to provide a balance of natural resource benefits and uses, including opportunities for commercial forest production. BLM multiple use management prescriptions shall provide for forest products, recreation, livestock grazing, wildlife habitat, as well as the protection and enhancement of other resources.

The forestry program allows the commercial cutting and removal of diseased trees, disease treatment by spraying, herbicidal spraying of grasses and shrubs, and pre-commercial thinning, chaining, and shearing, as well as clearcuts, slash disposal, logging, helicopter logging, and skidder-type and cable yarding may be allowed during timber harvest. Other commercial uses may include post and pole harvest and the removal of wildlings for transplanting purposes. Non-commercial timber harvest under individual permits involves collection and cutting of firewood, Christmas trees, posts, poles, and wildling removal in stands or areas with good public access. The BLM ensures that site regeneration and stand replacement follow timber harvesting. Forest management activities may include conducting surveys; acquiring easements on private, state and other federal agency lands; designing and developing roads; and installing erosion control, such as drain culverts and water bars.

Timber harvesting occurs on commercial forestlands with slopes less than 45%. Commercial operations are authorized under sale contracts or permits. Individual authorized clearcuts may not exceed 20 acres. Areas within 200 feet of surface water are prohibited from harvest. Slash is to be lopped and scattered,

roller chopped, or burned. Regeneration areas are often enclosed by fence to prevent wildlife and livestock from damaging seedlings.

Forest stand inventories are conducted prior to any management activities, and regeneration surveys are performed following stand management activities. During forest management activities for timber harvest, the BLM allows forest stand improvement activities (initial thinning) of young trees (i.e., regeneration growth usually less than 15 feet in height) in forest stands. This activity may or may not require minimal road construction, and the trees are simply laid down with a chainsaw at a set spacing distance and left where they drop to decay. Pre-commercial harvest and removal of diseased trees and pre-commercial thinning of young trees is conducted to reduce the density of smaller trees, and thereby allowing the remaining trees to have better access to available nutrients, water, and light. These activities generally require creation of minimum to light road or two-track trail construction for access, and use of chainsaws and possibly some light yarding equipment for lay down and retrieval of trees. During commercial harvest activities, the BLM allows removal of commercial size trees (i.e., saw logs), ensures slash piling or lop-and-scatter disposal of debris, allows commercial thinning of saw logs under some types of silvicultural treatment, and allows use of both skidder and cable yarding of harvested trees. Generally, light to medium roads are constructed to the harvest stand and yarding areas and load out landings are built in the sale area to facilitate the removal of logs, utilizing heavy equipment. Trees are laid down with chain saws or harvester machines. During restoration efforts following timber harvest activities, the BLM ensures site re-contouring of landings and most roads, and revegetation of the sale area, as needed. All the above activities require the use of vehicles and human presence.

Currently, cottonwood and willow trees are not harvested by the BLM in Wyoming. Non-commercial woodlands (e.g., riparian areas) are managed to optimize cover and enhance habitat for wildlife and to protect the soil and watershed values.

Hazardous Materials Management Actions

The primary objective of hazardous materials management is to protect public and environmental health and safety on public lands administered by BLM. Hazardous materials management also seeks to comply with federal and state laws, prevent waste contamination due to any BLM-authorized actions, and to minimize federal exposure to the liabilities associated with waste management on public lands.

Hazardous materials and waste management policies are integrated into all BLM programs. Public lands contaminated with hazardous wastes are reported, secured, and cleaned according to federal and state laws, regulations, and contingency plans. The clean-up of hazardous sites generally requires the use of heavy equipment, transport trucks, other vehicles and human presence. Warnings are issued to potentially affected communities and individuals if hazardous material is released on public land. If a spill of hazardous materials occurs, the site will be reported, secured, and cleaned and an emergency consultation conducted with the USFWS.

Lands and Realty Management Actions

The objective of the lands and realty management program is to support multiple-use management goals of the BLM resource programs; respond to public requests for land use authorizations, sales, and exchanges; and acquire and designate access to serve administrative and public needs.

Public land tracts not critical to current management objectives will be disposed of through the realty management program. Non-federal lands may be acquired through exchange in areas with potential for recreation development or in areas containing important wildlife, cultural, scenic, natural, open space, or other resource values. Generally lands with special status species (SSS), which includes threatened and endangered species, are not eligible for disposal and are retained in Federal ownership for management of those species. Protective withdrawals from mineral entry may be established to protect and preserve

important resource values, but require extensive mineral investigations.

Realty management authorizes occupancy of public lands for roads, power lines, pipelines, communication sites, and irrigation ditches authorized by granting a right-of-way. Rights-of-way management actions respond to public requests for access, land authorizations, sales, and exchanges. These rights-of-way may be temporary or may extend for years. If restricted types of rights of way are required in avoidance areas or when such areas cannot reasonably be avoided, the adverse effects of construction will be intensively mitigated in these areas. Most rights-of-way require the use of medium to heavy equipment, vehicles and human presence during their construction.

The program pursues cooperative agreements and considers and processes proposed withdrawals and temporary use permits. Unauthorized uses are investigated, documented, and steps are taken to resolve the trespass.

Public lands can be considered for sale or disposal on a case-by-case basis when a definite need for the land is identified and the proposal meets the requirements of the Recreation and Public Purpose (R&PP) Act and local land use plans. Leasing public lands for landfills, public recreation facilities, and other uses is allowed under the R&PP Act.

Livestock Grazing Management Actions

The management objective of livestock grazing management is to maintain or improve forage production and range condition as a sustainable resource base for livestock grazing on the public lands while improving wildlife habitat and watershed condition. Management actions on grazing allotments are prioritized by, and classified into, one of three management categories: maintain (M), improve (I), and custodial (C). Certain areas may be closed to livestock grazing because of conflicts with other resource uses including, but not limited to, timber sale areas being re-harvested, crucial wildlife or endangered species habitat, areas managed for prescribed fire, developed recreation sites, or education areas. Vegetation manipulation to change composition or productivity (including noxious weed control) may be accomplished by the range program by using prescribed fire, mechanical, chemical or biological treatments. Cattle are the predominant class of livestock grazed on Public lands in Wyoming, however, sheep, horses and bison are also authorized. Livestock grazing on Public lands can cause trampling of plants and removal of vegetation to various stubble heights dependent on the number of livestock and the length of time livestock are allowed to graze an allotment.

Fencing activities authorized by the livestock grazing management program may include fence construction and repair, designing and implementing grazing systems, and building livestock exclosures for important riparian habitat. Water management activities associated with range management may include the development of reservoirs, springs, pipelines, and wells, and access authorization. Permit and lease management activities include conducting monitoring studies, performing project work to enhance and improve riparian zones and uplands, managing stock driveways, and developing management plans and agreements.

In some cases cross fencing (subdividing an allotment, pasture or ranch by fencing) is used to accomplish management needs or when a parcel is leased by more than one lessee. Temporary fencing, including electric fencing may be authorized to accomplish management goals. Fencing might be used to reduce grazing intensity, distribute grazing away from important resources (streams, springs, riparian areas, wetlands, cottonwood galleries, etc.). When fencing is proposed, either permanent or temporary, fences are built to standards developed in the Fencing BLM Manual Handbook (H-1741-1, Fencing, Rel. 1-1572, 12/6/1989). These standards are required to reduce the amount of restriction or hazards to wildlife. Fence construction and maintenance would likely require access to the site, possible removal of

vegetation or uneven surface materials (rocks, trees, sand, etc.), stringing wire, digging postholes, building fence braces, building rock jacks, cutting or removing on or off site building materials (fence posts, rails, gathering rocks, etc.), weed management (spraying, cutting, pulling, etc.), or if the project is large enough, the possibility of camps for workers. The use of corrals for confinement of livestock for various purposes (sheep shearing, overnight holding of livestock, etc.) would require construction and maintenance activities including, hauling building materials, heavy equipment use, access to the corral site, etc.

The livestock grazing program may also include rangeland improvements such as stock water ponds, pits, or reservoirs; pipeline and trough systems; spring developments; storage tanks and troughs; wells; or temporary tanks and water hauling. These off-stream water improvements better distribute the use and intensity of use by livestock away from streams, rivers or wetlands and help protect important riparian areas, but could require the use of hand tools, mechanical or heavy equipment, hauling/transporting materials (gravel, dirt, tanks, etc.), and clearing vegetation. Placement of salt and mineral blocks or riding horseback and physically moving livestock are other forms of livestock distribution.

Rangeland restoration to improve range health is also a part of livestock management. These activities might include aerial seeding and possibly herbicide application, seeding by disking or drilling (using a tractor or other heavy equipment), fertilizing, plowing, chaining, or rangeland pitting.

Most livestock operators use off-highway vehicles (OHVs), i.e.: pick-up trucks; off road vehicles (ORVs), i.e.: motorcycles or “4-wheelers,” or ride horseback or walk to access their allotments. “Herding ” (moving) livestock through walking, horseback riding, and the use of dogs to distribute livestock on allotments or trailing (move them from one location to another - on or off of allotments), and the use of domestic sheep bed grounds (a temporary site to bed down flock(s) of sheep) and associated sheep herder camps are commonly employed methods of livestock operations. Road construction and maintenance, for access to various livestock operations would again require heavy equipment use, possible mechanical vegetation removal or spraying with herbicides, and material hauling.

Forage needs for wildlife and adequate vegetation cover for watershed protection are considered before additional livestock use is authorized. Livestock management includes, authorizing livestock grazing, and adjusting season of use, distribution, kind, and number of livestock. Salt or mineral supplements may be provided, which causes livestock concentrations, but can also move or distribute livestock away from water sources.

Off-Highway Vehicle (OHV) Management Actions

The objective of OHV management is to offer outdoor recreational opportunities on BLM-administered public land while providing for resource protection, visitor services, and the health and safety of public land visitors. BLM-administered public land is enrolled in the Wyoming State Program Off-Road Vehicle Registration Program. This program requires the purchase of a Wyoming State registration sticker to be displayed on motorized vehicles (four-wheelers, motorcycle, etc.) that are not currently licensed for highway use. The State manages the registration program in cooperation with its partner agencies (BLM, USFS, WGFD, Wyoming State Parks and Cultural Resources). However, the use of OHVs on the BLM administered lands is restricted, depending on the designation contained in the resource management plans for the various field offices (e.g., closed, limited, or open).

Off-Highway Vehicle use on BLM-administered lands is designated by area as either limited to designated roads and travel routes, limited to existing roads and travel routes, or in a few areas, designated as open which allows cross-country travel. Additional restrictions with seasonal closures or restrictions to type of vehicle can also be imposed. Some areas and roads are closed to all OHV use.

Over snow vehicles can also be limited to their use by being designated to roads or travel routes or they may be allowed for cross country travel. Off-Highway Vehicle management designates closed, limited, or open areas for OHV use; posts signs, maps, or brochures; permits OHV rallies, cross-country races, and outings; monitors OHV use; and performs necessary tasks requiring OHV use. OHVs can be used off road to conduct necessary tasks (i.e.; set up a camp, collect firewood or retrieve a big game animal) or in the performance of authorized activities (i.e.; firefighting, etc.).

Until signing has occurred, OHV use in "limited" areas will only be permitted on existing roads and vehicle routes. Off-Highway Vehicle travel may be prohibited on wet soils and on slopes greater than 25% if damage to vegetation, soils, or water quality would result. Seasonal restrictions may be applied in crucial wildlife habitats as needed.

Paleontological Resources Management Actions

The objective of paleontological resources management is to manage paleontological resources that are part of the BLM-administered public land surface estate for their informational, educational, scientific, public, and recreational uses.

Using the land for scientific purposes such as paleontological exploration is authorized through a permit system. Since 1985, 53 permits have been issued, and it was estimated that about 12 more could be issued between 1991 and 2005. Fossils fall under paleontological resources and are part of the surface estate, such that whoever owns the surface consequently owns the fossils. A paleontological collecting permit is required before collecting any fossil vertebrates, significant fossil invertebrates, and plants on BLM-administered public lands.

Potential effects on paleontological resources on BLM-administered public lands will be considered in site-specific environmental analyses before authorizing surface-disturbing activities. Site-specific inventories will be required where significant fossil resources are known or are anticipated to occur. Hobby collection of invertebrate fossils and petrified wood are allowed except in specified areas. Excavation or "digs", typically involving less than an acre, may be performed with hand tools, power tools, or heavy equipment that could involve intensive human activity at the site by field crews; placement of crew and evaluation facilities; intense, though usually localized, ground disturbance at the immediate site; and periodic use of primitive access roads and trails. Rarely, a site will have *in situ* interpretive value, and when this takes place, intensive development could occur which might include the construction of permanent access and service roads, power sources, facilities (including protective fencing), and relatively heavy, though usually localized, human use. The closing of BLM-administered public lands or restricting uses to protect paleontological resources are evaluated case-by-case.

Paleontological resource values are managed in much the same manner as cultural resources, and the management activities are also similar, however, the statutory authorities are different.

Recreation Resources Management Actions

The objective of recreation resources management is to offer outdoor recreational opportunities on lands administered by BLM while providing for resource protection, visitor services, and the health and safety of public land visitors.

Categories of activities of the BLM for recreation management include allowing recreational access and use by the public, developing recreational areas, imposing restrictions, acquiring recreational access, and assessing effects of recreational use to the environment. The BLM monitors recreational use, develops management plans, and evaluates and updates recreational potential.

Recreational activities allowed by the BLM include hiking, hunting, mountain biking, boating, and fishing, OHV use (including snowmobiles), horseback riding, and camping. Casual use of BLM-administered public land for hiking, bicycling, hunting, fishing, and similar uses are allowed without charge. Large recreational events may include organized group hikes, motocross competitions, or horse endurance rides. The BLM develops recreational and camping sites, and where these take place, intensive development could occur which might include the construction of permanent access and service roads, power sources, facilities (including protective fencing), and relatively heavy, though usually localized, human use. Recreational site development also includes maintaining or developing recreational sites and facilities, developing campgrounds, providing fishing and floating opportunities, maintaining developed and undeveloped recreation sites, adding developments as opportunities arise, adding interpretive markers, and constructing roads and interpretive sites. Most recreation use on Public lands is dispersed human use by low numbers of individuals (i.e; hiking, hunting, bicycling, horseback riding, etc.), although individuals often concentration during activities such as forming hunting camps in the fall.

The Recreation program may place boundary signs, identify hazards on rivers, restrict recreational uses, limit motorized vehicles to existing trails, designate road use and recreation areas, require facilities to blend with the natural environment, and conduct field inventories. Most Public land recreation use occurs on or near existing trails or roads.

Recreation areas may have specific restrictions to protect other important resources. Development and enforcement of stipulations and protective measures includes designating OHV use, enforcing recreation-oriented regulations, patrolling high-use areas, and contacting users in the field.

Riparian Areas Management Actions

The objectives for riparian areas management will be to maintain, improve, or restore riparian value to enhance forage, habitat, and stream quality. Priority for riparian areas management will be given to those areas identified as Wyoming BLM sensitive fish species habitat, including habitat for native cutthroat trout.

Riparian areas management is an integral part of all resources and related management programs. Management actions may include reductions in livestock numbers, adjustments in grazing distribution patterns, fencing, herding, and livestock conversions. Riparian area management may require short-term disturbances from construction activities such as fencing or livestock herding. Those activities that affect or are affected by riparian values, will take into account the riparian areas management objectives and direction. Resource values and uses that affect or are affected by riparian values include wildlife and fisheries habitat, forest resources, livestock grazing, OHV use, visual resources, cultural and historical resources, minerals exploration and development activities, lands and realty activities, watershed and soils resources, recreation uses, fire management, and access.

Laws and guidelines abided by during riparian management include Executive Orders 11990 (wetland) and 11988 (floodplain), and section 404 of the Clean Water Act. In addition, there are species-specific management plans for some riparian areas (i.e., Bonneville and Colorado River Cutthroat Trout Strategy and Management Plans).

Sensitive Plants Management Decisions

The objective for sensitive plants (those plant species designated as such by each respective BLM State Director – see BLM Manual 6840 – Special Status Species Management) management is to maintain and enhance known populations of sensitive plant species within BLM-administered public lands.

Known populations of sensitive plant species will be protected from disturbance by maintaining or establishing fencing around the populations and/or by intensively managing surface-disturbing activities within sensitive plant habitat and in adjacent areas that could affect the populations. Sensitive plant species management may require short-term disturbances from construction activities such as fencing, inventory or monitoring of sensitive plants and their habitats. Case-by-case examination of any proposed surface-disturbing activity will be made to determine potential adverse effects and appropriate impact minimization measures to minimize those effects. Developments, uses, and facilities will be managed temporally and spatially to avoid damage to the sensitive plant species. Sensitive species is beneficial to plant species and usually wildlife.

While Federally listed plant species do not fall under the sensitive designation, protective measures will be developed for their habitats or sites within a FO in consultation with the USFWS.

Soil Management Actions

The objective for soil resources management is to maintain soil cover and productivity and provide for improvement in areas where soil productivity may be below potential on surface lands administered by BLM.

Activities associated with soil mapping/sampling may include surveying, core drilling, use of pick-up truck mounted soil augers and core samplers (1 ½" to 2" in diameter) and back-hoes (usually around 12-24" in width and pits may be up to 6' deep) for digging soil characterization pits and trenches, using hand held shovels to dig holes or pits, and associated human and vehicle disturbances. These trenches are backfilled and revegetated/reseeded when surveys are complete. Disturbances are usually very small of short duration in nature and will reclaim to the native terrain/vegetation quickly. Surface soil erosion studies may also be conduced. These soil resource related activities in the planning area are mainly in support of other programs. Soil mapping and identification may require the digging of trenches to identify and measure soil horizons below the surface. Formal soil surveys are conducted under a contract with the Natural Resource Conservation Service (NRCS).

Other activities associated with soil resources may include reclamation of abandoned mine lands (AML) and open shafts, removal of waste rock in floodplains or streams, or cleanup of tailings. These reclamation programs are covered under the hazardous materials section of this document.

To keep soil from eroding and to protect the water quality, timber harvest activities will be limited to slopes of 45% or less. OHV travel will be prohibited on wet soils and on slopes greater than 25% if unnecessary damage to vegetation, soils, or water quality would result. Roads and trails will be closed and reclaimed if they are heavily eroded, washed out, or if access roads in better condition are available. No surface disturbance or occupancy will be allowed in areas susceptible to severe erosion between March 1 and June 15.

Surface Disturbance Restriction Decisions

Surface disturbance restrictions are necessary to protect certain sensitive resources and areas from adverse affects of surface-disturbing activities and human presence, and are inclusive of the various management actions developed in and analyzed for the approved RMP. These restrictions apply to all types of activities involving surface disturbance or human presence impacts and are applied in accordance with the guidelines described in the BLM Mitigation Guidelines for Surface Disturbing and Disruptive Activities. These guidelines include, where applicable, proposals for waiver, exception, or modification, based on analysis for individual actions. This would allow for situations where a surface-disturbing activity may

actually benefit sensitive resources, and allow for those occasions when analysis determines that an activity will not affect those resources.

The Surface Disturbing Guidelines will be used, as appropriate, to condition development activities in all programs where surface-disturbing activities occur and where the objectives of the RMP include the protection of important resource values. On a case-by-case basis, activities will be conditioned by any one or more of the mitigations in the Guidelines to avoid or minimize impacts to other important resource values and sensitive areas. Use restrictions (e.g., dates and distances) may be made more or less stringent, depending on the needs of specific situations. The restrictions identified under the various resource programs are complementary to the standards in the Guidelines and are not all-inclusive. They represent both actual requirements applicable to specific circumstances, and examples of requirements that will be considered and that may be applied, if necessary. Additional restrictions may be placed on surface-disturbing activities as necessary.

The impact minimization measures identified in a particular RMP serve to provide a degree of protection to affected resources, not to unnecessarily restrict activities. The RMP provides the flexibility for modifications or exceptions to restrictions in specific circumstances where a restriction is determined not to apply or is not needed to achieve a desired objective.

Surface disturbance is characterized by the removal of vegetative cover and soil materials. Where actual excavation does not occur, activities may be allowed to occur with less stringent limitations provided that the objectives and purpose for the surface disturbance restrictions are met. Examples where less stringent application of the Guidelines would apply are timber harvesting within 500 feet of streams or riparian areas and on slopes greater than 25%. This would be applicable to those timber harvest activities, such as tree cutting, skidding, and slash disposal that do not fully remove vegetative cover and soil materials. In the past, allowing these activities with a 100-foot streamside buffer distance and on slopes greater than 25% did not produce detrimental effects. However, road construction or staging/loading areas for logging equipment would not meet the less stringent definition and would be subject to the standard requirements of 500 feet and 25% slope.

The impact minimization measures prescribed for Federal mineral development on split estate lands (Federal minerals beneath a non-Federal surface) apply only to the development of the Federal minerals. These impact minimization measures do not dictate the surface owner's management of their lands. The impact minimization measures present restrictions on only those surface activities conducted for purposes of developing the Federal minerals and that are permitted, licensed, or otherwise approved by the BLM.

When the BLM is considering issuing a mineral lease, the agency has a statutory responsibility under the National Environmental Policy Act to assess the potential environmental impacts of the Federal undertaking. It also has the statutory authority under the Mineral Leasing Act (MLA) of 1920, the Mineral Leasing Act for Acquired Lands (MLAAL), and the Federal Land Policy and Management Act (FLPMA) of 1976 to take reasonable measures to avoid or minimize adverse environmental impacts that may result from Federally authorized mineral lease activities. This authority exists regardless of whether or not the surface is Federally owned.

The MLA, the MLAAL, and the FLPMA are not the only statutes that establish such authority. Other statutes that may be applicable include the Clean Water Act, the Clean Air Act, the National Historic Preservation Act, the Endangered Species Act of 1973, the Federal Coal Leasing Amendments Act of 1976, and the Surface Mining Control and Reclamation Act of 1977. Moreover, the recently enacted Federal Onshore Oil and Gas Leasing Reform Act of 1987 specifically requires the BLM to regulate surface disturbance and reclamation on all leases.

Threatened, Endangered, and Candidate Species Protection Actions

The management objectives of threatened, endangered and candidate (TEC) species protection are to maintain biological diversity of plant and animal species; to support WGFD strategic plan population objective levels to the extent practical and to the extent consistent with BLM multiple use management requirements; to maintain and improve forage production and quality of rangelands, fisheries, and wildlife habitat; and to provide habitat for threatened and endangered and special status plant and animal species on all public lands in compliance with the Endangered Species Act (ESA) and approved recovery plans.

Known populations of threatened and endangered species will be protected, as mandated by law. BLM will not authorize activities or commit resources that may jeopardize the continue existence of a species or population (BLM Manual 6840).

The BLM's threatened and endangered species management activities include protecting habitat and known populations, enforcing timing stipulations, conducting surveys, and closing known locations of sensitive populations or habitat to surface-disturbing activities.

Most TEC management activities temper other impacting activities. However, if methods required to protect TEC species include fencing, or other construction, then some short-term, low intensity disturbance may occur. TEC management is beneficial to wildlife and plant species.

Vegetation Resource Management Actions

The objectives of vegetation resource management are to maintain or improve the diversity of plant communities to support timber production, livestock needs, wildlife habitat, watershed protection, and acceptable visual resources; to enhance essential and important habitats for special status plants species on BLM-administered public land surface and prevent the need for any special status plant species being listed as threatened and endangered; and to reduce the spread of noxious weeds.

Vegetation treatments, including timber harvesting, sagebrush spraying or burning, will be designed to meet overall resource management objectives. Cooperative integrated weed control programs implement weed control work on adjoining deeded and state lands in cooperation with county weed and pest districts. The three types of control used by the BLM on public lands are chemical, biological, and mechanical. Biological control can involve the use of insects such as weevils or beetles, and herbivores like controlled, high intensity goat grazing. This method may be used in cooperation with mechanical control (e.g., dozing, cutting, chaining, or chopping). Mechanical methods employ the use of a tractor or caterpillar to pull mowers or brush hogs, or to use two caterpillars to pull large chains in a "U" shape to knock down vegetation. Sagebrush control measures are also implemented by the BLM with control methods using primarily chemical, mechanical, or prescribed fire. Prescribed fire is used as a management tool to improve range forage production, wildlife habitat, timber stand improvement, sale debris disposal, and to reduce hazardous fuel buildup. Noxious weed control is typically implemented along rights-of-way.

Trees will be planted on timber harvest areas that fail to regenerate naturally in order to achieve minimum stocking levels within five years after completing harvest and rehabilitation activities. Pre-commercial tree thinning will be initiated on overstocked seedling- and sapling-size stands. Temporary use of heavy equipment may be associated with these authorized activities.

If herbicides are proposed for use, minimum-toxicity herbicides will be used with appropriate buffer zones along streams, rivers, lakes, and riparian areas, including those along ephemeral and intermittent

streams. Only Federally approved pesticides and biological controls are used. Local restrictions within each county are also followed. Projects that may affect threatened or endangered plants or animals will be modified to protect these species. Pesticide Use Proposals (PUPs) and Biological Use Proposals (BUPs) are developed conjunctively with the County Weed and Pest Districts and the BLM. All PUPs and BUPs are reviewed by the state Noxious Weed Coordinator and approved by the BLM Assistant State Director.

Visual Resources Management Actions

The objective of visual resources management is to maintain or improve scenic values and visual quality, and establish visual resources management priorities in conjunction with other resource values. Visual resources are managed in accordance with objectives for visual resources management (VRM) classes that have been assigned to each FO. Visual resource classification inventories have been developed for some, but not all, of the areas in Wyoming. The designation of VRM classes in an RMP is simply a designation, and tempers or stipulates from a visual resource viewpoint, specific protections or management of other BLM authorized actions. VRM classifications, in and of themselves, do not place on-the-ground projects or ground disturbing activities. Examples of the types of actions or projects required to meet VRM criteria are in the following paragraph.

To improve visual resources, the BLM designs facilities to blend in with the surroundings, reclaims watershed projects and water wells, regulates discharge of produced water, and restricts activities that might degrade visual resources. No activity or occupancy is allowed within 200 feet of the edge of state and Federal highways. Facilities or structures such as power lines, oil wells, and storage tanks are required to be screened, painted, and designed to blend with the surrounding landscape, except where safety indicates otherwise and dependent upon the VRM classification. Any facilities or structures proposed in or near wilderness study areas will be designed so as not to impair wilderness suitability. Generally, VRM classification benefits wildlife and plant species.

Watershed and Water Resources Management Actions

The objective of watershed and water resources management is to maintain or improve surface and groundwater quality consistent with existing and anticipated uses and applicable state and federal water quality standards, to provide for availability of water to facilitate authorized uses, and to minimize harmful consequences of erosion and surface runoff from BLM-administered public land.

Passing of the Water Resources Research Act, Water Resources Planning Act, and the Water Quality Act of 1965 allowed the BLM to expand its water resources program and increased cooperation with soil conservation districts.

Activities authorized under water resources management may include implementation of watershed plans, identification of heavy sediment loads, monitoring and treating soil erosion, evaluating and restricting surface development activities, and monitoring water quality.

Monitoring of streams and rivers for water quality would be very small and short term in nature (a few hours or less). Monitoring would be done with small, hand held kits on site, or water samples would be collected and analyzed in a laboratory off site. Other activities would be to measure stream channelization and evaluate streambank and riparian conditions. Access for these activities would be primarily by vehicle (pickup truck, etc.) and monitoring would be done by personnel walking into and along streams and rivers. Permanent in-stream flow monitoring and continuous water quality analysis gauging stations would be small structures that would require some construction to build (backhoe,

concrete truck or a lift to place a pre-built structure) and some disturbance to streams or rivers during construction and occasional maintenance activities.

Other smaller scale water resource activities would include plugging abandoned wells to prevent contamination or cross contamination of water aquifers and reclaiming (recontouring and revegetating) the associated drill pad. This activity would consist of pouring concrete into the well casing to plug the well, requiring: vehicles, concrete trucks, concrete pumper trucks, personnel, etc. Reclamation of the drill pad after plugging would require the use of loaders, backhoes, graders or bulldozers, seeding equipment, and trucks and trailers to haul the equipment. Instream flow control structures such as drop structures (made of logs, rock baskets, or concrete); weirs; revetments (streambank erosion control structures (trees, logs, etc.)); rip-rap (rocks, boulders, logs, etc.); placing gravel or concrete in streams for crossings and fish spawning; culverts, all requiring equipment and personnel to construct. Equipment might include: vehicles, backhoes, bulldozers, skid loaders, concrete trucks, etc. Planting of riparian plant species to reduce erosion and sediment movement along watercourses would be done either using hand held tools (shovels, augers, or just jamming stems into the ground (willows, cottonwoods, etc.)) or with smaller equipment like motorized augers, backhoes, tree spades, etc.).

Water is produced as a bi-product of the extraction process of developing Coal Bed Natural Gas (CBNG), natural gas, and oil. The area has been drilled to try and produce some of these shallow coal seams for CBNG with little success. Most produced water in western Wyoming is cycled back into the ground via re-injection wells. Some produced water could possibly flow down perennial, ephemeral, or dry drainages, increasing flows and changing the dynamics of the drainage systems. Some of this produced water can be high in trace metals and sodium, which may be detrimental to plants. Much of the produced water is more “pure” and can also be beneficial to wildlife and plant species. This produced water may also be stored in ponds or reservoirs, requiring construction (see below) and changes in landscape to the area.

Larger scale activities associated with water resource management would include the construction, maintenance (of existing), and rehabilitation (of failed) of impoundments/reservoirs for salt and sediment control. These impoundments would be constructed using heavy equipment (graders, bulldozers, loaders, backhoes, dump trucks, etc. and the trucks and trailers to haul them). They usually require: the removal of soil and materials for the catchment basin; building of earthen dams and protecting the dam face with vegetation, mesh material, or rock; and hauling, placement and contouring of fill material and possible building of access roads. Maintenance would consist of using loaders, backhoes, bulldozers, etc. to clean out and haul or contour nearby the sediment removed from the catchment basin to increase water holding capacity. Water diversions may be allowed in some situations (livestock or wildlife watering projects, the use of existing water rights by farmers/ranchers, etc.) and while construction of diversion structures may be of small scale, dewatering of streams/rivers may have a long-term affect on aquatic systems. Few of the water resource management projects listed above would be accomplished on public lands in the Wyoming due to limited water courses, the need for improvement, scattered land ownership tracts, and limited budgets to accomplish the work. This trend is expected to continue over the life of the nine RMPs listed in this BA.

No surface disturbance will be allowed within 500 feet of any spring, reservoir, water well, or perennial stream unless waived by the authorized officer. Pollution prevention plans are developed for actions that qualify under the Wyoming Storm Water Discharge Program to reduce the amount of non-point pollution entering waterways. The rights to water-related projects on public lands will be filed with the Wyoming state engineer's office in order to obtain valid water rights.

Wild and Scenic Rivers Management Actions

The objectives of wild and scenic rivers management for public lands administered by the BLM that meet the wild and scenic rivers suitability factors are to maintain or enhance their outstandingly remarkable values and wild and scenic rivers (WSR) classifications until Congress considers them for possible designation. Wild and Scenic Rivers Management activities of the BLM include studying segments of the river for potential classification by Congress. The suitable determination is based on the uniqueness of the diverse land resources and their regional and national significance, making them worthy of any future consideration for addition to the WSR system.

The designation of WSR status is simply a designation, and tempers or stipulates from a WSR resource viewpoint, specific protections or management of other BLM authorized actions. WSR classifications, in and of themselves, do not place on-the-ground projects or ground disturbing activities. Generally, WSR status is a beneficial impact on wildlife and plant species. Grizzly bear habitat that falls within a WSR segment would generally be beneficially impacted by the more restrictive criteria applied to those stream/river segments, including spawning fish or berry producing plants that provide a food source for grizzly bears and security habitat.

Wilderness Resources Management Actions

Wilderness Study Areas (WSAs) on public lands are single-use resources managed in accordance with decisions issued by the U.S. Congress. The BLM managers ensure that proposed actions are consistent with the land use plan in effect for the area. Absence of roads, total aerial extent, naturalness, solitude, or a primitive and unconfined type of recreation, and other ecological, geological, educational, scenic, or historical features may be considered wilderness values.

Activities associated with this program may include inventories to identify wilderness areas, public involvement with the wilderness study process, authorization of mining claims under unique circumstances, or evaluations of proposed actions to determine potential impacts to known or potential wilderness values.

All WSAs are managed under the Interim Management Policy (IMP) until Congress issues management guidelines. There are three categories of public lands to which the IMP applies: (1) WSAs identified by the wilderness review required by Section 603 of the Federal Land Policy Management Act (FLPMA), (2) legislative WSAs (i.e., WSAs established by Congress, of which there are none administered by the BLM in Wyoming), and (3) WSAs identified through the land-use planning process in Section 202 of the FLPMA.

A Plan of Operation is prepared by operators before any mining exploration begins. The plan identifies the mining strategy and attempts to minimize environmental impacts. Discovery work for WSAs under Section 603 must be done to non-impairment standards. Only “unnecessary and undue degradation” requirements apply to Section 202 WSAs.

A mining claim may be staked at any time in an existing WSA. National Environmental Policy Act (NEPA) analysis is required, however, before any activity is authorized in a WSA. Environmental Assessments (EAs) or Environmental Impact Statements (EISs) are prepared to determine if a proposal meets non-impairment criteria. The use of categorical exclusion to eliminate this analytical process for uses and facilities on lands under wilderness review is not allowed.

The designation of WSA status is simply a designation, and tempers or stipulates from a WSA viewpoint, specific protections or management of other BLM authorized actions. WSA classifications, in and of themselves, do not place on-the-ground projects or ground disturbing activities. Generally, WSA status is a beneficial impact on wildlife and plant species.

Wild Horse Management Actions

The management objective of wild horse management is to maintain a viable herd that will preserve the free-roaming nature of wild horses in a thriving ecological balance and to provide opportunity for the public to view them. The FLPMA amended the Wild and Free Roaming Horse and Burro Act to authorize the use of helicopters in horse and burro roundups. Wild horse and burro numbers on BLM lands in Wyoming were estimated at 37,000 in 2004 (Breckenridge 2004); this compares with 17,000 in the entire West in the late 1960s.

The Wild Horse Program herds, corrals, transports, monitors, and rounds up horses for wild horse management. Herds are monitored by airplane census and counted each year. Helicopters may also be used to round up wild horses. The construction of corrals and capture facilities could cause impacts through ground disturbance and concentrated human presence. Horse round-up generally causes concentrated compaction by horse hooves in corral and load-out areas. Placement of capture corrals and capture facilities outside of special status species habitat is important as the concentrated disturbance could potentially be an adverse affect to these species and/or their habitats.

Land Use Plans are used to plan wild horse management. The BLM decides how many horses to allow on a certain area. This is termed the Approximate Management Level and the BLM can adjust horse numbers as needed. Issues taken into consideration include carrying capacity, trends in utilization, and public input. The BLM's wild horse management specialists coordinate with wildlife biologists and archaeologists to ensure that wild horse management will not cause adverse impacts to biological or cultural resources. There is no grizzly bear habitat located within any wild horse herd management areas in Wyoming. No wild horse herd management areas occur in the Kemmerer or Pinedale FOs, although both FOs have wild horse herd areas that are not currently being managed for wild horses.

Wildlife Habitat Management Actions

The objectives of wildlife habitat management are to maintain the biological diversity of plant and animal species; support the strategic plan population objective levels of the Wyoming Game & Fish Department (WGFD) to the extent practical and to the extent consistent with BLM multiple-use management requirements; maintain and, where possible, improve forage production and quality of rangelands, fisheries, and wildlife habitat; and, to the extent possible, provide habitat for threatened and endangered and special status plant and animal species on all public lands in compliance with the Endangered Species Act (ESA) and approved recovery plans. Habitat management plans are developed with goals and objectives specifically aimed at the conservation of special status species and/or their habitats.

Approximately 90% of wildlife program activities are in support of other resource programs such as fuels reductions, density of timber stands in deer and elk winter habitats, oil and gas exploration, timber harvest, or prescribed fires. Specific management goals and actions are for several wildlife groups and habitats including big game ranges, wetland and riparian areas, elk habitat, raptor and grouse breeding areas, and animal and insect damage control. Wildlife management maintains and, where possible, improves forage productions and quality of rangelands, fisheries, and wildlife habitat, and provides habitat for threatened, endangered, and special status animal and plant species on BLM-administered public land surface in compliance with the ESA and approved recovery plans.

Big game and fisheries management levels identified in the WGFD 1990-1995 strategic plan are supported by the BLM. The BLM cooperates with the WGFD in introducing or reintroducing native and acceptable non-native wildlife and fish where potential habitat exists. Wildlife habitat is monitored and population adjustments and habitat improvements are recommended to the WGFD, as appropriate. The BLM works with the U.S. Fish and Wildlife Service and the WGFD in evaluating and designating critical habitat for threatened and endangered species on BLM-administered public lands.

Wildlife program projects may include surveying, monitoring, habitat improvement activities such as developing habitat management plans, and creating cooperative management areas. The categories of wildlife management activity for the BLM include developing stipulations and protective measures, acquiring land, conducting inventories, performing livestock or forestry-related activities, and wildlife and fisheries habitat improvement projects.

Plant and animal resource inventories often include sampling and documenting plant and animal population and habitat occurrence and conditions. Techniques can include anything from satellite imagery mapping and interpretation; to the actual measurement of resource transect parameters on the ground, or the collection of information for laboratory analysis. These activities often include off-road field travel, but generally no significant surface disturbance requiring large reclamation efforts. Many of the same techniques are often used for monitoring management implementation effectiveness following implementation of a set of management projects or actions.

Habitat development and improvement projects may include, but are not limited to; the development of water sources or water regulating structures including spring developments, guzzlers, dikes or water spreading devices, development of islands in ponds and reservoirs, modification of existing projects, construction of artificial waterfowl or raptor nesting structures, construction of small game cover brush piles, and construction and maintenance of fences. Fencing projects in the wildlife program are typically small in area, to create an exclosure or to protect a guzzler or spring development and would usually not exceed 100 to 200 feet on a side. These actions could require the use of hand tools, mechanical or heavy equipment, hauling or transporting materials (gravel, dirt, tanks, etc.), and clearing vegetation. When fencing is proposed, whether permanent, temporary, or electric, they are built to fencing standards developed in the BLM Fencing Manual Handbook (H-1741-1, Fencing, Rel 1-1572, 12/6/1989). These standards are required to reduce the amount of restriction or hazards to wildlife. Fence construction and maintenance would likely require access to the site, possible removal of vegetation or uneven surface materials (rocks, trees, sand, etc.), digging postholes, stringing wire, building fence braces, building fence jacks, cutting or removing building materials on or off site, (fence posts, rails, rocks, etc.) weed management (spraying, cutting, pulling, etc.). Construction of waterfowl ponds and islands typically requires major surface disturbance and earth work with heavy dirt moving equipment like bulldozers and scrapers. Generally, permanent roads are not constructed for access to wildlife program project sites.

The BLM develops stipulations and protective measures to enhance wildlife and fisheries habitat. These include authorizing withdrawals of some areas from mineral entry; limiting access of four-wheel drives, snowmobiles, horseback, and pedestrians; prohibiting surface development; and imposing road closures. The BLM may acquire riverfront land or easements, and conducts inventories of potential habitat and occurrences of threatened, endangered, and sensitive species.

Livestock-related wildlife management activities include the development of water sources, construction and maintenance of fences, the management of other resource activities to conserve forage and protect habitat, the improvement of forage production and quality of rangelands, and the improvement of range with mechanical treatment. Forestry-related wildlife management activities include the management of timber and the promotion of cutting, thinning, planting, seeding, and pitting.

Other wildlife management activities for terrestrial species include introducing species, monitoring habitat, fencing modifications for antelope passage, implementing public use closures for wintering elk, development of water areas for waterfowl and shorebirds, development of springs or seeps, rock or manmade catchments for collecting water for wildlife watering, recommending habitat improvement projects, treatment to control exotic plants, prescribed burns, meadow restoration, cabling of junipers, changing types of grazing and season of grazing, prescribed burning, developing islands, allowing farming, managing accesses, authorizing agricultural entry and disposal, and using surface protection impact minimization measures.

Other wildlife management activities for aquatic species include establishing a baseline fisheries inventory, fish habitat improvement, bank stabilization, development of watering sources, modification of barrier fences, exotic fish removal, construction of instream barriers to protect species from non-native invaders, installation of revetments and fish passage structures, installation of log overpours, macroinvertebrate sampling and analysis, installing gabion baskets, and placement of large boulders for instream fish habitat.

Existing Impact Minimization Measures

Certain existing guidance serves to mitigate potential actions on grizzly bears, and they are reviewed below.

The Wyoming BLM Mitigation Guidelines for Surface Disturbing and Disruptive Activities are intended to attain statewide consistency in establishing requirements for avoiding and mitigating environmental impacts and resource and land use conflicts. The Wyoming BLM Mitigation Guidelines for Surface Disturbing and Disruptive Activities includes several guidelines that are applicable to a variety of resources, including the grizzly bear. These guidelines apply to all surface disturbing activities on lands administered by BLM and are considered in the assessment of potential affects. Under the wildlife mitigation guideline, the following guidance applies to the grizzly bear:

Portions of the authorized use area legally described as (legal description), are known or suspected to be essential habitat for (name) which is a threatened or endangered species. Prior to conducting any onsite activities, the lessee/permittee will be required to conduct inventories or studies in accordance with BLM and U.S. Fish and Wildlife Service guidelines to verify the presence or absence of this species. In the event that (name) occurrence is identified, the lessee/permittee will be required to modify operational plans to include the protection requirements of this species and its habitat (e.g., seasonal use restrictions, occupancy limitations, and facility design modifications) (subpart 2d of Wildlife Mitigation Guideline).

The BLM Guidelines for Livestock Grazing Management (Standards for healthy rangelands and guidelines for livestock grazing management for public lands administered by the Bureau of Land Management in the state of Wyoming) also apply to surface disturbing activities. The guidelines apply to all actions that may disturb or disrupt the surface in all of the FOs. Although all the protective standards listed in the guidelines are valuable to habitat protection, Standard #2 and Standard #4 relate to the grizzly bear. Standard #2 addresses protection of riparian vegetation, which is an important habitat type for elk because of the forage it supplies. Standard #4 relates to endangered species.

Grizzly Bear Management Guidelines and Conservation Strategy

The Grizzly Bear Management Guidelines (IGBC 1986) were developed as an interagency effort and submitted to the U.S. Fish and Wildlife Service for formal consultation. The returned Biological Opinion concurred that the implementation of the Guidelines would promote conservation of the grizzly bear.

These Guidelines are the basis of guidance for Section 7 consultations while the grizzly bear remains listed under the ESA.

The Final Conservation Strategy for the Grizzly Bear in the Yellowstone Ecosystem (ICST 2003) was developed to be the document guiding management and monitoring of the Yellowstone grizzly bear population and its habitat upon recovery and delisting, and thus is the guiding document for future management of the bears. Delisting of the grizzly bear was anticipated to occur in 2005, but may be further delayed. The Conservation Strategy includes the Wyoming, Idaho, and Montana state management plans.

Wyoming BLM is a signatory to the Conservation Strategy. There is some implicit obligation by the signatories to help maintain the 500 grizzly bears specified in the Strategy. Because the 500 bears may require more area than what is present in the PCA (Bruscino 2004), this may include areas outside the PCA, including BLM land

CODY FIELD OFFICE

The Cody Record of Decision and Approved Resource Management Plan (RMP) was signed in November 1990 (BLM 1990). The RMP provides the management direction for approximately 891,600 acres of public surface lands and 1,508,000 acres of federal mineral estate within the Cody Field Office FO. The Cody FO is located in north central Wyoming and occupies portions of Big Horn and Park Counties.

Environmental Baseline

This section presents a summary of the grizzly bear distribution in the Cody FO and an analysis of the effects of past and ongoing human activities (including Federal, State, tribal, local and private) that may influence grizzly bears and their habitats. There is no BLM land within the Primary Conservation Area (PCA). There are 126,521 acres of mapped grizzly bear distribution (from Schwartz et al. 2002) on BLM land in this FO (**Map 3**). Cody is the FO with the largest acreage of grizzly bear habitat.

Data from radio-collared bears, confirmed observations of bears and bear sign from Wyoming Game and Fish officers, known bear-human conflicts, and human-caused bear mortalities were used to define the following areas in the Cody FO as occupied and used by grizzly bears (Bruscino 2004):

- Clark's Fork Canyon area, including Bald Ridge.
- Rattlesnake Mountain.
- Sheep Mountain (since the early 1990s). Known army cutworm moth aggregation sites occur west of BLM lands in the Wapiti Ridge areas. These are the largest complex of known moth sites in the GYA. BLM lands in Hardpan and Houlihan Creek drainages (southwest of Sheep Mountain) are important spring bear habitat and seasonally highly used. Large numbers of elk occur here and are used by grizzly bears in the form of winter kill and active killing of calves.
- East end of Carter Mountain, where a resident bear population occurs and also makes use of Meeteetse, Rose, and Rawhide creeks; first documented in 1994. BLM lands on Carter Mountain are close to moth aggregation sites (themselves not on BLM land) on Carter Mountain.
- Upper Greybull River.
- There are reports of grizzly bears on Heart Mountain, though these are not yet confirmed.

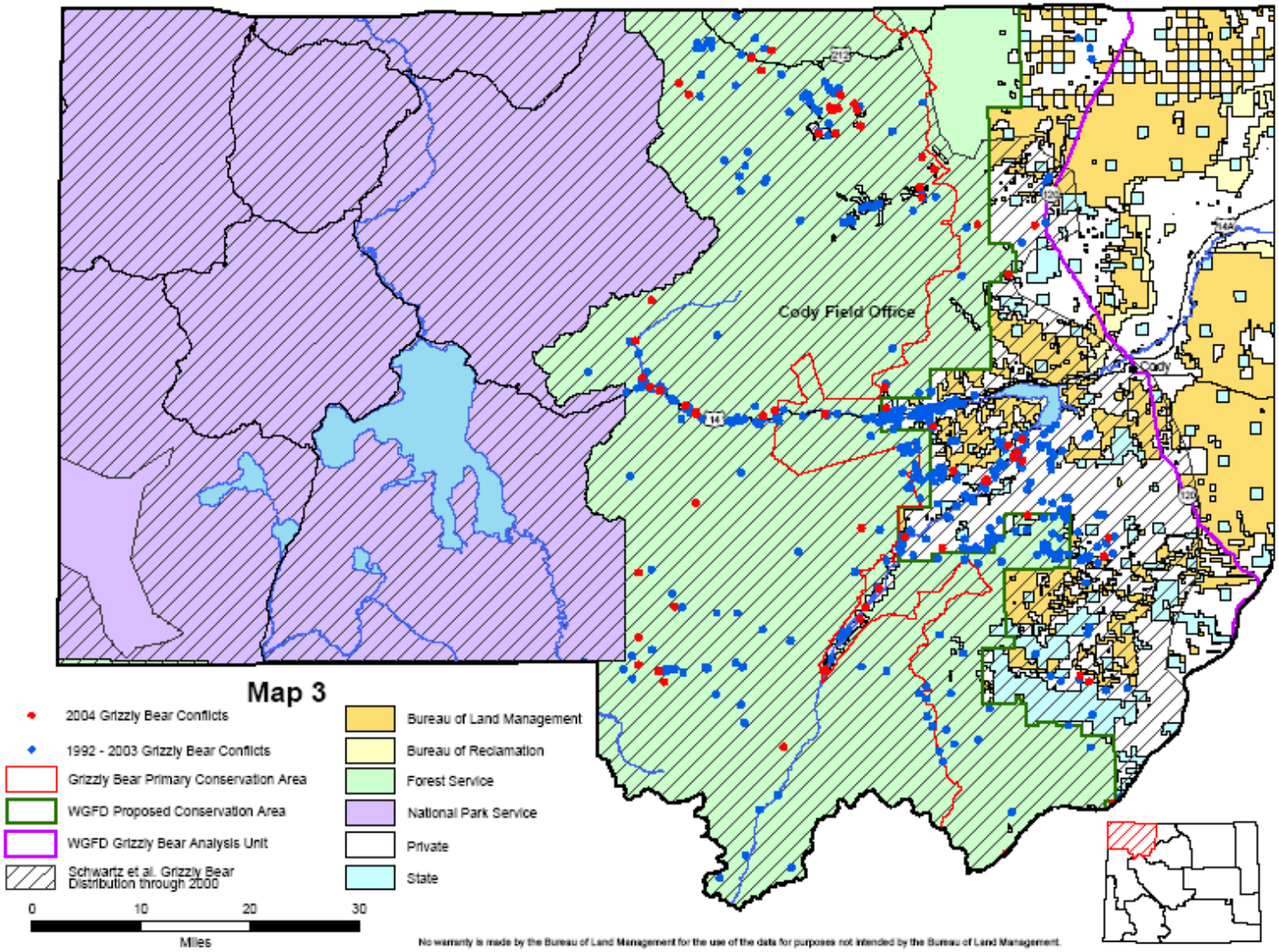
Isolated populations of whitebark pine occur on Rattlesnake Mountain, Meeteetse Creek, and Carter Mountain (Harrell 2004). Army cutworm moths aggregation sites occur in the alpine habitats of Carter Mountain and Sheep Mountain, although these are not be on BLM land. Cutthroat trout occur in the South Fork and North Fork, where BLM has small isolated parcels of riverfront land. Trout also occur on two smaller creeks on Carter Mountain, Rose and Rawhide creeks.

Existing Impact Minimization Measures

Most RMPs contain restrictions or measures that are incorporated as stipulations on use permits. These measures cover a broad range of protective features (protection of ungulate calving grounds, protection of raptors, greater sage-grouse, wet soils, etc.) that may provide some benefit to grizzly bears. The following section presents measures included in the Cody RMP that may directly or indirectly minimize impacts to the grizzly bear:

(a) "Through land exchanges, the BLM will try to acquire nonfederal lands…that contain recovery habitat for threatened or endangered species" (BLM 1990, p. 13).

Map 3 Grizzly Bear Distribution and Primary Conservation Area in the Cody Field Office (from Schwartz et al. 2002).



(b) "Vehicular use on BLM-administered public lands is designated as limited to designated roads and trails in the following areas – Essential and recovery habitat for threatened and endangered species" (BLM 1990, p. 22).

(c) "Use of chemicals on noxious weeds will be controlled in areas designated as essential or recovery habitat for threatened, endangered, or sensitive plant and animal species in accordance with site-specific habitat requirements" (BLM 1990, p. 39).

(d) "The BLM will make every reasonable attempt to coordinate with these agencies (Wyoming Game and Fish Department and U.S. Fish and Wildlife Service) and others who are interested in fish and wildlife habitat management activities on BLM-administered public lands and to accommodate their interests and concerns whenever possible" (BLM 1990, p.40).

(e) "Portions of the authorized use area legally described as (legal description), are known or suspected to be essential habitat for (name) which is a threatened or endangered species. Prior to conducting any onsite activities, the lessee/permittee will be required to conduct inventories or studies in accordance with BLM and U.S. Fish and Wildlife Service guidelines to verify the presence or absence of this species. In the event that (name) occurrence is identified, the lessee/permittee will be required to modify operational plans to include the protection requirements of this species and its habitat (e.g., seasonal use restrictions, occupancy limitations, facility design modifications)" (BLM 1990, Appendix B, p.60).

(f) "The construction or development of a range improvement project would be denied if the proposal would affect or jeopardize the continued existence of federally listed threatened or endangered plant or animal species and/or its habitat. Consultation and coordination with USFWS would be required under such conditions to determine acceptable mitigating measures to avoid possible impacts" (BLM 1990, Appendix G, p.94).

Analysis of Proposed Management Actions and Effects

The Cody RMP (BLM 1990) includes descriptions of each management prescription applied within the FO. These activities are summarized in the Introduction, above. Refer to the Cody RMP for a complete explanation of each prescription.

Air Quality Management

Management Actions

No specific management actions are presented with this program. However, actions conducted under other resource programs, including fire or mining, will be conducted in a manner so as to avoid violation of the Wyoming and National ambient air quality standards.

Effects Analysis

Actions related to air quality management are extremely small in scope, of short duration, and infrequent. They will result in no impacts to grizzly bear behavior, denning habitat, or foraging habitat. No air quality monitoring stations are currently in any grizzly bear habitat on BLM lands within the Cody FO. Actions related to air quality management on other activities will not result in negative impacts to grizzly bears or their habitat. These management actions will likely result in maintaining or improving air quality conditions throughout the FO, which may have secondary benefits to grizzly bears.

Determination

Implementation of air quality management actions, as presented in the Cody RMP (1990), will have **no effect** on the grizzly bear, due to the fact that this management activity is not anticipated to impact grizzly bear behavior, or foraging or denning habitat.

Areas of Critical Environmental Concern

Management Actions

There are four ACECs in the Cody FO: Carter Mountain (approximately 7,819 acres), Five Springs Falls (approximately 160 acres), Little Mountain (approximately 22,270 acres), and Sheep Mountain Anticline (approximately 12,285) acres.

Further information regarding these special management area designations and Special Recreation Management Areas (SRMAs) is in the Cody RMP (1990). The Chapman Bench area (about 15,400 acres) was proposed and considered for designation as an ACEC. All except 160 acres of the area is withdrawn for purposes of the Bureau of Reclamation (BOR). Because the BOR has the administrative authority for the area, there is no authority for the BLM to make planning and management decisions for the area and there is no authority for an ACEC designation on the area. However, the BLM will coordinate with the BOR (under provisions of BLM/BOR cooperative agreements) toward managing the area for its important long-billed curlew and mountain plover habitat. In the future, should the BOR withdrawal be terminated and should the total administrative authority for the area be transferred to the BLM, the needs and possibilities for special management designation can be reconsidered.

Exploration and development of leasable minerals is allowable in three of the ACECs; locatable minerals (approximately 7,819 acres in one of the ACECs. All four are avoidance areas for right-of-way, and all allow continuation of livestock grazing. Carter Mountain is the only ACEC in grizzly bear habitat. Surface-disturbing activities are prohibited on slopes greater than 7% to protect fragile tundra vegetation and soils. If rights-of-way through the ACEC will be required or the ACEC cannot reasonably be avoided, the effects of right-of-way construction on soils, watershed, and alpine tundra will be intensively mitigated.

Only the Carter Mountain ACEC falls within potential grizzly bear habitat.

Effects Analysis

This program analysis is for the designation and management of ACECs. Management actions associated with ACECs will be analyzed under the program covering that activity. There are no impacts to the grizzly bear in the establishment of an ACEC. Most activities are limited due to ACEC status. There is the possibility that some management action could occur, specific to an ACEC that is not addressed by the existing program management plans. Implementation of ACEC management involves no actual ground disturbing activities and primarily involves a narrow, focused outlook on management of the ACEC providing limited uses and restricting most activities from either occurring or tempering them so that they are less disruptive in nature.

Determination

Implementation of ACEC management actions, as presented in the Cody RMP (1990), is **not likely to adversely affect** the grizzly bear, due to possible **beneficial effects**. This determination is based on the

premise that implementation of ACEC management involves no actual ground disturbing activities and therefore no anticipated disturbance to grizzly bear habitat; the low likelihood that a management action, specific to an ACEC, would occur that did not fit within the existing program management plans; no increased human presence; and likely will provide beneficial affects due to limiting activities in particular ACECs that grizzly bears might inhabit.

Cultural and Paleontological Management

Management Actions

The cultural and paleontological resources management objective is to protect, study and expand the interpretation of these resources. Emergency site stabilization and long-term protection projects will be completed on five known sites (about 60 total acres), including the Hanson prehistoric occupation site and several rock art sites. Activity plans will be prepared for the Hanson prehistoric occupation site, several rock art occurrences, historic trails, including the Bridge Trail, the Nez Perce (Ne-me-poo) Trail, the Fort Washakie to Red Lodge stage route, and other important sites such as the Wiley and Sidon canals.

The Hanson Prehistoric Occupation site is a world-quality site. Management actions for this area will include nominating the site as a National Historic Landmark and for placement on the "World Heritage List." Areas in the immediate vicinity of significant cultural and paleontological resource sites, and within 0.25 mile or the visual horizon (whichever is closer) of significant segments of historic trails and canals are avoidance areas for surface-disturbing activities. Included under these provisions are the Bridger Trail, the Nez Perce (Nee-me-poo) Trail, the Fort Washakie to Red Lodge stage route, and the Wiley and Sidon canals.

Effects Analysis

Actions associated with cultural resource and paleontological management are sparsely distributed across the landscape, are very small in physical extent, and involve very little disturbance to the area. Frequently, the goal is to leave the area intact with no disturbance. These activities are unlikely to occur in grizzly bear habitat.

Determination

Implementation of cultural resource management actions, as presented in the Cody RMP (1990), is **not likely to adversely affect** the grizzly bear, due to **discountable effects**. This determination is based on the premise that cultural surveys implemented for other projects could lead to people working in occupied grizzly bear habitat, creating some possibility for conflict, although these activities are very unlikely to occur in or near grizzly bear habitat. Behavior guidelines for humans in occupied bear country and application of the grizzly bear conservation measures should minimize the potential for such conflicts.

Fire Management

Management Actions

Portions of the FO that are located west of State Highway 120 are designated as full suppression areas for wildfires. This area occupies 240,100 acres. The remainder of the FO, approximately 841,100 acres, is designated a limited fire suppression area. Some methods of wildfire suppression will be restricted in sensitive resource areas. The use of heavy equipment will be restricted or prohibited in areas of fragile

soils, in wetland and riparian areas, on lands above significant caves, on Sheep Mountain west of Cody, on Carter Mountain, and in timbered areas of the east end of Rattlesnake Mountain.

Effects Analysis

Fire management actions, particularly actions associated with wildfire suppression and prescribed fire, whether planned or unplanned, have the potential to occur in habitats occupied by grizzly bears. Fire exclusion alters the natural mosaic of successional stages that promote a mixture of forest openings and structural diversity on the landscape level. This limits the function of fire in perpetuating certain vegetation conditions, such as the development of early successional shrubs that can provide berry food resources for bears. Burns resulting from wildfires in this century are important producers of fruiting shrubs which provide food energy for the bears (IGBC 1986). Control of such natural fires would reduce these potential future foods for grizzly bears. Roads constructed in association with fire suppression, if not revegetated, can lead to increased access into higher altitude sites by humans resulting in increased human/bear interactions, the main cause of mortality for grizzly bears (Schwartz et al. 2003).

Prescribed burning can lead to an increase in early seral stages that promote shrub development. This can provide food resources for bears. Some grizzlies appear to derive much of their energy from the fruits of shrubs, including huckleberry and buffaloberry. Prescribed burns may function to restore the natural fire regime and promote seral succession.

Prescribed burning, construction of firelines, use of off-road vehicles, and use of hand tools and heavy equipment all have the potential for disturbing grizzly bears by causing them to abandon or avoid particular habitats temporarily, although the actual fire is much more likely to cause grizzly bears to be temporarily displaced. Suppression activities are likely to cause some loss of habitat. However, fire suppression disturbances are anticipated to be temporary and of relatively short duration. They could pose a problem if they were located at a concentrated food resource, but this is highly unlikely on BLM lands because these food resources are lacking. Whitebark pine stands are in areas with restrictions on use of mechanical equipment.

Conservation measures in place that will reduce adverse impacts include providing educational packets, specifications for food and garbage handling on operation plans and special use permits, and planning of authorized activities with grizzly bears in mind. Prescribed fires are not planned in grizzly habitat at this time in the Cody RMP (1990) planning area.

Determination

Implementation of fire management actions, as presented in Cody RMP (1990), is **not likely to adversely affect** the grizzly bear, due to **insignificant effects**. This determination is based on the low potential for activities associated with wildfire suppression and prescribed burning to substantively reduce the potential for grizzly bears to utilize the landscape and find food and denning sites and the conservation measures in place to protect grizzly bears and their habitat. Fire suppression affecting the development of berry producing shrubs, and the creation of temporary roads during fire suppression activities are anticipated to be infrequent. Other disturbances are minor and temporary in nature. In the event of a wildfire and immediate suppression is required in grizzly bear habitat, as many conservation measures as possible will be applied that do not hinder safety or property protection. The USFWS will be contacted and emergency consultation will take place at the earliest possible time if grizzly bear habitat is affected or impacted.

Forestland Management

Management Actions

Forestlands on Rattlesnake Mountain are in a special Forest Management Plan area.

Effects Analysis

Forestland management actions occur in coniferous habitats, which are the same areas that can be used by grizzly bears. Although there is the potential for these activities to be conducted during winter when bears are hibernating, this is often impractical due to the complications of snow cover and severe weather conditions.

Timber harvest, especially selection and group selection cuts and small clearcuts with no dozer piling of slash and no mechanical soil scarification, leads to openings in which successional processes produce important amounts of herbs and shrubs bearing fruits eaten by grizzlies. Production of grizzly food sources in these cuts is often greater than in uncut sites in the same habitat types. This indicates that certain timber harvest practices can be used in some forest stands to provide habitat diversity, and that habitat quality can probably be increased or enhanced by creating openings producing grizzly food (IGBC 1986). Thinning and seedcuts would open up the canopy and produce more diverse and productive vegetation types, and would increase early spring foraging opportunities.

New roads created for timber harvest activities, and not immediately revegetated, can lead to an increase in the number of people using an area and to potential interactions with grizzlies, depending on the access to the created roads. Controlling access via locked gates could avoid this problem. Bear-human interactions are one of the highest sources of mortality for bears (Schwartz et al. 2003). Grizzly bears are sensitive to disturbance associated with roads, and may avoid areas within 2.5 miles of roads (Mattson et al. 1986). Such displacement from quality habitats may prevent dispersal, force bears to use poorer quality sites, and cause social disruption (Kasworm and Manley 1989, McLellen 1989). Road avoidance may result in higher mortality and lower fecundity of displaced individuals (Mattson et al. 1986). However, forested habitat on BLM lands mainly provided cover for grizzly bears and do not provide the significant resources known from the areas inside the PCA.

In summary, forestry management can lead to more human intrusion and some loss of cover but those are the only potential adverse affects likely on BLM land. A number of conservation measures apply to forestland management, including planning of authorized activities with grizzly bears in mind, providing educational packets, food and garbage safeguards, no whitebark pine cutting,. These protective measures will substantially reduce impacts to grizzly bears from forest management activities.

Determination

Implementation of forest management actions, as presented in the Cody RMP (1990), is **not likely to adversely affect** the grizzly bear, due to **insignificant effects**. This determination is based on the limited amount of forest management activities that occur and conservation measures that can be incorporated into proposed forest management projects to avoid the potential for adverse affects to grizzly bears.

Geothermal Management

Management Actions

The geothermal resources management objective is to maintain opportunities for geothermal exploration and development.

Effects Analysis

Activities and potential effects to grizzly bears that result from development of geothermal resources are not unique and are similar to potential effects from mineral and oil and gas development. However, all known geothermal activities are at a great distance from forested habitat. It is not anticipated that there will be any impacts to grizzly bear behavior or denning and foraging habitats. There are no current geothermal leases in Wyoming at this time.

Determination

Implementation of geothermal management actions, as presented in the Cody RMP (1990), will have **no effect** on the grizzly bear because these activities do not occur in or near habitat and no geothermal activities are currently taking place in Wyoming.

Hazardous Materials, Hazardous Waste, and Other Hazards Management

Management Actions

The hazardous materials, hazardous waste, and other hazards management objective is to protect public health and safety on BLM-administered public lands and prevent waste contamination due to any BLM-authorized actions.

For BLM-authorized activities that involve hazardous materials or their use, precautionary measures will be used to guard against releases or spills into the environment.

BLM-administered public land sites contaminated with hazardous wastes will be reported, secured, and cleaned up according to applicable federal and state regulations and contingency plans. Parties responsible for contamination will be liable for cleanup and resource damage costs, as prescribed in federal and state regulations.

If hazards should be identified, the BLM will provide appropriate warnings and establish precautions for safety hazards associated with the use of any areas on BLM-administered public lands.

Effects Analysis

Emergency responses to hazardous materials, hazardous waste, and other hazards occur very infrequently, are limited in scale, and typically restricted to roadways or other areas of human activity, where grizzly bears will likely have become accustomed to some degree of human disturbance.

Determination

Implementation of hazardous materials management actions, as presented in the Cody RMP (1990), is **not likely to adversely affect** the grizzly bear, due to **discountable effects**. This determination is based on

the extremely low likelihood that releases of hazardous materials and subsequent response actions will occur in or destroy suitable grizzly bear habitat. In the event a hazardous materials cleanup is required in grizzly bear habitat, as many conservation measures as possible will be applied that do not hinder safety or property protection. The USFWS will be contacted and emergency consultation will take place at the earliest possible time if grizzly bear habitat is affected or impacted.

Lands and Realty Management

Management Actions

The BLM will seek to acquire and retain access in several areas, including recreational access along the North and South Forks of the Shoshone River.

Approximately 55,900 acres of BLM-administered lands have been identified for disposal in the Cody FO. Proposals for disposal of any BLM-administered lands in the FO will be considered. All disposal actions will be assessed for potential effects to other important resources prior to approval. Priority will be given to disposal of lands proposed to meet community needs. Exchange will be the preferred method of disposal or acquisition of lands by BLM. Lands included in several sections within the Cody FO will be targeted for acquisition because these lands contain recovery habitats for threatened and endangered wildlife species.

Designated utility and pipeline corridors and communication site windows include areas of existing right of way concentration areas and three existing communication sites. These designated corridors and windows are the preferred locations for future communication sites and utility and pipeline rights of way. Most of the FO is open for location of utility and transportation systems. Proposals will be addressed on an individual basis with emphasis on avoiding potential conflict areas.

The areas within 2 miles of the Bighorn River and within 1 mile of the Shoshone and Greybull Rivers and the Clark Fork of the Yellowstone River are avoidance areas for construction of aboveground power lines.

Reviews of withdrawn lands, under section 204(I) of Federal Land Policy and Management Act (FLPMA), will be completed to determine whether withdrawals are serving or needed for their intended purposes. These reviews are not a part of developing the RMP. Thus, no decisions are made on the termination of any withdrawals in this RMP. Existing stock driveway withdrawals will be retained, although the BLM reserves the right to modify historic trailing routes and use to mitigate any impacts associated with trailing, or to deny trailing use if the impacts cannot be adequately mitigated.

Withdrawals from locatable mineral entry and development will be initiated on the BLM-administered Bighorn River HMP/RAMP tract and the BLM-administered by BLM in the Yellowtail Wildlife Habitat Management Unit (HMU). Withdrawals from locatable mineral entry and development will be initiated on the Five Springs Falls ACEC and in the Little Mountain ACEC.

About 500,000 acres of land administered by BLM that were classified under the provisions of the Classification and Multiple Use (C&MU) Act were initially reviewed in 1981. At that time, C&MU retention classifications and segregations from the land laws were terminated on all but 2,840 acres and segregations from the mining laws were terminated on 200 acres.

The C&MU classifications in the FO were established by BLM and no other agencies or administrative authorities were involved. Approximately 493,000 of these acres were classified for retention in federal ownership for multiple use management and were segregated from disposal through operation of public lands laws. The remaining 7,000 acres were also classified for retention and multiple acres were also

classified for retention and multiple use management and segregated from disposals, but in addition, were segregated from mineral location through operation of the mining laws, to protect important resource values.

Review of the remaining 497,000 acres of lands administered by BLM in the FO indicated that all of the classifications were either no longer serving their intended purpose or no longer needed for their intended purpose. These lands will be managed as follows:

Any terminations of C&MU classifications that were not completed in 1981 will be completed.

When classification terminations are processed, they will be reviewed to identify needed refinements to the RMP management decisions or to identify the need for new protective withdrawals to be initiated. If necessary, the RMP will be amended.

Recreation values and rare plants at Five Springs Falls and important caves and scenic values with the Little Mountain ACEC will remain closed to locatable mineral entry and development under the existing C&MU classifications, until after the new withdrawals are in place.

All remaining lands under previous C&MU classifications will be managed under the various provisions and management decisions of the Cody RMP, as they apply.

Effects Analysis

Management of existing access or acquisition of new access to lands administered by BLM is not expected to alter grizzly bear behavior. Lands under new administration may result in positive effects to grizzly bear habitats by securing these lands and managing them under BLM provisions.

Lands and realty management actions associated with exchanges are not expected to negatively impact grizzly bear behavior or habitats. Current BLM land holdings would be evaluated for unique characteristics prior to disposal, including suitability and use by grizzly bears. Lands identified as important for grizzly bears would not likely be available for disposal. Lands not under BLM jurisdiction that are suitable or occupied grizzly bear habitats may be targeted for acquisition and subsequent management by BLM. Such acquisitions would provide benefits to grizzly bear habitats that may not be afforded under non-federal ownership.

Corridors are designated and managed to accommodate power lines, communication towers, pipelines, and roads. Roads can be a source of fragmentation of grizzly bear habitat resulting in reduced mobility and reduced ability to utilize otherwise secure habitat. Roads and other linear access are significant factors in habitat deterioration and increased mortality of grizzly bears (Schwartz et al. 2003). Roads increase the opportunity for human access and result in an increase in human-bear interactions, a major source of mortality for bears.

Disposal or transfer of public lands with potential grizzly bear habitat through Desert Land Entry, public sale, exchange, Wyoming indemnity selection, or Recreation and Public Purposes (R&PP) leases or patents may affect the bear's ability to utilize suitable habitat and travel corridors linking desirable habitats. The overall goal of field office staff is to maintain lands that contain potential habitat for the bear; however, large transfer of acreage due to land tenure actions may occur.

The issuance of ROWs and leases (utility transportation corridors), specifically ROWs for ditches, canals, and roads may affect the grizzly bear if the associated construction is within the vicinity of travel corridors or areas between different seasonal foraging sites. This may cause short-term behavioral

avoidance of these areas by the grizzly bear due to the presence of human activity. The issuance of temporary use permits, and construction activities associated with fencing of revegetation sites require an analysis to determine if they are present in potential habitat areas and travel corridors and would have similar short-term avoidance impacts.

The acquisition of access easements as well as Rights-of-way/leases include powerlines, communication sites, pipelines, ditches and canals, roads (includes stream crossings), well pads, reservoirs, buried telephone and fiber optic lines, wind power generation farms and facilities, compressor stations and other facilities, temporary use permits, and fence re-vegetation sites and designate, cancel, or change stock trail driveways activities may cause short-term behavioral avoidance of these areas during construction/maintenance operations and would have an insignificant effect on the grizzly bear. The establishment of withdrawals, acquisition of conservation easements, and road closures/rehabilitation would close areas from certain activities that could have a negative effect on the grizzly bear; closing areas creates undisturbed habitat for grizzly bear.

Actions associated with classifications and multiple use are not expected to impact grizzly bear behavior or habitats.

Conservation measures in place that will reduce adverse impacts include providing educational packets, planning of authorized activities with grizzly bears in mind, and implementation of strategies to reduce human-bear conflicts proactively.

Determination

Implementation of land resource management actions, as provided in the Cody RMP (1990) is **not likely to adversely affect** the grizzly bear due to **discountable effects**. This determination is based on the premise that land resource management activities occur in areas outside of habitat typically used by grizzly bears; the conservation measures in place to protect grizzly bears; the limited potential for an increase in roads with added human-bear interactions; disposal or transfer of public land within grizzly bear habitat; issuance of right-of-way and leases for utility transportation corridors, ditches and canals, and roads; temporary use permits; and fencing of re-vegetation sites to disturb grizzly bear behavior, affect their ability to use suitable habitat and travel corridors between habitats; and increases in direct mortality as a consequence of interactions with humans. The potential for increased human access and development within grizzly bear habitat at the higher elevations favored by the bears and need for a right-of-way for access, etc., is considered to be of very low likelihood, as land resource management activities typically occur outside of grizzly bear habitat in the Cody RMP (1990) planning area.

Access Management

Management Action

The BLM access policy in Wyoming is to acquire permanent exclusive easements (BLM controls and includes rights for the public) over mainline roads on the BLM transportation plan. A BLM mainline road is considered the principal access into larger blocks of BLM-administered public lands or into tracts of BLM-administered lands with high resource values. All access violations will be consistent with this and other provisions of the Wyoming BLM access policy.

The BLM will seek to acquire administrative access along Trail Creek to Rattlesnake Mountain. Priority emphasis will be placed on acquisition of public access to the Little Mountain and Cedar Mountain areas. Existing public access to BLM-administered public lands in the Carter Mountain area will be continued.

Recreational access will be retained to public lands along the North Fork and the South Fork of the Shoshone River to BLM-administered tracts covered by the Bighorn River Habitat Management Plan/Recreation Area Management Plan (HMP/RAMP), and to public land along the Clarks Fork of the Yellowstone River.

Acquired lands and/or interests in acquired lands will be managed in accordance with the Cody RMP (1990) and in a manner consistent with adjacent or nearby public lands if applicable. Acquired lands within an ACEC or other special management area will be managed in accordance with the special management area's activity plan which is supported/justified the acquisition.

Effects Analysis

Management of existing access or acquisition of new access to lands administered by BLM is not expected to alter grizzly bear behavior. Lands closed to access may result in positive effects to grizzly bear habitats by securing these lands and managing them under BLM provisions.

Corridors are designated and managed to accommodate power lines, communication towers, pipelines, and roads. Roads can be a source of fragmentation of grizzly bear habitat resulting in reduced mobility and reduced ability to utilize otherwise secure habitat. Roads and other linear access are significant factors in habitat deterioration and increased mortality of grizzly bears (Schwartz et al. 2003). Roads increase the opportunity for human access and result in an increase in human-bear interactions, a major source of mortality for bears.

Conservation measures in place that will reduce adverse impacts include providing educational packets, planning of authorized activities with grizzly bears in mind, and implementation of strategies to reduce human-bear conflicts proactively.

Determination

Implementation of access management actions, as presented in the Cody RMP (1990), is **not likely to adversely affect** the grizzly bear, due to **insignificant effects**. This determination is based on the extremely low likelihood that access actions will occur in or destroy suitable grizzly bear habitat, disturb grizzly bear behavior, or affect their ability to use suitable habitat and travel corridors between habitats, due to the application of grizzly bear conservation measures.

Livestock Grazing Management

Management Actions

The total authorized livestock grazing use will not exceed 90,895 animal unit months (AUMs). Livestock grazing will not be allowed in Bighorn River HMP/RAMP tracts, which totals approximately 2,500 acres. There are 3 or 4 sheep allotments in the Cody FO area, mostly on the east side of the basin although one allotment is located north of Meeteetse, in the vicinity of potential grizzly bears. Cody FO has phased out nearly all sheep allotments in the grizzly bear occupied area and those remaining have very small tracts of BLM managed land. There have been no depredations by bears on BLM land within the Cody FO to date. Table B-1 lists the livestock grazing allotments within the Cody FO with overlapping grizzly bear habitat.

Effects Analysis

The Guidelines for Livestock Grazing Management on BLM land in Wyoming apply (see Standards for healthy rangelands and guidelines for livestock grazing management for public lands administered by the Bureau of Land Management in the state of Wyoming). Grazing permit stipulations require that livestock carcasses be transported ½ mile from areas of human activity, that human and prepared livestock and pet food, beverages, and garbage be handled and disposed in a manner so as to make it unavailable to bears, and garbage and uneaten horse feed may not be left or buried.

Grizzly bear issues related to livestock grazing have generally involved depredations of livestock by grizzly bears, disposal of livestock carcasses, storage of human food and stock feed, and grizzly bear habituation, food conditioning and mortality risk associated with these activities in the Cody FO area. Interaction between livestock and grizzly bears has typically led to relocation or removal of grizzly bears. This has not yet occurred on BLM grazing permits, but there is a high potential for it to occur on a BLM grazing permit at some time in the future. This is particularly true on domestic sheep allotments. In the case of sheep allotments, conflicts have been much more prevalent and more difficult to resolve without eventually phasing out sheep grazing in the PCA (ICST 2003). Grazing leases for BLM contain stipulations that sheep must be removed in the event of problems with grizzly bears.

Potential adverse effects of livestock grazing on individual bears would result from management control actions associated with livestock conflicts; and illegal, accidental, or defensive taking by grazing permittees/employees and other members of the public resulting from depredation conflicts.

The Grizzly Bear Management Guidelines recommend control actions in response to livestock depredations (outside of Management Situation 1) that involve a two-strike policy for males and a three-strike policy for females before consideration for removal. However, the proposed Response Protocol for Nuisance Grizzly Bear Actions Outside the Recovery Zone in Wyoming gives the Wyoming Game and Fish Department greater latitude to remove a bear from the population. Thus, livestock grazing will likely result in more grizzly bears being removed out of the population outside the PCA, when livestock depredations occur.

Illegal, accidental, or defensive taking by grazing permittees and/or their employees may occur because of trying to protect their livestock or in self-defense in some situations (for example, a herder shooting a bear attacking livestock). Risk also exists for the taking of bears by public agency personnel, permittee personnel, or members of the public as a result of accidentally encountering bears feeding on livestock carcasses.

As grizzly bear populations expand outside the PCA, the proportion of livestock depredations occurring outside the PCA will likely increase, especially since there are more livestock grazing operations outside the PCA than inside. Grazing allotments within grizzly bear habitat will very likely have livestock depredation.

Conservation measures will reduce the potential for adverse impacts from grazing, but will not eliminate them; they include educational material packets to be distributed to permittees, the phasing out of sheep grazing as the opportunity arises, and the proper disposition of livestock carcasses.

Determination

Implementation of livestock grazing management actions, as presented in the Cody RMP (1990), is **likely to adversely affect** the grizzly bear. This determination is based on the likelihood or inevitability that

livestock grazing within grizzly bear habitat will result in depredation on livestock and removal or death of a grizzly bear.

Minerals Management

Management Action

Surface-disturbing activities associated with all types of mineral exploration and development and geophysical exploration are subject to application of the Wyoming BLM Standard Mitigation Guidelines for Surface-Disturbing Activities.

The coal screening process has not been conducted in the Cody FO. Interest in exploration or leasing of federal coal will be handled on a case-by-case basis. If an application for a coal lease should be received in the future, an appropriate land use and environmental analysis, including the coal screening process, will be conducted to determine whether the coal areas are acceptable for development and for leasing.

All parts of the Cody FO that are open to oil and gas exploration are open to geophysical exploration. Those lands identified as closed to oil and gas exploration are also closed to geophysical exploration. On lands with “no surface occupancy” restrictions for oil and gas exploration and development activities, only causal use geophysical exploration will be allowed, unless otherwise specified. Surface disturbance restrictions for geophysical exploration activities apply to both leased and unleased land.

With the exception of the McCullough Peaks Wilderness Study Area, the Cody FO is open to oil and gas leasing, subject to appropriate restrictions for surface disturbing activities. Throughout the Cody FO, oil and gas reclamation plans will be prepared to improve reclamation in old fields and to allow for orderly development of new fields. Restrictions or requirements that are no longer applicable, insufficient, or too restrictive may be changed only with the use of conservation measures or Conditions of Approval in authorizing Applications for Approval, Plans of Operation, or Plans of Development.

Effects Analysis

The increase in human activity associated with oil and gas and mineral development may negatively impact grizzly bear behavior by causing bears to avoid or abandon these areas. Construction of roads, pads, or access by OHVs, and other facilities associated with development of mineral resources may alter or destroy existing terrestrial habitats that may be suitable grizzly bear foraging habitats or linkages between suitable habitats. Increased vehicle traffic associated with mineral and geology exploration, development, and operation may lead to increases in human-bear interactions, which are the largest source of bear mortality, and vehicle collisions. Additional impacts to grizzly bears are increased access into habitat by humans, increased fragmentation, associated noise and human activity, and associated hazards (such as chemical toxins).

Grizzly bears have been documented abandoning a den that was driven over by seismic vehicle, and as a consequence of nearby gravel mining (Harding and Nagy 1977). Grizzly bears have denned successfully at distances of 1.6 to 6.4 km from mining camps. Human activity, at or within 100 m of den sites, caused abandonment by grizzly bears in 12 of 18 dens (Swenson et al. 1997).

Very little, if any, minerals management activity in the Cody RMP planning area will occur in higher elevations comprising occupied grizzly bear habitat.

Conservation measures in place that will reduce adverse impacts include providing educational packets, planning of authorized activities with grizzly bears in mind, and implementation of strategies to reduce human-bear conflicts proactively.

Determination

Implementation of mineral management actions, as presented in the Cody RMP (1990), is **not likely to adversely affect** the grizzly bear due to **discountable effects**. This determination is based on the premise that minerals management activities occur in lowland areas of sagebrush steppe and grasslands, areas not typically used by grizzly bears, and the conservation measures in place to protect grizzly bears. The potential for increased human access and development within grizzly bear habitat at the higher elevations favored by the bears is considered to be of low likelihood because minerals management activities typically occur in the lower-elevation basins found in the Cody RMP planning area.

Off-Road Vehicle Management

Management Action

Unless otherwise specified, vehicle use on BLM-administered public lands in the Cody FO is designated as limited to existing roads and trails. Several areas, including the Bentonite Hills, Irma Flats, and Lovell Lakes Motorcross Area, have been designated as open to ORV use. Vehicle use on BLM-administered lands is designated as limited to designated roads and trails in the following areas:

- Essential and recovery habitat for threatened or endangered species;
- Areas with fragile soils or with Class I or II Visual Resource Management ratings;
- Areas containing significant cultural or paleontological resources;
- Areas over important caves or cave passages;
- The Bighorn River and West Slope Special Recreation Management Areas;
- Rattlesnake Mountain; and
- The Carter Mountain, Little Mountain, and Sheep Mountain Anticline ACECs and in the McCullough Peaks area.

No other specific requirements or guidelines that are applicable to grizzly bear mitigation are included for this resource in the Cody RMP (1990).

Effects Analysis

The Cody RMP (1990) restricts ORV use to existing roads and trails. OHV use on BLM lands is almost entirely on rough, 4-wheel drive roads receiving limited maintenance, so the possibility of a grizzly bear mortality by an OHV would be extremely remote. Two-track roads occur throughout the mountainous areas where grizzly bears also roam, although not many actually occur in grizzly bear habitat for the Cody FO. Rattlesnake Mountain is restricted to a single road, Carter Mountain has only a single road and it is seasonally closed, and Sheep Mountain and the Bald Ridge area are roadless. Most OHV incidents involving grizzly bears would occur when drivers leave improperly stored food in a vehicle and a bear would break into the vehicle to extract it.

ORV use is one of the main methods of access by humans into grizzly bear habitat, and can lead to disturbance to the bears by encouraging greater access in undeveloped habitat, causing some potential for the bears to avoid areas and reducing habitat availability. In the spring, as bears are coming out of

hibernation, people may drive out on these roads to search for and collect antlers. Most antler hunting is by foot or horseback along the Absaroka Front, whereas OHVS are used for antler hunting occurs along the front of the west Bighorn Mountains. This has led to human-bear encounters in the past few years (Seville 2004). Such encounters lead to human-caused mortality, which accounts for as much as 90% of recorded mortalities (Schwartz et al. 2003).

Determination

Implementation of OHV management actions, as presented in the Cody RMP (1990), is **not likely to adversely affect** the grizzly bear due to **insignificant effects.** This determination is based on the very limited potential for OHV use to occur in grizzly bear habitat and disrupt foraging and movement, fragmenting habitat, and leading to human-bear encounters which may result in death for grizzly bears and grizzly bear conservation measures in place that will protect grizzly bears and their habitat from ORV users.

Recreation Management

Management Action

The objective of recreation management is to enhance opportunities for primitive recreation while increasing visitor services in some areas. Within the FO, recreation areas have been designated as special or extensive. Five special recreation management areas (SRMAs) are designated in the FO, which occupy approximately 125,000 acres of BLM-administered surface lands. The remaining FO is designated as an extensive recreation management area (ERMA). Recreational uses of the Bighorn River, such as fishing, boating, and hunting, will be managed under the Bighorn River HMP/RAMP.

Special Recreation Permit (SRP) stipulations require that activities be conducted in a manner to prevent or minimize human/bear conflicts, and require specific options for food storage and disposal and handling of livestock feed.

Effects Analysis

People enjoy recreational activities, such as fishing, hiking, and hunting in montane areas inhabited by grizzly bears. This type of activity is on the increase throughout the western United States. Antler-hunting is also a popular recreational activity. Antler hunting, on foot and on horseback, typically occurs in the spring, after the antlers are shed and when grizzly bears are emerging from hibernation and in particular need of food resources vulnerable to disturbance. Hunters occasionally encounter grizzly bears while hunting and grizzly bears may approach a hunter harvested animal to consume the carcass or entrails. Human intrusions can displace or disturb grizzly bears. Anticipated impacts to grizzly bears may possibly be reduced somewhat, but the general increase in recreational use of BLM lands is likely to cause increases in the potential for bear-human conflicts, especially as bear populations also expand. The public lands are generally open (with limited exceptions) to use by the public for many uses, with recreational activities one of the primary uses. These recreational activities are allowed, by generally not regulated by the BLM (hunting, fishing and antler-gathering are regulated by the WGFD).

Conservation measures in place that will reduce adverse impacts include providing educational packets, installation of bear-resistant refuse containers in developed campgrounds, specifications for food and garbage handling in operation plans and special use permits, planning of authorized activities with grizzly bears in mind, and implementation of strategies to reduce human-bear conflicts proactively. Few new recreational projects (campground or trail-head construction, signs, etc.) or activities will take place in

grizzly bear habitat.

Determination

Implementation of recreation management actions, as presented in the Cody RMP (1990), is **not likely to adversely affect** the grizzly bear due to **insignificant effects.** This determination is based on the premise that increases in human recreational use of BLM lands have occurred in recent years and will inevitably continue to increase, resulting in the increased potential for human-bear conflicts resulting in the potential harm to grizzly bears, but that the grizzly bear conservation measures will protect grizzly bears and their habitat from recreation uses, projects, or activities and human-bear interactions by recreationists on BLM lands are extremely infrequent to non-existent.

Visual Resource Management

Management Actions

The objective of visual resource management (VRM) is to maintain or improve scenic values and visual quality throughout the Cody RMP planning area.

Effects Analysis

Actions associated with visual resource management will not directly impact grizzly bear behavior or habitats. The exclusion of some activities and structures from designated view sheds may have a secondary positive effect of limiting disturbance of habitats that may be suitable for grizzly bears or their food resources. Potentially, a request for movement of a structure or project due to VRM classification out of a higher classification area to a lesser classified area might move the project into grizzly bear habitat. Impacts to grizzly bears by such moves would be precluded by the grizzly bear conservation measures.

Determination

Implementation of VRM actions, as presented in the Cody RMP (1990), is **not likely to adversely affect** the grizzly bear, due to possible **beneficial effects**. This determination is based on the fact that implementation of the visual resources management involves no actual ground disturbing activities and therefore no anticipated disturbance to grizzly bear habitat, no increased human presence, and likely will provide beneficial affects due to limiting activities in particular viewsheds that grizzly bears inhabit.

Watershed Management

Management Action

A maintenance priority is placed on approximately 700 acres of existing spreader dikes and 10 existing retention dams in the FO. Other watershed projects will be maintained as necessary. Watershed improvement practices in the Wyoming's Bighorn Basin water quality plans will be implemented to reduce sediment loading in the streams and river segments. Priority stream segments for use of watershed improvement practices and development of watershed activity plans include portions of the Shoshone and Bighorn rivers:

Priority 1: The Shoshone River (from its confluence with the Bighorn River to the Buffalo Bill Dam). Priority drainages within the Shoshone sub-basin include Whistle, Deer, Coon, and Sand Creeks, Roan Wash, and Foster Gulch.

Priority 2: The Bighorn River (from Bighorn Reservoir to Greybull). Priority drainages within the Bighorn sub-basin are Crystal, Bear, and Dry Bear Creeks.

Surface disturbing activities will be prohibited within 500 feet of surface water and riparian areas, except when necessary and when their impacts can be avoided or mitigated. However, sagebrush control is allowed within 500 ft, unless site-specific environmental analysis indicates otherwise.

Effects Analysis

Actions associated with watershed management will not negatively impact grizzly bear behavior or their denning or foraging habitats. The activities associated with this management action are infrequent and small in scale. The watershed improvement practices along the Shoshone and Bighorn rivers are not in grizzly bear habitat. Management actions may also benefit grizzly bears because they are likely to improve riparian vegetation and habitat for cutthroat tout.

Determination

Implementation of water resource management actions, as presented in the Cody RMP (1990), will have **no effect** on the grizzly bear. This determination is based on the fact that these actions generally do not occur in grizzly bear habitat.

Wild Horse Management

Management Action

The objective of wild horse management in the McCullough Peaks Wild Horse Herd Management Area (WHHMA) is to maintain a viable herd that will maintain the free-roaming nature of wild horses in a thriving ecological balance and to provide opportunity for the public to view them. The McCullough Peaks WHHMA will be managed to maintain a population of 100 wild horses until monitoring data indicate changes in the population level are necessary.

Effects Analysis

Actions associated with wild horse management in the McCullough Peaks WHHMA are expected to be limited to occasional herding, corralling, and transporting of horses. These activities occur outside of the potential management area for grizzly bears (Moody et al. 2002) and it is unlikely that bears would range very far to the east from the Shoshone National Forest or Absoraka Front to reach this area. These actions are not expected to detrimentally impact grizzly bear behavior or foraging or denning habitats.

Determination

Implementation of wild horse management, as presented in the Cody RMP (1990), will have **no effect** on the grizzly bear. This determination is based on the fact that grizzly bears would be unlikely to travel through the lower-elevation basin and be adversely affected by actions associated with management of wild horses.

Wild and Scenic Rivers Management

Management Actions

Interim management practices for public land WSR parcels will focus on maintaining or enhancing the outstandingly remarkable scenic, recreational, and historic values and the relatively unmodified character of the area in a near-natural setting. Any activities that would conflict with this objective are prohibited. Some intrusions on the public lands involved may be allowed if they are not readily evident or are short-lived, and do not adversely affect maintaining the scenic classification.

Effects Analysis

The designation of WSR status is simply a designation, and tempers or stipulates from a WSR resource viewpoint, specific protections or management of other BLM authorized actions. WSR classifications, in and of themselves, do not place on-the-ground projects or ground disturbing activities. Because of their isolation, rugged character, and naturalness, designation as a Wild and Scenic River will not be likely to have negative impacts on wildlife. At the time of designation, further consideration of details will be given to potential impacts to grizzly bears.

Generally, WSR status is a beneficial impact on wildlife and plant species. Grizzly bear habitat that falls within a WSR segment would generally be beneficially impacted by the more restrictive criteria applied to those stream/river segments, including protecting spawning fish habitat or berry producing plants that provide a food source for grizzly bears and security habitat. Actions associated with wild and scenic river management are not expected to detrimentally influence grizzly bear behavior or impact suitable denning, travel, and foraging habitats. These actions will likely result in positive, beneficial effects by maintaining or enhancing habitats suitable for grizzly bears.

Although stream or river segments meeting the Wild and Scenic River (WSR) eligibility and suitability factors are found within the Cody RMP planning area, none are within or near potential grizzly habitat.

Determination

Implementation of wild and scenic rivers management actions, as presented in the Cody RMP (1990), will have **no effect** on the grizzly bear. This determination is based on the lack of WSR stream or river segments within or near any potential grizzly bear habitat.

Wilderness Management

Management Action

The BLM's recommendations to the Secretary of the Interior on the McCullough Peaks wilderness study area (WSA) will be made in the Wyoming State-wide Wilderness Report to Congress. Wilderness decisions are not part of this Record of Decision or the Cody RMP. The decisions regarding wilderness are ultimately made by Congress and will be incorporated into the Cody RMP. A detailed description and analysis of the wilderness issues and alternatives are in the Grass Creek/Cody Wilderness EIS. Three wilderness study areas (WSAs) occur in the Cody RMP planning area.

Effects Analysis

None of the three WSAs are in or near grizzly bear habitat. Management actions associated with wilderness management will not result in detrimental impacts to grizzly bear behavior or habitats. These actions will result in positive effect to bears by limiting harassment and disturbance to denning, travel, and foraging areas.

Determination

Implementation of wilderness management, as presented in the Cody RMP (1990), will have **no effect** on the grizzly bear. This determination is based on the premise that no grizzly suitable habitat occurs in or near any WSAs in the Cody FO.

Wildlife and Fish Management

Management Action

Vegetative manipulations and application of the Wyoming BLM Standard Mitigation Guidelines for Surface-Disturbing Activities will be used to maintain or improve uncommon and important wildlife habitats such as wetlands, mountain shrublands, shrub steplands, Douglas-fir, Engelmann spruce-subalpine fir, and aspen-conifer forestlands. Surface disturbance restrictions will be applied on BLM-administered tracts managed under the Bighorn River HMP/RAMP (recreation area management plan) (approximately 2,500 acres), and on BLM-administered lands in the Yellowtail Wildlife habitat management unit (HMU) (approximately 4,070 acres). For the protection of prey bases essential to threatened or endangered birds, spraying of insecticides will not be allowed until after a site-specific environmental analysis has been conducted. When practical, BLM will consult with WGFD in applying mitigation for wildlife needs and before waiving, allowing exceptions to, or modifying wildlife-related land use restrictions and mitigations. The BLM will make a reasonable attempt to coordinate with WGFD and USFWS regarding fish and wildlife management on BLM-administered lands and to accommodate their interests and concerns whenever possible.

These projects are designed to improve habitat for species such as the grizzly bear and northern goshawk, such as conifer removal in aspen stands to reduce encroachment. In other cases it may be a matter of responding to an action undertaken by a different party, such as occurred on the flank of Carter Mountain after a salvage sale. BLM fenced some areas to protect aspen suckers from elk foraging in the cleared areas.

Effects Analysis

The implementation of management actions associated with wildlife habitat management will likely have positive effects by maintaining or improving existing habitat conditions that will benefit grizzly bears and their prey. Many of the actions are, in fact, directed at such habitat improvement. There is the possibility that in some cases, grizzly bears would avoid areas where activities would create a temporary disturbance to the animals.

Determination

Implementation of wildlife habitat management actions, as presented in the Cody RMP (1990), is **not likely to adversely affect** the grizzly bear due to **insignificant effects.** Wildlife and fish management actions will be designed to enhance grizzly bear habitat, grizzly bear conservation measures will protect

grizzly bears and their habitat during project construction, and many of the projects are designed to benefit grizzly bears by maintaining and improving habitat for the bears and/or their food resources.

Summary of Determinations

The following is a summary of the effects determinations developed for each of the Cody RMP (1990) management actions.

TABLE 2 SUMMARY OF DETERMINATIONS FOR THE CODY RMP

Resource	***Determination***
ACEC	Not likely to adversely affect, due to beneficial effects
Air Quality	No effect
Cultural and Paleontological	Not likely to adversely affect, due to discountable effects
Fire	Not likely to adversely affect, due to insignificant effects
Forestland	Not likely to adversely affect, due to insignificant effects
Geothermal	No effect
Hazardous Materials	Not likely to adversely affect, due to discountable effects
Lands and Realty	Not likely to adversely affect, due to discountable effects
Access	Not likely to adversely affect, due to insignificant effects
Livestock Grazing	Likely to adversely affect
Minerals	Not likely to adversely affect, due to discountable effects
Off-Road Vehicles	Not likely to adversely affect, due to insignificant effects
Recreation	Not likely to adversely affect, due to insignificant effects
Visual Resources	Not likely to adversely affect, due to beneficial effects
Watershed	Not likely to adversely affect, due to discountable effects
Wild Horses	No effect
Wilderness	No effect
Wildlife and Fish	Not likely to adversely affect, due to insignificant effects

Cumulative Effects

Cumulative effects include future State, tribal, local, or private actions that are reasonably certain to occur in the Cody FO. Future state, tribal, local, or private actions in the Cody FO include the following (Harrell 2003):

- Oil field exploration proposed for the western side of the Bighorn Mountains
- Bentonite and gypsum mining on the western side of the Bighorn Mountains
- Seismic exploration outside of the town of Clark, near the Clark's Fork River
- Possible coal exploration in coal seams throughout the Cody FO

Some of these possible projects are located in potential grizzly bear habitat. The area west of Clark, where seismic exploration may occur, is generally in grizzly bear habitat. Certain components of these projects, if completed, could directly or indirectly affect grizzly bears or their habitats. In addition to the cumulative impacts resulting from the BLM activities described previously, implementation of the Cody RMP could add further impacts to the grizzly bear that may result from current non-federal actions.

KEMMERER FIELD OFFICE

The Record of Decision for the Kemmerer Resource Management Plan, signed on April 29, 1986, is a comprehensive plan for managing the Kemmerer field office (BLM 1986). The Kemmerer FO occupies approximately 1.63 million acres in southwestern Wyoming. The FO occurs in Lincoln, Sweetwater, and Uinta Counties, and includes some lands in Idaho and Utah. These lands outside of Wyoming are managed for range resources only under the Kemmerer RMP.

The approved Kemmerer RMP represents a selection of management actions that will resolve the planning issues and provide multiple use management of the public lands and resources that will best meet present and future needs. As previously mentioned in this document, the Wyoming approved stipulations will be used, as appropriate, to condition development activities in all programs where surface disturbing activities take place and where the objectives of the RMP include the protection of important resource values. Restrictions specifically set forth in resource management plans are complementary to those included in the Wyoming BLM Mitigation Guidelines and BLM Guidelines for Livestock Grazing Management and are not all-inclusive.

The objectives of the RMP are to provide a degree of protection to certain resources rather than to restrict other activities. Four areas of no surface occupancy have been designated within the FO. These restricted areas include: bald eagle communal winter roosting sites (Woodruff Narrows, Morgan Canyon, and Rock Creek), the Bridger Antelope Trap, sensitive plant locations, and lands within a ¼ mile radius of perennial streams in the Raymond Mountain ACEC.

Environmental Baseline

This section presents a summary of the known grizzly bear locations in the Kemmerer FO and an analysis of the effects of past and ongoing human activities (including Federal, State, tribal, local and private) that may have influenced grizzly bears and their habitats.

There are no known current records of grizzly bears in the Kemmerer FO. The distribution map for grizzly bears in Wyoming (Schwartz et al. 2002) does not encompass any portions of the Kemmerer FO (**Map 1**). The proposed outer boundary of grizzly bear occupancy in Wyoming created by the WGFD (**Map 2**) does encompass a portion of the FO, and extends down to the town of Kemmerer.

In 2002, a subadult male was killed in the Blind Bull drainage near Deadman Mountain on the Bridger-Teton NF in the Wyoming Range (Bruscino 2004). This location is about 50 miles north of the FO boundary. Based on recent range expansion, there is potential for grizzlies to reoccupy the Wyoming Range and the Salt River Range, and there is potential grizzly bear use the Dry Ridge/Commissary Ridge area (Bruscino 2004, Servheen 2004). And although grizzly bears do not occur in the FO now, they are anticipated to disperse to this area (Oles 2005).

Existing Impact Minimization Measures

Most RMPs contain restrictions or measures that are incorporated as stipulations on use permits. These measures cover a broad range of protective features (protection of ungulate calving grounds, protection of raptors, greater sage-grouse, wet soils, etc.) that may provide some benefit to grizzly bears. The following section presents measures included in the Kemmerer RMP that may directly or indirectly minimize impacts to the grizzly bear.

(a) "Crucial big game winter ranges will be closed from November 15 through April 30. Exceptions may be granted if field inspections reveal a lack of actual or potential wildlife use (BLM 1986, p. 9, 29).

(b) "No activity or surface disturbance will be allowed for up to a ¾ mile radius from active raptor nest sites from February 1 through July 31 (except that bald eagle and peregrine falcon restrictions extend from February 1 through August 15). A nest site will be considered active if it has been used within the past three years. Actual distances and dates will vary based on topography, species, season of use, and other pertinent factors" (BLM 1986, p. 9, 29).

(c) "Elk calving areas will be protected from disturbances during the calving period (May 1 though June 30). Geophysical operations proposed in elk calving areas during this time frame will be reviewed for potential impacts to elk calving. If inspections indicate that elk have not moved into these traditional calving areas, activities may be allowed" (BLM 1986, p. 9, 29).

(d) "Geophysical operations will not be allowed within ¼ mile of a greater sage-grouse lek center from March 15 through May 31. The authorized officer may grant an exception and allow operations from five hours after sunrise until two hours before sunset" (BLM 1986, p. 9, 29).

In addition, the Kemmerer FO follows guidelines outlined in a memorandum of August 16, 2004, as follows (Oles 2005):

> The following distances, and timeframes will hereafter be utilized in all new land use and activity plan development (including revisions), and other resource management implementation actions (authorizations and projects) that involve activities that may impact sage-grouse or their habitats on BLM administered Public Lands in Wyoming. These distances and timeframes are based on current information, and may be subject to change in the future based upon new information.
> Sage-grouse leks:
>
> 1) Avoid surface disturbance or occupancy within ¼ mile of the perimeter of occupied sage-grouse leks.
> 2) Avoid human activity between 8 p.m. and 8 a.m. from March 1 - May 15 within ¼ mile of the perimeter of occupied sage-grouse leks.
>
> Sage-grouse nesting/early brood-rearing habitat: Avoid surface disturbing and disruptive activities in suitable sage-grouse nesting and early brood-rearing habitat within two miles of an occupied lek, or in identified sage-grouse nesting and early brood-rearing habitat outside the 2-mile buffer from March 15 - July 15.
> Sage-grouse winter habitat: Avoid disturbance and disruptive activities in sage-grouse winter habitat from November 15 - March 14.

Analysis of Proposed Management Actions and Effects

The Kemmerer RMP (BLM 1986) includes descriptions of each management prescription applied within the FO. These activities are summarized in the Introduction, above. The Wyoming BLM Mitigation Guidelines for Surface Disturbing and Disruptive Activities will be applied to all surface disturbing or disruptive activities.

Air Quality Management

Management Actions

No specific management actions are presented with this program. However, actions conducted under other resource programs, including fire or mining, will be conducted in a manner so as to avoid violation of the Wyoming and National ambient air quality standards.

Effects Analysis

Actions related to air quality management will result in no impacts to grizzly bear behavior, denning habitat, or foraging habitat. The actions associated with air quality management are extremely small in scope, of short duration, and infrequent. No air quality monitoring stations are currently in any grizzly bear habitat on BLM lands within the Kemmerer FO. Actions related to air quality management on other activities will not result in negative impacts to grizzly bears or their habitat. These management actions will likely result in maintaining or improving air quality conditions throughout the FO, which may have secondary benefits to grizzly bears.

Determination

Implementation of air quality management actions, as presented in the Kemmerer RMP (1986), will have **no effect** on the grizzly bear, due to the fact that this management activity is not anticipated to impact grizzly bear behavior, or foraging or denning habitat as no grizzly bears currently occur in the Rock Springs FO.

Geology and Minerals Management

Management Actions

Geophysical, oil and gas, and mineral (for example; coal, sodium, oil shale, phosphate, and locatable and salable minerals) exploration will occur throughout the Kemmerer FO. Measures that are specific to wildlife and habitat resources are included in the management of geology and mineral resources. To protect riparian areas, no surface disturbance will be allowed within 500 feet of perennial streams or live water.

Effects Analysis

The increase in human activity associated with oil and gas and mineral development may negatively impact grizzly bear behavior by causing bears to avoid or abandon these areas. Construction of roads, pads, or access by OHVs, and other facilities associated with development of mineral resources may alter or destroy existing terrestrial habitats that may be suitable grizzly bear foraging habitats or linkages between suitable habitats. Increased vehicle traffic associated with mineral and geology exploration, development, and operation may lead to increases in human-bear interactions, which are the largest source of bear mortality, and vehicle collisions. Additional impacts to grizzly bears are increased access into habitat by humans, increased fragmentation, associated noise and human activity, and associated hazards (such as chemical toxins).

Grizzly bears have been documented abandoning a den that was driven over by seismic vehicle, and as a consequence of nearby gravel mining (Harding and Nagy 1977). Grizzly bears have denned successfully

at distances of 1.6 to 6.4 km from mining camps. Human activity, at or within 100 m of den sites, caused abandonment by grizzly bears in 12 of 18 dens (Swenson et al. 1997).

Very little, if any, minerals management activity in the Kemmerer RMP planning area will occur in areas containing occupied grizzly bear habitat. A limited amount of habitat occurs along the Bridger-Teton National Forest/BLM boundary and in the extreme northwest portion of the Kemmerer FO. Few grizzly bears make their way onto public lands in the FO and most are young males seeking food or trying to establish a home range.

Conservation measures in place that will reduce adverse impacts include providing educational packets, planning of authorized activities with grizzly bears in mind, and implementation of strategies to reduce human-bear conflicts proactively.

Determination

Implementation of mineral management actions, as presented in the Kemmerer RMP (1986), is **not likely to adversely affect** the grizzly bear due to **discountable effects**. This determination is based on the fact that minerals management activities occur outside of potential grizzly bear habitat in areas not typically frequented by grizzly bears, the lack of grizzly bears within the Kemmerer RMP planning area, and those conservation measures in place to protect grizzly bears. The potential for increased human access and development within grizzly bear habitat at the higher elevations favored by the bears due to implementation of minerals management actions is considered to be of low likelihood.

Soils Management

Management Actions

The protection of trees, shrubs, and ground cover from damage during construction activities will be required. Backfill will be required to be replaced in a similar sequence and density to preconstruction conditions. The restoration of normal surface drainage will be required. Any mulch used will be free of mold, fungi, or noxious weed seeds. The grantee or lessee will be responsible for the control of all noxious weed infestations on surface disturbances.

Recognized roads will be used when the alignment is acceptable for the proposed use. Generally, roads will be required to follow natural contours; be constructed in accordance with acceptable standards; and be reclaimed to BLM standards. On newly constructed roads and permanent roads, the placement of topsoil, seeding and stabilization will be required on all cut and fill slopes. No unnecessary side-casting of material on steep slopes will be allowed. Reclamation of abandoned roads will include requirements for reshaping, recontouring, resurfacing with topsoil, installation of water bars, and drill seeding on the contour. Stripped vegetation will be spread over the disturbance for nutrient recycling, where practical.

On well pads and facility locations, special attention will be given to parts of the surface use plan covering reclamation. This plan will include objectives for successful reclamation covering; soil stabilization, plant community composition, and desired vegetation density and diversity. The development of facilities on slopes between 25 and 40 % will be restricted unless soil erosion controls can be ensured and adequate revegetation is expected. No surface occupancy will be allowed on slopes greater than 40 %. Abandoned sites must be satisfactorily rehabilitated by the lessee.

Existing road locations will be used where possible to minimize surface disturbances. Where possible, clearing of pipeline and communication line rights of way will be accomplished with the least degree of

disturbance to topsoil. Where topsoil removal is necessary, it will be stockpiled and respread over the disturbance after construction and backfilling are completed. Vegetation removed from the right of way will also be required to be respread to provide protection, nutrient recycling, and a natural seed source.

Effects Analysis

The implementation of soils management involves planning for not allowing actions that will cause soil erosion and modifying others to avoid soil erosion. There are no impacts from this management action on grizzly bears. However, activities associated with soil mapping/sampling may include surveying, core drilling, use of pick-up truck mounted soil augers and core samplers (1 ½" to 2" in diameter) and back-hoes (usually around 12-24" in width and pits may be up to 6' deep) for digging soil characterization pits and trenches, using hand held shovels to dig holes or pits, and associated human and vehicle disturbances. These trenches are backfilled and re-vegetated or reseeded when surveys are complete. Disturbances are usually very small of short duration in nature and will reclaim to the native terrain/vegetation quickly. Surface soil erosion studies may also be conduced. These soil resource related activities in the planning area are mainly in support of other programs. Soil mapping and identification may require the digging of trenches to identify and measure soil horizons below the surface. Other surface disturbing activities associated with soil resources may include reclamation of abandoned mine lands (AML) and open shafts, removal of waste rock in floodplains or streams, or cleanup of tailings. These reclamation programs are covered under the hazardous materials section of this document. The actions involved in soils management serve to improve soils and vegetation after various construction activities have occurred. The maintenance of good soils and native plants will be beneficial to grizzly bears.

Determination

Implementation of soil resource management actions, as presented in the Kemmerer RMP (1986), is **not likely to adversely affect** the grizzly bear, due to **discountable effects**. This determination is based on the conservation measures in place that will preclude any adverse effects to the grizzly bear or its habitat and will minimize or remove impacts to grizzly bear habitat. Management of soil resources is not expected to detrimentally impact grizzly bear behavior or suitable denning or foraging areas. The activities associated with this management action are infrequent, localized or small in scale, and generally not likely to occur in grizzly bear habitat. Implementation of soil resource management actions may maintain or improve soils condition of some grizzly bear habitats and the use of native plants for re-vegetation will benefit grizzly bears, resulting in secondary beneficial effects to foraging or other habitat parameters.

Water Management

Management Actions

Activities within the Kemmerer FO will be managed to comply with state and Federal water quality standards.

Effects Analysis

Activities authorized under water resources management may include implementation of watershed plans, identification of heavy sediment loads, monitoring and treating soil erosion, evaluating and restricting surface development activities, and monitoring water quality.

Monitoring of streams and rivers for water quality would be very small and short term in nature (a few hours or less). Monitoring would be done with small, hand held kits on site, or water samples would be collected and analyzed in a laboratory off site. Other activities would be to measure stream channelization and evaluate streambank and riparian conditions. Access for these activities would be primarily by vehicle (pickup truck, etc.) and monitoring would be done by personnel walking into and along streams and rivers. Permanent in-stream flow monitoring and continuous water quality analysis gauging stations would be small structures that would require some construction to build (backhoe, concrete truck or a lift to place a pre-built structure) and some disturbance to streams or rivers during construction and occasional maintenance activities.

Other smaller scale water resource activities would include plugging abandoned wells to prevent contamination or cross contamination of water aquifers and reclaiming (recontouring and revegetating) the associated drill pad. This activity would consist of pouring concrete into the well casing to plug the well, requiring: vehicles, concrete trucks, concrete pumper trucks, personnel, etc. Reclamation of the drill pad after plugging would require the use of loaders, backhoes, graders or bulldozers, seeding equipment, and trucks and trailers to haul the equipment. Instream flow control structures such as drop structures (made of logs, rock baskets, or concrete); weirs; revetments (streambank erosion control structures (trees, logs, etc.)); rip-rap (rocks, boulders, logs, etc.); placing gravel or concrete in streams for crossings and fish spawning; culverts, all requiring equipment and personnel to construct. Equipment might include: vehicles, backhoes, bulldozers, skid loaders, concrete trucks, etc. Planting of riparian plant species to reduce erosion and sediment movement along watercourses would be done either using hand held tools (shovels, augers, or just jamming stems into the ground (willows, cottonwoods, etc.)) or with smaller equipment like motorized augers, backhoes, tree spades, etc.).

The above types of actions associated with watershed management would take place very rarely, if at all within any grizzly bear denning or foraging habitat and would likely have minimal or no negative impacts on grizzly bear behavior or their denning or foraging habitats. The activities associated with this management action are infrequent, small in scale, and not likely to occur in grizzly bear habitat. Actions associated with watershed management are likely to improve riparian vegetation and habitat for grizzly bears and their food resources.

Determination

Implementation of soil resource management actions, as presented in the Kemmerer RMP (1986), is **not likely to adversely affect** the grizzly bear, due to **discountable effects**. This determination is based on the conservation measures in place that will preclude adverse effects to the grizzly bear or its habitat and will minimize or remove impacts to grizzly bears or their habitat. Management of water resources is not expected to detrimentally impact grizzly bear behavior or suitable denning or foraging areas. The activities associated with this management action are infrequent, localized or small in scale, and generally not likely to occur in grizzly bear habitat. Implementation of water resource management actions may maintain or improve the condition of some grizzly bear habitats and therefore may result in secondary beneficial effects to foraging habitats and are likely to improve riparian vegetation and habitat for grizzly bears and their food resources.

Livestock Management and Rangeland Program

Management Actions

All noxious weed control will adhere to measures allowed in the Record of Decision for the Rock Springs District Noxious Weed Control EA or applicable updated guidance. Cooperation with county weed and

pest control programs will continue.

Predator control will continue in accordance with the Rock Springs District Animal Damage Control Plan. No herds of wild and free-roaming horses will be maintained in the Kemmerer FO.

Forage will be produced for livestock grazing and, at the same time, other resource values will be protected or enhanced. The overall objective will be to improve range condition on "I" allotments and to maintain range condition on other allotments. A long-term increase of 31,901 AUMs, for a total of up to 193,901 AUMs could be realized through management actions. Any realized forage increases will be distributed among various resource uses to achieve overall management objectives.

Vegetation manipulation projects will be proposed on up to 82,610 acres. Vegetation manipulation will be designed to minimize adverse impacts to wildlife habitat and to improve it, whenever possible. WGFD will be consulted in advance on all vegetation manipulation projects.

Approximately 4,500 acres of unallotted public lands that support approximately 646 AUMs could be made available for grazing. However, some of these lands may be disposed of through the Lands program.

No conversion of sheep to cattle will be allowed in allotments with riparian problems without a plan to address riparian issues. Management actions and range improvements proposed would have to be in place before a conversion is authorized.

Riparian areas will be addressed on all "I" category allotments during the development of monitoring or allotment management plans. This objective will be established on allotments as riparian problems are identified and priorities for implementation are adjusted.

Effects Analysis

The Guidelines for Livestock Grazing Management on BLM land in Wyoming apply (see Standards for healthy rangelands and guidelines for livestock grazing management for public lands administered by the Bureau of Land Management in the state of Wyoming). Grazing permit stipulations require that livestock carcasses be transported ½ mile from areas of human activity, that human and prepared livestock and pet food, beverages, and garbage be handled and disposed in a manner so as to make it unavailable to bears, and garbage and uneaten horse feed may not be left or buried.

Grizzly bear issues related to livestock grazing have generally involved depredations of livestock by grizzly bears, disposal of livestock carcasses, storage of human food and stock feed, and grizzly bear habituation, food conditioning and mortality risk associated with these activities. Interaction between livestock and grizzly bears has typically led to relocation or removal of grizzly bears. This has not yet occurred on BLM grazing permits, but there is a high potential for it to occur on a BLM grazing permit at some time in the future. This is particularly true on domestic sheep allotments. In the case of sheep allotments, conflicts have been much more prevalent and more difficult to resolve without eventually phasing out sheep grazing in the PCA (ICST 2003). Grazing leases for BLM contain stipulations that sheep must be removed in the event of problems with grizzly bears.

Potential adverse effects of livestock grazing on individual bears would result from management control actions associated with livestock conflicts; and illegal, accidental, or defensive taking by grazing permittees/employees and other members of the public resulting from depredation conflicts.

The Grizzly Bear Management Guidelines recommend control actions in response to livestock depredations (outside of Management Situation 1) that involve a two-strike policy for males and a three-strike policy for females before consideration for removal. However, the proposed Response Protocol for Nuisance Grizzly Bear Actions Outside the Recovery Zone in Wyoming gives the Wyoming Game and Fish Department greater latitude to remove a bear from the population. Thus, livestock grazing will likely result in more bears being taken out of the population outside the PCA when livestock depredations occur.

Illegal, accidental, or defensive taking by grazing permittees and/or their employees may occur because of trying to protect their livestock or in self-defense in some situations (for example, a herder shooting a bear attacking livestock). Risk also exists for the taking of bears by public agency personnel, permittee personnel, or members of the public as a result of accidentally encountering bears feeding on livestock carcasses. Grazing allotments within grizzly bear habitat will very likely have livestock depredation. Grizzly bears have not occupied habitat within the Kemmerer FO area to date. An rare, occasional sighting occurs along the extreme northern edge of the FO area, but they are likely young males seeking food resources or home ranges. There have been no depredations by bears on BLM land within the Kemmerer FO to date.

As grizzly bear populations expand outside the PCA, the proportion of livestock depredations occurring outside the PCA will likely increase, especially since there are more livestock grazing operations outside the PCA than inside.

Conservation measures will reduce the potential for adverse impacts from grazing, they include: educational material packets to be distributed to permittees, the proper disposition of livestock carcasses and the best management practice of phasing out of sheep grazing as the opportunity arises.
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Determination

Implementation of wildlife habitat management actions, as presented in the Kemmerer RMP (1986), is **not likely to adversely affect** the grizzly bear due to **discountable effects.** This determination is based on the premise that grizzly bears have not occupied habitat within the Kemmerer FO area, the likelihood that grazing will result in depredation and removal or death of a grizzly bear is extremely low at this time, and the implementation of the grizzly bear conservation measures would currently reduce adverse affects to grizzly bears and their habitat.

Vegetation Management

Management Action

Vegetation manipulation projects will be proposed on up to 82,610 acres. Vegetation manipulation will be designed to minimize adverse impacts to wildlife habitat and to improve it whenever possible. The objectives for vegetation manipulation in big game winter range may include the enhancement of livestock grazing, but the overall purpose will be to improve big game winter range. Projects in areas other than big game winter range may also have multiple objectives (e.g., reduce long-term erosion and sedimentation, improve wildlife habitat, increase livestock forage protection etc.) The Wyoming Game and Fish Department will be consulted in advance on all vegetation manipulation projects.

Effects Analysis

Actions associated with vegetation management, including increased human presence and use of machinery or fire to implement management actions, may occasionally have a detrimental influence on grizzly bear behavior. The potential for these effects is low. Riparian habitats are most likely to experience vegetation management actions. These habitats are diverse and widespread throughout the FO and therefore, isolated disturbances resulting from vegetation management practices are not expected to limit the availability or quality of riparian habitats. The use of prescribed fire as vegetation manipulation to convert stands of brush to mixed brush and grasslands are very unlikely to cause disturbance to grizzly bears because this is not their primary habitat. This conversion of stands of brush to intermixed grassland/shrub steplands, and the promotion of aspen stands and/or shrub species regeneration, will benefit grizzly bears by increasing the amount of sedges and berry food resources. The management of forestlands for thermal cover characteristics and old growth will also benefit the bears by protecting and enhancing cover and den sites.

Determination

Implementation of the vegetation management actions, as presented in the Kemmerer River RMP (1986), is n**ot likely to adversely affect** the grizzly bear, due to **discountable effects**. This determination is based on the unlikely potential for these actions to harass or displace grizzly bears or occur in core grizzly bear habitat, and the strong likelihood that vegetation management actions will benefit grizzly bears in the long run by enhancing their food resources and cover and hibernation sites.

Fish and Wildlife Habitat Management

Management Actions

Management actions will be directed toward maintaining or improving riparian habitat condition by minimizing impacts: from surface disturbing activities in or near the riparian zone through the use of avoidance; by crossing on temporary or permanent bridges or culverts; and through the reclamation to promote native riparian vegetation.

Big game winter range will be improved using mechanical treatment, burning, or other vegetation manipulation methods. Seasonal closures for motorized vehicles may be used to protect big game winter range, as has been the case for the past three years from January 1 to April 30.

Management actions in riparian areas and wetlands will include measures to preserve, protect, and if necessary, restore natural functions. The objectives will be to minimize the degradation of stream banks and the loss of riparian habitat. Riparian areas in the Thomas Fork drainage will be managed to re-establish riparian/willow vegetation. Wetland areas will be improved for waterfowl production and greater sage-grouse brood rearing. Stream improvement practices to improve riparian and wetlands areas for fisheries habitat will be implemented.

No activities that would jeopardize the continued existence of threatened and endangered species will be allowed in habitat for those species. USFWS will be contacted prior to implementing projects that may affect habitat for threatened and endangered species. If a “may affect” situation is identified, a biological assessment will be prepared and formal consultation with USFWS will be initiated.

Inventories to locate important wildlife habitat will be conducted as funds are available. Inventories will be conducted to provide baseline data for a proposed management action, such as an HMP, or to provide

information in response to other program activities. Important wildlife habitat will be monitored to determine seasonal habitat use and to identify areas in need of habitat improvement.

Effects Analysis

The implementation of management actions associated with wildlife habitat management will likely have positive effects by maintaining or improving existing habitat conditions that will benefit grizzly bears and their prey. Many of the actions are, in fact, directed at such habitat improvement. There is the possibility that in some cases, grizzly bears would avoid areas where activities would create a temporary disturbance to the animals.

Determination

Implementation of wildlife habitat management actions, as presented in the Kemmerer RMP (1986), is **not likely to adversely affect** the grizzly bear due to **insignificant effects.** Fish and wildlife management actions will be designed to enhance grizzly bear habitat, grizzly bear conservation measures will protect grizzly bears and their habitat during project construction, grizzly bears have minimally occupied the Kemmerer FO area, and many of the projects are designed to benefit grizzly bears by maintaining and improving habitat for the bears and/or their food resources.

Riparian Management

Management Actions

Management actions in riparian areas and wetlands will include measures to preserve, protect and, if necessary, restore natural functions (Executive Orders 11988 and 11990). The objectives will be to minimize the degradation of stream banks and the loss of riparian habitat. Bridges and culverts will be designed and installed to maintain adequate fish passage and to prevent headcutting.

Riparian areas in the Thomas Fork drainage will be managed to re-establish riparian/willow vegetation. Wetland areas will be improved for waterfowl production and sage grouse brood rearing areas. Stream improvement practices to improve riparian and wetland areas for fisheries habitat will be implemented.

Effects Analysis

Actions associated with riparian management include increased human presence and use of machinery or fire to implement management actions that may detrimentally influence grizzly bear behavior briefly while they are being conducted. The potential for these effects is low and the intensity is not expected to have lasting detrimental effects. Implementation of vegetation management actions are likely to result in positive effects to grizzly bears by increasing sedges and berries in riparian areas.

Determination

Implementation of the riparian management actions, as presented in the Kemmerer RMP (1986), is **not likely to adversely affect** the grizzly bear, due to **beneficial effects**. This determination is based on the premise that riparian management in and of itself will not produce and surface disturbing activities and long-term results of riparian management would generally benefit the grizzly bears by creating or supplementing available food resources.

Recreation Management

Management Actions

Recreation area management plans (RAMPs) will be developed for prime areas of recreation potential. These include the Raymond Mountain Area, Pine Creek, Dempsey Ridge, Commissary Ridge, Upper Hams Fork, and Upper Smith's Fork areas.

For Off-Road Vehicle use, most of the Kemmerer FO (98 %) will be designated "limited" to existing roads and trails except for necessary tasks. The entire Kemmerer FO will be open to snowmobile use, with the exception of big game winter ranges. WSAs are closed to all OHVs except snow machines. Most over-the-snow vehicle use would have a negligible effect on grizzly bears as they are hibernating during the season of use for these vehicles.

Effects Analysis

People enjoy recreational activities, such as fishing, hiking, and hunting in montane areas inhabited by grizzly bears. This type of activity is on the increase throughout the western United States. Antler-hunting is also a popular recreational activity. Antler hunting, on foot and on horseback, typically occurs in the spring, after the antlers are shed and when grizzly bears are emerging from hibernation and in particular need of food resources vulnerable to disturbance. Hunters occasionally encounter grizzly bears while hunting and grizzly bears may approach a hunter harvested animal to consume the carcass or entrails. Human intrusions can displace or disturb grizzly bears. Anticipated impacts to grizzly bears may possibly be reduced somewhat, but the general increase in recreational use of BLM lands is likely to cause increases in the potential for bear-human conflicts, especially as bear populations also expand. The public lands are generally open (with limited exceptions) to use by the public for many uses, with recreational activities one of the primary uses. These recreational activities are allowed, by generally not regulated by the BLM (hunting, fishing and antler-gathering are regulated by the WGFD).

Conservation measures in place that will reduce adverse impacts include providing educational packets, installation of bear-resistant refuse containers in developed campgrounds, specifications for food and garbage handling in operation plans and special use permits, planning of authorized activities with grizzly bears in mind, and implementation of strategies to reduce human-bear conflicts proactively. Few new recreational projects (campground or trail-head construction, signs, etc.) or activities will take place in grizzly bear habitat.

Determination

Implementation of the recreation resource management actions, as presented in the Kemmerer River RMP (1986), is n**ot likely to adversely affect** the grizzly bear, due to **discountable effects**. This determination is based on the premise that grizzly bears rarely occur in the Kemmerer FO area; increases in human recreational use of BLM lands have occurred in recent years and will inevitably continue to increase, resulting in the increased potential for human-bear conflicts resulting in the potential harm to grizzly bears; that the grizzly bear conservation measures will protect grizzly bears and their habitat from recreation uses, projects, or activities; and human-bear interactions by recreationists on BLM lands are extremely infrequent to non-existent.

Off-Road Vehicle Management

Management Action

Most of the Kemmerer FO area (1,600,054 acres) will be designated "limited" to existing roads and trails except for necessary tasks. Most of the Raymond Mountain WSA, 32,946 acres will be designated "closed." However, the Huff Creek road and the two southernmost roads off the IGO Speedway will be designated "limited." The standards for healthy public rangelands will apply.

The Kemmerer FO area will remain open to snowmobile use except that big game winter ranges may be closed to minimize stress to wintering animals. Closures will vary depending on conditions developed through coordination with the Wyoming Game and Fish Department.

Other roads that will be closed are: a one mile segment of the Westfall Hollow area, a three-mile segment of the rock slide area of the Sublette Cutoff of the Oregon Trail, and the Slide Rock Trail. Except for the main access road to Nugent Park, all roads north and west of the Pine Creek Road intersection on Dempsey Ridge (into the Slide Rock Trail area) will be permanently closed to protect elk calving areas and watershed values. A two-mile segment of the Dempsey-Hockaday Trail on the east side of Commissary Ridge will be closed.

The ORV designations will match Forest Service designations at the boundary of the Bridger-Teton and Wasatch National Forests. A "limited" designation on BLM lands would be compatible with the Bridger-Teton designations. The Wasatch designations would require different restrictions. The public lands in Sections 25, 26, 32, 33, and 34 of T. 13 N., R. 116 W., would comply with USFS Designation 3 (open to motorized wheel vehicles on designated roads, closed to over-the-snow machines operating on snow). Section 30 of T. 13 N., R. 115 W. would be designated to conform with the USFS Designation 3. Sections 24, 26, 27, and 34 of T. 13 N., R. 115 W. Would be designated to conform with the USFS Designation 5 (open to over-the-snow machines on designated routes only, open to motorized wheel vehicles on designated roads). Section 19 of T. 13 N., R. 114 W., would also be designated to conform with the USFS Designation 5.

Effects Analysis

The Kemmerer RMP (1986) restricts ORV use to existing roads and trails. OHV use on BLM lands is almost entirely on rough, 4-wheel drive roads receiving limited maintenance, so the possibility of a grizzly bear mortality by an OHV, would be extremely remote. Two-track roads occur throughout the mountainous areas where grizzly bears also roam, although not many actually occur in grizzly bear habitat for the Cody FO. Most OHV incidents involving grizzly bears would occur when drivers leave improperly stored food in a vehicle and a bear would break into the vehicle to extract it.

ORV use is one of the main methods of access by humans into grizzly bear habitat, and can lead to disturbance to the bears by encouraging greater access in undeveloped habitat, causing some potential for the bears to avoid areas and reducing habitat availability. In the spring, as bears are coming out of hibernation, people may drive out on these roads to search for and collect antlers. Most antler gathering is done on foot, by horseback or by OHV along the northeastern portion of the Kemmerer FO, which to date has not had any verified grizzly bear occurrences. Such encounters lead to human-caused mortality, which accounts for as much as 90% of recorded mortalities (Schwartz et al. 2003).

Determination

Implementation of the OHV management actions, as presented in the Kemmerer River RMP (1986), is n**ot likely to adversely affect** the grizzly bear, due to **discountable effects**. This determination is based on the rare occupancy of the Kemmerer FO area by grizzly bears, the very limited potential for OHV use to occur in grizzly bear habitat and disrupt foraging and movement, fragmenting habitat, and leading to human-bear encounters which may result in death for grizzly bears and grizzly bear conservation measures in place that will protect grizzly bears and their habitat from ORV users.

Lands Management

Management Actions

Authorizations in the Lands Program, including occupancy of public lands for roads, power lines, pipelines, communication sites, and irrigation ditches authorized by granting a right-of-way, will be conditioned to avoid undue adverse impacts to other important resource values and sensitive areas.

Effects Analysis

Management of existing access or acquisition of new access to lands administered by BLM is not expected to alter grizzly bear behavior. Lands under new administration may result in positive effects to grizzly bear habitats by securing these lands and managing them under BLM provisions.

Lands and realty management actions associated with exchanges are not expected to negatively impact grizzly bear behavior or habitats. Current BLM land holdings would be evaluated for unique characteristics prior to disposal, including suitability and use by grizzly bears. Lands identified as important for grizzly bears would not likely be available for disposal. Lands not under BLM jurisdiction that are suitable or occupied grizzly bear habitats may be targeted for acquisition and subsequent management by BLM. Such acquisitions would provide benefits to grizzly bear habitats that may not be afforded under non-federal ownership.

Corridors are designated and managed to accommodate power lines, communication towers, pipelines, and roads. Roads can be a source of fragmentation of grizzly bear habitat resulting in reduced mobility and reduced ability to utilize otherwise secure habitat. Roads and other linear access are significant factors in habitat deterioration and increased mortality of grizzly bears (Schwartz et al. 2003). Roads increase the opportunity for human access and result in an increase in human-bear interactions, a major source of mortality for bears.

Disposal or transfer of public lands with potential grizzly bear habitat through Desert Land Entry, public sale, exchange, Wyoming indemnity selection, or Recreation and Public Purposes (R&PP) leases or patents may affect the bear's ability to utilize suitable habitat and travel corridors linking desirable habitats. The overall goal of field office staff is to maintain lands that contain potential habitat for the bear; however, large transfer of acreage due to land tenure actions may occur.

The issuance of ROWs and leases (utility transportation corridors), specifically ROWs for ditches, canals, and roads may affect the grizzly bear if the associated construction is within the vicinity of travel corridors or areas between different seasonal foraging sites. This may cause short-term behavioral avoidance of these areas by the grizzly bear due to the presence of human activity. The issuance of temporary use permits, and construction activities associated with fencing of revegetation sites require an

analysis to determine if they are present in potential habitat areas and travel corridors and would have similar short-term avoidance impacts.

The acquisition of access easements as well as Rights-of-way/leases include powerlines, communication sites, pipelines, ditches and canals, roads (includes stream crossings), well pads, reservoirs, buried telephone and fiber optic lines, wind power generation farms and facilities, compressor stations and other facilities, temporary use permits, and fence re-vegetation sites and designate, cancel, or change stock trail driveways activities may cause short-term behavioral avoidance of these areas during construction/maintenance operations and would have an insignificant effect on the grizzly bear. The establishment of withdrawals, acquisition of conservation easements, and road closures/rehabilitation would close areas from certain activities that could have a negative effect on the grizzly bear; closing areas creates undisturbed habitat for grizzly bear.

Actions associated with classifications and multiple use are not expected to impact grizzly bear behavior or habitats.

Conservation measures in place that will reduce adverse impacts include providing educational packets, planning of authorized activities with grizzly bears in mind, and implementation of strategies to reduce human-bear conflicts proactively.

Determination

Implementation of land management actions, as provided in the Kemmerer RMP (1986) is **not likely to adversely affect** the grizzly bear, due to **discountable effects**. This determination is based on the premise that land resource management activities occur in areas outside of habitat typically used by grizzly bears; the conservation measures in place to protect grizzly bears; grizzly bears very rarely occur in this field office, although they may reoccupy the Wyoming Range eventually; the limited potential for an increase in roads with added human-bear interactions; disposal or transfer of public land within grizzly bear habitat; issuance of right-of-way and leases for utility transportation corridors, ditches and canals, and roads; temporary use permits; and fencing of re-vegetation sites to disturb grizzly bear behavior, affect their ability to use suitable habitat and travel corridors between habitats; and increases in direct mortality as a consequence of interactions with humans. The potential for increased human access and development within grizzly bear habitat at the higher elevations favored by the bears and need for a right-of-way for access, etc., is considered to be of very low likelihood, as land resource management activities typically occur outside of grizzly bear habitat in the Kemmerer RMP (1986) planning area.

Access Management

Management Action

During oil and gas operations, roads will be considered for long-term support of all programs. Access will be sought across private land if a need is identified. Legal access will be sought to areas which will be intensively managed for timber production. Temporary easements may be used for specific actions for short time periods. High priority areas for access acquisition will be the Meeks Cabin area in support of the forestry program. Legal access to the mouth of Raymond Canyon will be sought to provide access to the mountain. Other needs will be identified as site-specific management plans are developed (e.g., for areas where RAMPs will be prepared or where recreation potential has been identified).

Effects Analysis

Management of existing access or acquisition of new access to lands administered by BLM is not expected to alter grizzly bear behavior. Lands closed to access may result in positive effects to grizzly bear habitats by securing these lands and managing them under BLM provisions.

Corridors are designated and managed to accommodate power lines, communication towers, pipelines, and roads. Roads can be a source of fragmentation of grizzly bear habitat resulting in reduced mobility and reduced ability to utilize otherwise secure habitat. Roads and other linear access are significant factors in habitat deterioration and increased mortality of grizzly bears (Schwartz et al. 2003). Roads increase the opportunity for human access and result in an increase in human-bear interactions, a major source of mortality for bears.

Conservation measures in place that will reduce adverse impacts include providing educational packets, planning of authorized activities with grizzly bears in mind, and implementation of strategies to reduce human-bear conflicts proactively.

Determination

Implementation of access management actions, as presented in the Kemmerer RMP (1986), is **not likely to adversely affect** the grizzly bear, due to **discountable effects**. This determination is based on the extremely low likelihood that access actions will occur in or destroy suitable grizzly bear habitat, disturb grizzly bear behavior, or affect their ability to use suitable habitat and travel corridors between habitats, due to the application of grizzly bear conservation measures, and the fact that grizzly bears rarely occur within the Kemmerer FO area, although they may reoccupy the Wyoming Range eventually.

Forestry Management

Management Actions

Forest management practices will be directed to prevent insect or disease infestations. Clearcuts will generally be limited to no more than 25 acres in size. Exceptions on this acreage limitation may be made (e.g., for insect or disease infestations). Clearcuts will be laid out considering stand characteristics, topography, and other resource values.

Areas of new seedling establishment will be inventoried at specified intervals; areas not meeting stocking standards will be reforested using native species. Silvicultural treatments will be identified for specific areas to improve the stands. Treatment may include burning, chaining, cutting, or shearing. Rehabilitation surveys will be conducted on old logging and fire areas to determine if regeneration is sufficient to ensure proper stocking of a new timber stand. The effects of grazing will also be assessed and remedial action (e.g., fencing) may be taken to protect reproduction. The objective is to achieve a fully stocked stand within 15 years. When, prior to 15 years, it is apparent that natural regeneration will not result in a fully stocked stand and if funding is available, the area will be planted. Natural regeneration of a fully established stand normally takes from 5 to 9 years, and depends on a number of factors including soil, site location, topography, moisture, and aspect.

Road development will be kept to a minimum. Road locations and specifications will be selected to meet transportation needs, safety requirements, and consideration of other resource values. Timber harvest and associated activities will be planned in a sequence that will be least disruptive to wildlife. An engineering analysis will be required where road grades exceed 10 %. Roads will be routed away from areas that are

likely to slump or slide. Cross drain culverts, water bars, or ditches will be installed, as needed to prevent erosion or washing away of the road. Temporary roads will normally be rehabilitated and closed after logging.

Effects Analysis

Forestland management actions occur in coniferous habitats, which are the same areas that can be used by grizzly bears. Although there is the potential for these activities to be conducted during winter when bears are hibernating, this is often impractical due to the complications of snow cover and severe weather conditions.

Timber harvest, especially selection and group selection cuts and small clearcuts with no dozer piling of slash and no mechanical soil scarification, leads to openings in which successional processes produce important amounts of herbs and shrubs bearing fruits eaten by grizzlies. Production of grizzly food sources in these cuts is often greater than in uncut sites in the same habitat types. This indicates that certain timber harvest practices can be used in some forest stands to provide habitat diversity, and that habitat quality can probably be increased or enhanced by creating openings producing grizzly food (IGBC 1986). Thinning and seedcuts would open up the canopy and produce more diverse and productive vegetation types, and would increase early spring foraging opportunities.

New roads created for timber harvest activities, and not immediately revegetated, can lead to an increase in the number of people using an area and to potential interactions with grizzlies, depending on the access to the created roads. Controlling access via locked gates could avoid this problem. Bear-human interactions are one of the highest sources of mortality for bears (Schwartz et al. 2003). Grizzly bears are sensitive to disturbance associated with roads, and may avoid areas within 2.5 miles of roads (Mattson et al. 1986). Such displacement from quality habitats may prevent dispersal, force bears to use poorer quality sites, and cause social disruption (Kasworm and Manley 1989, McLellen 1989). Road avoidance may result in higher mortality and lower fecundity of displaced individuals (Mattson et al. 1986). However, forested habitat on BLM lands mainly provided cover for grizzly bears and do not provide the significant resources known from the areas inside the PCA.

In summary, forestry management can lead to more human intrusion and some loss of cover but those are the only potential adverse affects likely on BLM land. A number of conservation measures apply to forestland management, including planning of authorized activities with grizzly bears in mind, providing educational packets, food and garbage safeguards, no whitebark pine cutting,. These protective measures will substantially reduce impacts to grizzly bears from forest management activities.

Determination

Implementation of forest management actions, as presented in the Kemmerer RMP (1986), is **not likely to adversely affect** the grizzly bear, due to **insignificant effects**. This determination is based on the limited amount of forest management activities that occur, the conservation measures that can be incorporated into proposed forest management projects to avoid the potential for adverse affects to grizzly bears, and because grizzly bears rarely occur in the Kemmerer FO area at present, although they are anticipated to reoccupy the Wyoming Range in the future.

Cultural and Historic Management

Management Actions

All significant historical, archaeological, and cultural sites will be protected or mitigated. Interpretive signing will be developed. The trail register will be stabilized and preserved. A campground at Emigrant Springs (Dempsey) will be considered as a part of total development. Interpretive signs will be placed at the Alfred Corum gravesite and at nearby ruts of the Oregon Trail. Cultural resources management plans will be developed for significant sites. The need for such activity plans will be determined on a case-by-case basis.

Effects Analysis

Actions associated with cultural resource and paleontological management are sparsely distributed across the landscape, are very small in physical extent, and involve very little disturbance to the area. Frequently, the goal is to leave the area intact with no disturbance. These activities are unlikely to occur in grizzly bear habitat.

Determination

Implementation of cultural resource management actions, as presented in the Kemmerer RMP (1986), is **not likely to adversely affect** the grizzly bear, due to **discountable effects**. This determination is based on the premise that cultural surveys implemented for other projects could lead to people working in occupied grizzly bear habitat, creating some possibility for conflict, although these activities are very unlikely to occur in or near grizzly bear habitat. Currently grizzly bears very seldom occur within the Kemmerer FO area. Behavior guidelines for humans in occupied bear country and application of the grizzly bear conservation measures should minimize the potential for such conflicts.

Fire Management

Management Actions

The Kemmerer FO is divided into nine fire management units that share common management objectives, topographic boundaries, or land ownership patterns. Fire suppression efforts within these areas will be driven by property threatened or resource benefits derived.

All wildland fire suppression actions will be based on an appropriate management response. If, due to potential resource damage, a need for full suppression is clearly indicated, suppression procedures are initiated. Where there are limited benefits to be derived from fire, the costs of suppression versus expected benefits are analyzed. This may result in limited suppression efforts. When fire may result in important resource benefits, four primary parameters will be evaluated to determine if fire would result in potentially unacceptable impacts or in conditions that would make it difficult to control the fire. If at some point, one or more of the parameters becomes unfavorable, management of the fire would revert to full suppression. These parameters include: 1) threat to persons or property, 2) adverse weather conditions or forecast, and 3) resource impacts. These parameters will be monitored throughout the course of the fire.

Effects Analysis

Fire management actions, particularly actions associated with wildfire suppression and prescribed fire, whether planned or unplanned, have the potential to occur in habitats that could become occupied by

grizzly bears. Fire exclusion alters the natural mosaic of successional stages that promote a mixture of forest openings and structural diversity on the landscape level. This limits the function of fire in perpetuating certain vegetation conditions, such as the development of early successional shrubs that can provide berry food resources for bears. Burns resulting from wildfires in this century are important producers of fruiting shrubs which provide food energy for the bears (IGBC 1986). Control of such natural fires would reduce these potential future foods for grizzly bears. Roads constructed in association with fire suppression, if not revegetated, can lead to increased access into higher altitude sites by humans, the main cause of mortality for grizzly bears (Schwartz et al. 2002).

Prescribed burning can lead to an increase in early seral stages that promote shrub development. This can provide food resources for bears. Some grizzlies appear to derive much of their energy from the fruits of shrubs, including huckleberry and buffaloberry. Prescribed burns may function to replace the areas of fire suppression.

Prescribed burning, construction of firelines, use of off-road vehicles, and use of hand tools and heavy equipment all have the potential for disturbing grizzly bears by causing them to abandon or avoid particular habitats temporarily. However, these disturbances are anticipated to be temporary and of relatively short duration. They could pose a problem if they were located at a concentrated food resource, especially as bears are eating large quantities of food to put on fat for hibernation (hyperphagia).

Conservation measures in place that will reduce adverse impacts include providing educational packets, specifications for food and garbage handling on operation plans and special use permits, and planning of authorized activities with grizzly bears in mind. Prescribed fires are not planned in grizzly habitat at this time in the Kemmerer RMP (1986) planning area.

Determination

Implementation of fire management actions, as presented in Kemmerer RMP (1986), is **not likely to adversely affect** the grizzly bear, due to **insignificant effects**. This determination is based on the low potential for activities associated with wildfire suppression and prescribed burning to substantively reduce the potential for grizzly bears to utilize the landscape and find food and denning sites, the conservation measures in place to protect grizzly bears and their habitat, and the lack of grizzly bears currently occupying the Kemmerer FO area. Fire suppression affecting the development of berry producing shrubs, and the creation of temporary roads during fire suppression activities are anticipated to be infrequent. Other disturbances are minor and temporary in nature. In the event of a wildfire and immediate suppression is required in grizzly bear habitat, as many conservation measures as possible will be applied that do not hinder safety or property protection. The USFWS will be contacted and emergency consultation will take place at the earliest possible time if grizzly bear habitat is affected or impacted.

Wilderness Management

Management Action

One wilderness study area (WSA) occurs in the Kemmerer RMP planning area. The Raymond Mountain WSA contains 32,936 acres. The Final Wilderness EIS Supplement will be printed at a later date.

Effects Analysis

Management actions associated with wilderness management will not result in detrimental impacts to grizzly bear behavior or habitats. These actions will likely result in positive effects to bears by limiting

harassment and disturbance to denning, travel, and foraging areas.

Determination

Implementation of the wilderness management actions, as presented in the Kemmerer RMP (1986), is **not likely to adversely affect** the grizzly bear, due to **beneficial effects**. This determination is based on the potential that these actions will limit the harassment and displacement of grizzly bears and maintain or protect suitable bear habitats.

Wild and Scenic Rivers Management

Management Actions

It was determined that two river/stream segments managed on public lands within the Kemmerer RMP meet the Wild and Scenic River (WSR) eligibility and suitability factors and are within potential grizzly habitat and should be managed to maintain or enhance their outstandingly remarkable values for any possible future consideration for inclusion in the National Wild and Scenic River Suitability (NWSRS) designation. The two WSR segments are: the Raymond Creek Unit (11.26 river miles) and Huff Creek (6.02 miles). The suitable determination is based on the unique qualities of the diverse public land resources and their regional and national significance, making them worthy of future consideration for addition to the NWSRS.

Interim management practices for the two public land WSR parcels will focus on maintaining or enhancing the outstandingly remarkable scenic, recreational, and historic values and the relatively unmodified character of the area in a near-natural setting. Any activities that would conflict with this objective are prohibited. Some intrusions on the public lands involved may be allowed if they are not readily evident or are short-lived, and do not adversely affect maintaining the scenic classification.

Effects Analysis

The designation of WSR status is simply a designation, and tempers or stipulates from a WSR resource viewpoint, specific protections or management of other BLM authorized actions. WSR classifications, in and of themselves, do not place on-the-ground projects or ground disturbing activities. Because of their isolation, rugged character, and naturalness, designation as a Wild and Scenic River will not be likely to have negative impacts on wildlife. At the time of designation, further consideration of details will be given to potential impacts to grizzly bears.

Generally, WSR status is a beneficial impact on wildlife and plant species. Grizzly bear habitat that falls within a WSR segment would generally be beneficially impacted by the more restrictive criteria applied to those stream/river segments, including protecting spawning fish habitat or berry producing plants that provide a food source for grizzly bears and security habitat. Actions associated with wild and scenic river management are not expected to detrimentally influence grizzly bear behavior or impact suitable denning, travel, and foraging habitats. These actions will likely result in positive, beneficial effects by maintaining or enhancing habitats suitable for grizzly bears.

Determination

Implementation of wild and scenic rivers management actions, as presented in the Kemmerer RMP (1986), is **not likely to adversely affect** the grizzly bear, due to **beneficial effects**. This determination is based on the potential that WSR status may maintain, protect or improve habitats used by grizzly bears.

Summary of Determinations

The following is a summary of the effects determinations developed for each of the Kemmerer RMP management actions.

TABLE 3 SUMMARY OF DETERMINATIONS FOR THE KEMMERER RMP	
Resource	***Determination***
Air Quality	No effect
Geology and Minerals	Not likely to adversely affect, due to discountable effects
Soils	Not likely to adversely affect, due to beneficial effects
Water	Not likely to adversely affect, due to discountable effects
Livestock and Rangeland	Not likely to adversely affect, due to discountable effects
Vegetation	Not likely to adversely affect, due to discountable effects
Fish and Wildlife	Not likely to adversely affect, due to insignificant effects
Riparian	Not likely to adversely affect, due to beneficial effects
Recreation	Not likely to adversely affect, due to discountable effects
ORV	Not likely to adversely affect, due to discountable effects
Lands	Not likely to adversely affect, due to discountable effects
Access	Not likely to adversely affect, due to discountable effects
Forestry	Not likely to adversely affect, due to insignificant effects
Cultural and Historic	Not likely to adversely affect, due to discountable effects
Fire	Not likely to adversely affect, due to insignificant effects
Wilderness	Not likely to adversely affect, due to beneficial effects
Wild and Scenic Rivers	Not likely to adversely affect, due to beneficial effects

Cumulative Effects

Cumulative effects include future State, tribal, local, or private actions that are reasonably certain to occur in the Kemmerer FO. Potential effects that could affect grizzly bears or their habitats in the Kemmerer FO include the following:

- Existing and proposed wind farms
- Hard rock mining (including coal, trona, and phosphates)
- Livestock grazing on private lands
- Non-federal oil and gas fields and related energy development
- Vehicle collisions
- Logging on private lands within grizzly bear habitat

Some of these possible projects are situated on or near grizzly bear habitat. Certain components of these projects, if completed, could directly or indirectly affect grizzly bear habitat. The recent development of wind farms has caused large mortalities of raptors and bats. These are erected especially on ridgetops, and potential adverse effects on grizzly bears have not been investigated. In addition to the cumulative impacts resulting from the BLM activities described previously, implementation of the Kemmerer RMP could add further impacts to the grizzly bear that may result from current non-federal actions.

LANDER FIELD OFFICE

The Record of Decision for the Lander Resource Management Plan (RMP) was signed in June 1987 (BLM 1987a). The Lander FO occupies portions of Hot Springs, Fremont, Sweetwater, Natrona, and Carbon counties in central Wyoming. The Lander FO includes approximately 2.5 million acres of surface lands and 2.7 million acres of federal mineral estate.

Environmental Baseline

This section presents a summary of the known grizzly bear distribution in the Lander FO and an analysis of the effects of past and ongoing human activities (including Federal, State, tribal, local and private) that may influence grizzly bears and their habitats. There are 29,000 acres of the mapped grizzly bear distribution in the Lander FO (Schwartz et al. 2002) (**Map 4**). Grizzly bears are known from the following areas in the Lander FO (Bruscino 2004):

- The Pole/Bear Creek areas, where there are small BLM parcels
- Drainages of the East Fork of the Wind River, including lands on the East Fork Big Game Winter Range
- Horse Creek and Tappan Creek drainages north of Dubois
- There is occasional use of small parcels of BLM land in the Dunoir Creek and Warm Springs Creek drainages
- There is the potential for grizzlies to use BLM land in the Jakeys Fork of the Wind River, as there is known use in areas to the north and west of this area
- Grizzly bears are known to use Forest Service lands on the north end of the Lander Slope of the Wind River Range

Parts of the Lander Slope on the Wind River Range contain grizzly bear habitat and will likely be occupied in the future as bears expand their current range (Bruscino 2004). Specific areas include the Lander Slope, Red Canyon, and South Pass areas. There are no known army cutworm moth aggregation sites. Cutthroat trout have been found in the Dubois areas and in the East Fork of the Wind River. Although spawning cutthroat trout are the best documented fish resource for grizzly bears, all riverine trout species are a potential food resource.

Existing Impact Minimization Measures

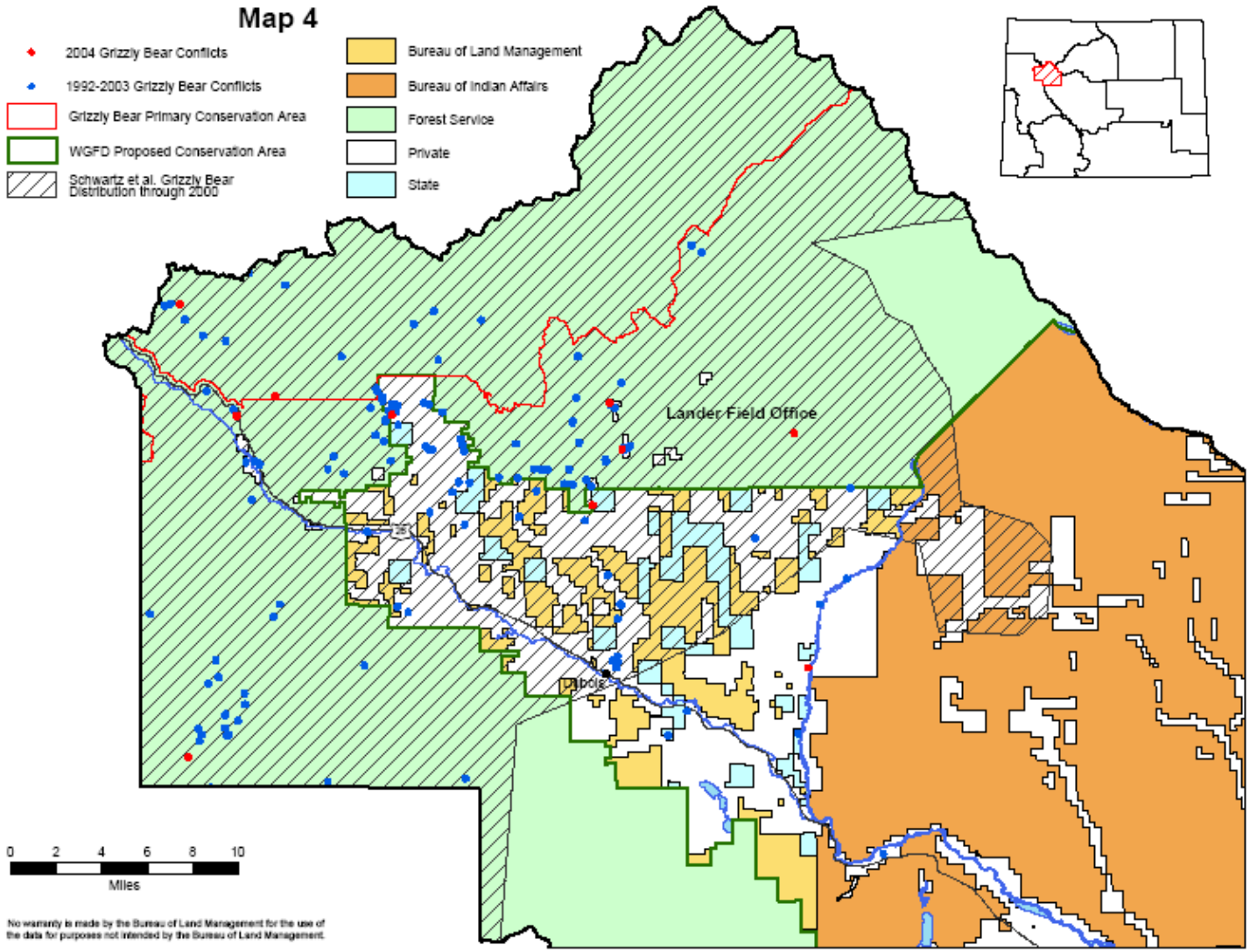
Most RMPs contain restrictions or measures that are incorporated as stipulations on use permits. These measures cover a broad range of protective features (protection of ungulate calving grounds, protection of raptors, greater sage-grouse, wet soils, etc.) that may provide some benefit to grizzly bears. The following section presents measures included in the Lander RMP that may directly or indirectly minimize impacts to the grizzly bear.

(a) “BLM will continue to work closely with the Wyoming Game and Fish Department in all matters affecting fish and wildlife resources” (BLM 1987a, p. 4).

(b) “ORV management will focus more intensive management on those management units having crucial wildlife values” (BLM 1987a, p. 9).

(c) “New oil and gas leases issued in areas rated as having moderate, low or no potential for the occurrence of oil and gas reserves will include a no-surface-occupancy restriction to protect water quality, fisheries, riparian areas, greater sage-grouse leks, steep slopes, threatened and endangered species,

Map 4 Grizzly Bear Distribution 1990-2000 and Primary Conservation Area in the Lander Field Office. Adapted from Schwartz et al. (2002).



significant cultural sites, sensitive visual resources, and elk and moose crucial winter range. In addition, seasonal restrictions will be applied to the leases to protect important wildlife habitat areas" (BLM 1987, p.27, 40, 43, 45, 50, 60, and 69).

(d) "Crucial wildlife areas will be critically examined before placement of any range improvement projects that can result in increased livestock use in these areas. Some crucial wildlife areas will require special intensive management actions" (BLM 1987, p. 80).

Analysis of Proposed Management Actions and Effects

The Lander RMP (BLM 1987a) describes each management prescription applied within the FO. These activities are summarized in the Introduction, above. Refer to the Lander RMP for a complete description of each management prescription (BLM 1987a).

Energy and Minerals

Management Action

Less than one percent of the slightly more than 2.7 million acres of federal mineral estate within the Lander FO will be closed to leasing. All but 12,000 acres of the open acreage will be managed under a management prescription that will allow for enhanced management of the oil and gas resources by being less restrictive of oil and gas development related to other surface resource values in known geological structures and areas rated as having a high potential for the occurrence of oil and gas. This would be accomplished over the life of this plan as analyses are done to determine where the restrictions can be modified and still avoid significant impacts to other resources. In addition, as new information on the potential occurrence of oil and gas in any given area is obtained or new discoveries of oil and gas reserves are made, the potential rating for the area will be revised to reflect new data. New leases issued in these areas will be issued under the management prescription for that new rating.

Oil and gas leases issued within the Lander FO will be conditioned with stipulations to protect other important resource values. If a particular method of geophysical exploration could be conducted within the constraints necessary to protect other resources, it will be allowed.

All federal lands within the Lander FO will be open to locatable mineral exploration and development unless specifically withdrawn or segregated from appropriation under the mining laws. At the present time, approximately 1 % of the federal mineral estate within the FO is closed to locatable mineral exploration and development. The portion of the FO that will be closed to locatable mineral exploration and development will increase by 30,000 acres to approximately 2 % of the total federal mineral estate within the FO. The additional acreage proposed for withdrawal will be withdrawn to protect crucial wildlife habitat in the East Fork Elk Winter Range and Whiskey Mountain Bighorn Sheep Winter Range, and the remaining acreage will be scattered throughout the FO in small tracts primarily for the protection of significant cultural and historical resources.

In addition, in an attempt to minimize the acreage withdrawn to protect significant surface resource values, the plan will require that plans of operation be approved for all exploration and mining operations in certain areas designated as ACECs. Notices of intent usually allowed for operations disturbing five acres or less will not be allowed.

Prospecting, exploration and development, and leasing of phosphate resources will be allowed. The phosphate deposits are located in a belt running along the northeast flank of the Wind River Range and

extend into three different management units. Phosphate activities within the Red Canyon and Lander Slope Management Units will require stringent stipulations and mitigation measures to protect surface-resource values. The Beaver Creek Management Unit, which contains approximately one-half of the known phosphate resources will remain open to exploration, development, and leasing with fewer restrictions than will be the case in the Red Canyon and Lander Slope Management Units. In the Red Canyon and Lander Slope Management Units, these restrictions will adversely affect the economic recovery of the phosphate resource.

The Lander FO has received APDs in forested land in the northwest (Dubois) portion of the FO (Carroll 2003).

Effects Analysis

The increase in human activity associated with oil and gas and mineral development may negatively impact grizzly bear behavior by causing bears to avoid or abandon these areas. Construction of roads, pads, or access by OHVs, and other facilities associated with development of mineral resources may alter or destroy existing terrestrial habitats that may be suitable grizzly bear foraging habitats or linkages between suitable habitats. Increased vehicle traffic associated with mineral and geology exploration, development, and operation may lead to increases in human-bear interactions, which are the largest source of bear mortality, and vehicle collisions. Additional impacts to grizzly bears are increased access into habitat by humans, increased fragmentation, associated noise and human activity, and associated hazards (such as chemical toxins).

Grizzly bears have been documented abandoning a den that was driven over by seismic vehicle, and as a consequence of nearby gravel mining (Harding and Nagy 1977). Grizzly bears have denned successfully at distances of 1.6 to 6.4 km from mining camps. Human activity, at or within 100 m of den sites, caused abandonment by grizzly bears in 12 of 18 dens (Swenson et al. 1997).

Grizzly bears occur in the Dubois portion of the Lander FO, but little active minerals management activity takes place there.

Conservation measures in place that will reduce adverse impacts include providing educational packets, planning of authorized activities with grizzly bears in mind, and implementation of strategies to reduce human-bear conflicts proactively.

Determination

Implementation of mineral management actions, as presented in the Lander RMP (1987a), is **not likely to adversely affect** the grizzly bear due to **discountable effects**. This determination is based on the fact that minerals management activities rarely occur in areas typically used by grizzly bears, and those conservation measures in place to protect grizzly bears. The potential for increased human access and development within grizzly bear habitat at the higher elevations favored by the bears due to implementation of minerals management is considered to be of low likelihood.

Fish and Wildlife

Management Actions

Improvement of aquatic and riparian habitats for fish, beaver, moose, and many other animals will receive to priority in the South Pass and Beaver Creek Management Units, high priority in the Green Mountain

Management Unit, and special attention in the Red Canyon Management Unit. Aquatic and riparian habitat management plans will be developed for an area encompassing parts of the upper Sweetwater River and Beaver Creek drainages and for the Green Mountain area.

Improvement of important big game ranges will receive high priority. The use of prescribed burning, cutting, thinning, planting, seeding, pitting, herbicide treatment, or other appropriate methods will be employed. Priority areas for action will be the Red Canyon and Lander Slope Management Units for elk and other big game habitat, the Whiskey Mountain unit for bighorn sheep, the southwest part of Beaver Creek unit and the South Pass unit for moose and mule deer, and the Sweetwater Rocks portion of the Gas Hills unit for mule deer. Terrestrial habitat management plans will be developed for the Red Canyon and Lander Slope units, the Sweetwater Rocks, and the south-central part of the Beaver Creek unit.

Development of small-scale, simple, or routine habitat improvement projects and maintenance of useful existing projects will be continued throughout the FO. Such action will be subject to normal interdisciplinary environmental review, and budgetary and management constraints.

Effects Analysis

The implementation of management actions associated with wildlife habitat management will likely have positive effects by maintaining or improving existing habitat conditions that will benefit grizzly bears and their prey. Enhancement of elk habitat and improvement of fish and riparian habitat will benefit grizzly bears by increasing ungulate and trout food resources. There is the possibility that in some cases, grizzly bears would avoid areas where activities would create a temporary disturbance to the animals.

Determination

Implementation of wildlife habitat management actions, as presented in the Lander RMP (1987a), is **not likely to adversely affect** the grizzly bear due to **insignificant effects.** Fish and wildlife management actions will be designed to enhance grizzly bear habitat, grizzly bear conservation measures will protect grizzly bears and their habitat during project construction, and many of the projects are designed to benefit grizzly bears by maintaining and improving habitat for the bears and/or their food resources.

Forest Management

Management Actions

Most of the timber management in the FO will occur in the Green Mountain Management Unit. Small volumes may be offered from South Pass and Dubois units and larger volumes from the Lander Slope unit.

Minor forest products will continue to be sold from timbered areas on a demand basis, depending on resource management objectives. Most fuel wood cutting will occur in the Green Mountain Management Unit.

Sawtimber volumes offered in the Green Mountain Management Unit will be approximately two million board feet (MMBF) per year and minor forest product volumes will be 1.5 to 2 MMBF per year. This will be undertaken for 10 years, or until the majority of the larger timber has been salvaged.

From the Lander Slope unit, approximately 10 MMBF will be offered in a large sale that will take up to five years to harvest. After completion of this sale, logging activity will cease for 10 years, and another

sale could be offered. The primary objective of the harvesting program will be to achieve management of the timber resources by salvaging the dead and dying timber and regenerating the harvested areas. However, other resource objectives such as habitat enhancement will be integrated into management plans to enhance these other values.

These will not be sustained-yield harvests, but will be salvage of the dead and dying timber and will eventually create an uneven-aged forest that will have many benefits, including enhancement of wildlife habitat. Individual clear-cut areas, in all cases, will be limited to 25-acre blocks.

Prescribed burning techniques will be included in management plans for conifer and aspen stands to achieve multiple resource objectives. Standard and special provisions will be employed on all sales and burns to achieve management objectives. The size of prescribed burns will be determined on an individual project basis. Regeneration of all harvested and burned areas will be assured, either through natural or artificial regeneration.

Most of the timber acquisition activities are initiated by small companies seeking timber for fencing projects or log cabins. There are currently no large-scale timber sales or large clear-cuts planned (Oberlie 2003).

Effects Analysis

Forest management actions in the Lander FO will primarily occur in upland coniferous forests in the Green Mountain Unit. Forestland management actions occur in coniferous habitats, which are the same areas that can be used by grizzly bears. Although there is the potential for these activities to be conducted during winter when bears are hibernating, this is often impractical due to the complications of snow cover and severe weather conditions.

Timber harvest, especially selection and group selection cuts and small clearcuts with no dozer piling of slash and no mechanical soil scarification, leads to openings in which successional processes produce important amounts of herbs and shrubs bearing fruits eaten by grizzlies. Production of grizzly food sources in these cuts is often greater than in uncut sites in the same habitat types. This indicates that certain timber harvest practices can be used in some forest stands to provide habitat diversity, and that habitat quality can probably be increased or enhanced by creating openings producing grizzly food (IGBC 1986). Thinning and seedcuts would open up the canopy and produce more diverse and productive vegetation types, and would increase early spring foraging opportunities.

New roads created for timber harvest activities, and not immediately revegetated, can lead to an increase in the number of people using an area and to potential interactions with grizzlies, depending on the access to the created roads. Controlling access via locked gates could avoid this problem. Bear-human interactions are one of the highest sources of mortality for bears (Schwartz et al. 2003). Grizzly bears are sensitive to disturbance associated with roads, and may avoid areas within 2.5 miles of roads (Mattson et al. 1986). Such displacement from quality habitats may prevent dispersal, force bears to use poorer quality sites, and cause social disruption (Kasworm and Manley 1989, McLellen 1989). Road avoidance may result in higher mortality and lower fecundity of displaced individuals (Mattson et al. 1986). However, forested habitat on BLM lands mainly provided cover for grizzly bears and do not provide the significant resources known from the areas inside the PCA.

In summary, forestry management can lead to more human intrusion and some loss of cover but those are the only potential adverse affects likely on BLM land. A number of conservation measures apply to forestland management, including planning of authorized activities with grizzly bears in mind, providing educational packets, food and garbage safeguards, no whitebark pine cutting,. These protective measures

will substantially reduce impacts to grizzly bears from forest management activities.

Determination

Implementation of forest management actions, as presented in the Lander RMP (1987a), is **not likely to adversely affect** the grizzly bear, due to **insignificant effects**. This determination is based on the limited amount of forest management activities that occur and conservation measures that can be incorporated into proposed forest management projects to avoid the potential for adverse affects to grizzly bears.

Land Ownership Adjustments and Utility Systems

Management Actions

The majority of the 2.5 million areas of public lands in federal ownership will be retained. One hundred seventy-two tracts, encompassing approximately 24,000 acres, meet the basic criteria for disposal. Based upon the analysis in the Lander RMP/EIS, 108 of these tracts, encompassing 12,500 acres, could be considered for future disposal through either sale or exchange.

Major utility and transportation systems will be located to make use existing corridors whenever possible, to provide for cost-efficient routes and to provide for protection of other resource values such as scenery and wildlife. Most of the area will be open for location of major utility systems. However, areas with the most potential conflicts have already been identified as areas to avoid. The avoidance areas will be areas where rights of way may be granted only when no feasible alternative route or designated rights of way corridor is available. These areas include Whiskey Mountain Bighorn Sheep Winter Range, the East Fork Crucial Elk Winter Range, the Dubois Badlands, the Lander Slope, Red Canyon, South Pass, Sweetwater Canyon, the Sweetwater Rocks, and ¼ mile or the visible horizon, whichever is less, on each side of the Oregon/Mormon Pioneer National Historic Trails.

Effects Analysis

Management of existing access or acquisition of new access to lands administered by BLM is not expected to alter grizzly bear behavior. Lands under new administration may result in positive effects to grizzly bear habitats by securing these lands and managing them under BLM provisions.

Lands and realty management actions associated with exchanges are not expected to negatively impact grizzly bear behavior or habitats. Current BLM land holdings would be evaluated for unique characteristics prior to disposal, including suitability and use by grizzly bears. Lands identified as important for grizzly bears would not likely be available for disposal. Lands not under BLM jurisdiction that are suitable or occupied grizzly bear habitats may be targeted for acquisition and subsequent management by BLM. Such acquisitions would provide benefits to grizzly bear habitats that may not be afforded under non-federal ownership.

Corridors are designated and managed to accommodate power lines, communication towers, pipelines, and roads. Roads can be a source of fragmentation of grizzly bear habitat resulting in reduced mobility and reduced ability to utilize otherwise secure habitat. Roads and other linear access are significant factors in habitat deterioration and increased mortality of grizzly bears (Schwartz et al. 2003). Roads increase the opportunity for human access and result in an increase in human-bear interactions, a major source of mortality for bears.

Disposal or transfer of public lands with potential grizzly bear habitat through Desert Land Entry, public sale, exchange, Wyoming indemnity selection, or Recreation and Public Purposes (R&PP) leases or

patents may affect the bear's ability to utilize suitable habitat and travel corridors linking desirable habitats. The overall goal of field office staff is to maintain lands that contain potential habitat for the bear; however, large transfer of acreage due to land tenure actions may occur.

The issuance of ROWs and leases (utility transportation corridors), specifically ROWs for ditches, canals, and roads may affect the grizzly bear if the associated construction is within the vicinity of travel corridors or areas between different seasonal foraging sites. This may cause short-term behavioral avoidance of these areas by the grizzly bear due to the presence of human activity. The issuance of temporary use permits, and construction activities associated with fencing of revegetation sites require an analysis to determine if they are present in potential habitat areas and travel corridors and would have similar short-term avoidance impacts.

The acquisition of access easements as well as Rights-of-way/leases include powerlines, communication sites, pipelines, ditches and canals, roads (includes stream crossings), well pads, reservoirs, buried telephone and fiber optic lines, wind power generation farms and facilities, compressor stations and other facilities, temporary use permits, and fence re-vegetation sites and designate, cancel, or change stock trail driveways activities may cause short-term behavioral avoidance of these areas during construction/maintenance operations and would have an insignificant effect on the grizzly bear. The establishment of withdrawals, acquisition of conservation easements, and road closures/rehabilitation would close areas from certain activities that could have a negative effect on the grizzly bear; closing areas creates undisturbed habitat for grizzly bear.

Actions associated with classifications and multiple use are not expected to impact grizzly bear behavior or habitats.

Conservation measures in place that will reduce adverse impacts include providing educational packets, planning of authorized activities with grizzly bears in mind, and implementation of strategies to reduce human-bear conflicts proactively.

Determination

Implementation of land resource management actions, as provided in the Lander RMP (1987a) is **not likely to adversely affect** the grizzly bear due to **discountable effects**. This determination is based on the premise that land resource management activities occur in areas outside of habitat typically used by grizzly bears; the conservation measures in place to protect grizzly bears; the limited potential for an increase in roads with added human-bear interactions; disposal or transfer of public land within grizzly bear habitat; issuance of right-of-way and leases for utility transportation corridors, ditches and canals, and roads; temporary use permits; and fencing of re-vegetation sites to disturb grizzly bear behavior, affect their ability to use suitable habitat and travel corridors between habitats; and increases in direct mortality as a consequence of interactions with humans. The potential for increased human access and development within grizzly bear habitat at the higher elevations favored by the bears and need for a right-of-way for access, etc., is considered to be of very low likelihood, as land resource management activities typically occur outside of grizzly bear habitat in the Lander RMP (1987a) planning area.

Recreation Management

Management Action

Management and maintenance will be provided at seven existing recreational sites, including Atlantic City, Big Atlantic Gulch, and Cottonwood campgrounds; Split Rock and Devil's Gate interpretive sites;

and Wild Horse Point Overlook and Castle Gardens picnic areas. The Split Rock and Devil's Gate interpretive sites are included in the Oregon/Mormon Pioneer National Historic Recreation Management Plan.

An interpretive marker will be added for the Red Canyon National Landmark overlook. Hazard reductions will be implemented and maintained on Green Mountain and South Pass. Plans for resource protection and maintenance of dispersed recreational opportunities and settings in the South Pass Historic mining area will be provided in a recreation management plan.

BLM will continue to monitor recreational use throughout the FO. Area personnel will supervise recreational use and provide enforcement of recreation-oriented regulations and special designations. Monitoring and use supervision will be accomplished by patrolling high-use areas and contacting users in the field. Special efforts will be made to ensure compliance with the terms of special recreation-use permits, authorizing commercial guide/outfitter services, permits for tours of the Oregon/Mormon Pioneer National Historic Trails, and special designations dealing with recreation such as 14-day camping limit on public lands and off-road vehicle designations. Quotas will be established for commercial hunting camps in the Green Mountain, Lander Slope, Red Canyon, and Whiskey Mountain Management Units.

Special Recreation Permits issued in grizzly bear country contain stipulations that: the permit may be suspended; the activities shall be conducted in a manner which will prevent or minimize the opportunity for human/bear conflicts; set standards for food storage; addresses methods for disposal of livestock carcasses; sets requirements for storage, handling, and disposal of human food; address human safety; and other measures and guidelines.

Effects Analysis

People enjoy recreational activities, such as fishing, hiking, and hunting in montane areas inhabited by grizzly bears. This type of activity is on the increase throughout the western United States. Antler-hunting is also a popular recreational activity. Antler hunting, on foot and on horseback, typically occurs in the spring, after the antlers are shed and when grizzly bears are emerging from hibernation and in particular need of food resources vulnerable to disturbance. Hunters occasionally encounter grizzly bears while hunting and grizzly bears may approach a hunter harvested animal to consume the carcass or entrails. Human intrusions can displace or disturb grizzly bears. Anticipated impacts to grizzly bears may possibly be reduced somewhat, but the general increase in recreational use of BLM lands is likely to cause increases in the potential for bear-human conflicts, especially as bear populations also expand. The public lands are generally open (with limited exceptions) to use by the public for many uses, with recreational activities one of the primary uses. These recreational activities are allowed, by generally not regulated by the BLM (hunting, fishing and antler-gathering are regulated by the WGFD).

Conservation measures in place that will reduce adverse impacts include providing educational packets, installation of bear-resistant refuse containers in developed campgrounds, specifications for food and garbage handling in operation plans and special use permits, planning of authorized activities with grizzly bears in mind, and implementation of strategies to reduce human-bear conflicts proactively. Few new recreational projects (campground or trail-head construction, signs, etc.) or activities will take place in grizzly bear habitat.

Determination

Implementation of recreation management actions, as presented in the Lander RMP (1987a), is **not likely to adversely affect** the grizzly bear due to **insignificant effects.** This determination is based on the premise that increases in human recreational use of BLM lands have occurred in recent years and will

inevitably continue to increase, resulting in the increased potential for human-bear conflicts resulting in the potential harm to grizzly bears, but that the grizzly bear conservation measures will protect grizzly bears and their habitat from recreation uses, projects, or activities and human-bear interactions by recreationists on BLM lands are extremely infrequent to non-existent.

Off-Road Vehicles (ORVs)

Management Actions

Existing ORV designations completed in 1981 on one-half of the Lander FO area will be continued. Designations will be completed on the remaining areas of public lands. ORV management will focus more intensive management on those management units having crucial wildlife values, significant visual resources, high watershed sensitivity, and outstanding natural character. Intensive management will limit ORV use to designated roads and vehicle routes and impose seasonal closures (from approximately December through June) on areas or roads where vehicle use is totally incompatible with other resource values. ORV use in the remainder of the FO will be limited to existing roads and vehicle routes, except for the performance of necessary tasks. Examples include picking up hunter harvested big game, repairing range improvements, managing livestock, conducting mineral activities where surface disturbance does not total more than five acres.

Effects Analysis

The Lander RMP (1987a) restricts ORV use to existing roads and trails. OHV use on BLM lands is almost entirely on rough, 4-wheel drive roads receiving limited maintenance, so the possibility of a grizzly bear mortality by an OHV, would be extremely remote. Two-track roads occur throughout the mountainous areas where grizzly bears also roam, although not many actually occur in grizzly bear habitat in the Lander FO. Most OHV incidents involving grizzly bears would occur when drivers leave improperly stored food in a vehicle and a bear would break into the vehicle to extract it.

ORV use is one of the main methods of access by humans into grizzly bear habitat, and can lead to disturbance to the bears by encouraging greater access in undeveloped habitat, causing some potential for the bears to avoid areas and reducing habitat availability. In the spring, as bears are coming out of hibernation, people may drive out on these roads to search for and collect antlers. This may lead to human-bear encounters. Such encounters lead to human-caused mortality, which accounts for as much as 90% of recorded mortalities (Schwartz et al. 2003).

Determination

Implementation of OHV management actions, as presented in the Lander RMP (1987a), is **not likely to adversely affect** the grizzly bear due to **insignificant effects.** This determination is based on the very limited potential for OHV use to occur in grizzly bear habitat and disrupt foraging and movement, fragmenting habitat, and leading to human-bear encounters which may result in death for grizzly bears and grizzly bear conservation measures in place that will protect grizzly bears and their habitat from ORV users.

Cultural and Natural History Management

Management Action

Important resources include the Oregon/Mormon Pioneer National Historic Trails and associated sites,

South Pass Historic Mining Area, Castle Gardens, Beaver Rim, Red Canyon National Natural Landmark, and the Warm Springs Canyon flume, natural bridge, and geyser will receive enhanced protection.

Effects Analysis

Actions associated with cultural resource and paleontological management are sparsely distributed across the landscape, are very small in physical extent, and involve very little disturbance to the area. Frequently, the goal is to leave the area intact with no disturbance. These activities are unlikely to occur in grizzly bear habitat.

Determination

Implementation of cultural resource management actions, as presented in the Lander RMP (1987a), is **not likely to adversely affect** the grizzly bear, due to **discountable effects**. This determination is based on the premise that cultural surveys implemented for other projects could lead to people working in occupied grizzly bear habitat, creating some possibility for conflict, although these activities are very unlikely to occur in or near grizzly bear habitat. Behavior guidelines for humans in occupied bear country and application of the grizzly bear conservation measures should minimize the potential for such conflicts.

Fire Management

Management Action

Approximately 2 % of the lands administered by the BLM in the Lander FO will be under full fire suppression, with no equipment restrictions. Full fire suppression management has the objective of suppressing all wildfires as quickly as possible with all available resources. Approximately 60 % of the lands administered by the BLM will have full suppression of wildfires with limited or restricted use of heavy equipment. This does not preclude the use of heavy equipment, such as bulldozers, but does limit their use on initial attack and requires fire authorities to analyze a fire situation critically before committing heavy equipment to a fire. Approximately 38 % of the public lands in the FO will be under limited suppression of wildfires. There will be no initial attack on the fire and an observer will monitor a wildfire to determine if management objectives are met. Suppression of wildfire will occur when the fire (a) exceeds or has the potential to exceed the size specified in a predetermined plan, (b) threatens private property, (c) threatens man-made structures, or (d) threatens human life. Prescribed burns will be allowed in all management units.

Effects Analysis

Fire management actions, particularly actions associated with wildfire suppression and prescribed fire, whether planned or unplanned, have the potential to occur in habitats occupied by grizzly bears. Fire exclusion alters the natural mosaic of successional stages that promote a mixture of forest openings and structural diversity on the landscape level. This limits the function of fire in perpetuating certain vegetation conditions, such as the development of early successional shrubs that can provide berry food resources for bears. Burns resulting from wildfires in this century are important producers of fruiting shrubs which provide food energy for the bears (IGBC 1986). Control of such natural fires would reduce these potential future foods for grizzly bears. Roads constructed in association with fire suppression, if not revegetated, can lead to increased access into higher altitude sites by humans, the main cause of mortality for grizzly bears (Schwartz et al. 2002).

Prescribed burning can lead to an increase in early seral stages that promote shrub development. This can provide food resources for bears. Some grizzlies appear to derive much of their energy from the fruits of shrubs, including huckleberry and buffaloberry.

Prescribed burning, construction of firelines, use of off-road vehicles, and use of hand tools and heavy equipment all have the potential for disturbing grizzly bears by causing them to abandon or avoid particular habitats temporarily. However, these disturbances are anticipated to be temporary and of relatively short duration. They could pose a problem if they were located at a concentrated food resource, especially as bears are eating large quantities of food to put on fat for hibernation (hyperphagia).

Conservation measures in place that will reduce adverse impacts include providing educational packets, specifications for food and garbage handling on operation plans and special use permits, and planning of authorized activities with grizzly bears in mind. Prescribed fires are not planned in grizzly habitat at this time in the Lander RMP (1987a) planning area.

Determination

Implementation of fire management actions, as presented in Lander RMP (1987a), is **not likely to adversely affect** the grizzly bear, due to **insignificant effects**. This determination is based on the low potential for activities associated with wildfire suppression and prescribed burning to substantively reduce the potential for grizzly bears to utilize the landscape and find food and denning sites and the conservation measures in place to protect grizzly bears and their habitat. Fire suppression affecting the development of berry producing shrubs, and the creation of temporary roads during fire suppression activities are anticipated to be infrequent. Other disturbances are minor and temporary in nature. In the event of a wildfire and immediate suppression is required in grizzly bear habitat, as many conservation measures as possible will be applied that do not hinder safety or property protection. The USFWS will be contacted and emergency consultation will take place at the earliest possible time if grizzly bear habitat is affected or impacted.

Access Management

Management Action

Access roads no longer needed would be rehabilitated, as outlined in the Lander RMP (1987a). Negotiations with private landowners concerning BLM access easements will be proposed for areas where public or administrative access will be needed.

Effects Analysis

Management of existing access or acquisition of new access to lands administered by BLM is not expected to alter grizzly bear behavior. Lands under new administration may result in positive effects to grizzly bear habitats by securing these lands and managing them under BLM provisions.

Corridors are designated and managed to accommodate power lines, communication towers, pipelines, and roads. Roads can be a source of fragmentation of grizzly bear habitat resulting in reduced mobility and reduced ability to utilize otherwise secure habitat. Roads and other linear access are significant factors in habitat deterioration and increased mortality of grizzly bears (Schwartz et al. 2003). Roads increase the opportunity for human access and result in an increase in human-bear interactions, a major source of mortality for bears.

Conservation measures in place that will reduce adverse impacts include providing educational packets, planning of authorized activities with grizzly bears in mind, and implementation of strategies to reduce human-bear conflicts proactively.

Determination

Implementation of access management actions, as presented in the Lander RMP (1987a), is **not likely to adversely affect** the grizzly bear, due to **insignificant effects**. This determination is based on the extremely low likelihood that access actions will occur in or destroy suitable grizzly bear habitat, disturb grizzly bear behavior, or affect their ability to use suitable habitat and travel corridors between habitats, due to the application of grizzly bear conservation measures.

Soils, Water, and Air Management

Management Action

The public lands will be managed in a manner that will protect and improve the quality of the soil, water, and air resources associated with the public lands. This will include project and plan review to ensure proper consideration of these resources and that enhancement opportunities are not overlooked. Also, monitoring of soil erosion, water quality and air quality will be conducted as necessary to track the effectiveness of specific projects and management schemes.

Effects Analysis

Air Management: Actions related to air quality management are extremely small in scope, of short duration, and infrequent. They will result in no impacts to grizzly bear behavior, denning habitat, or foraging habitat. No air quality monitoring stations are currently in any grizzly bear habitat on BLM lands within the Lander FO. Actions related to air quality management on other activities will not result in negative impacts to grizzly bears or their habitat. These management actions will likely result in maintaining or improving air quality conditions throughout the FO, which may have secondary benefits to grizzly bears.

Soils Management: The protection of trees, shrubs, and ground cover from damage during construction activities will be required. Backfill will be required to be replaced in a similar sequence and density to preconstruction conditions. The restoration of normal surface drainage will be required. Any mulch used will be free of mold, fungi, or noxious weed seeds. The grantee or lessee will be responsible for the control of all noxious weed infestations on surface disturbances.

Recognized roads will be used when the alignment is acceptable for the proposed use. Generally, roads will be required to follow natural contours; be constructed in accordance with acceptable standards; and be reclaimed to BLM standards. On newly constructed roads and permanent roads, the placement of topsoil, seeding and stabilization will be required on all cut and fill slopes. No unnecessary side-casting of material on steep slopes will be allowed. Reclamation of abandoned roads will include requirements for reshaping, recontouring, resurfacing with topsoil, installation of water bars, and drill seeding on the contour. Stripped vegetation will be spread over the disturbance for nutrient recycling, where practical.

On well pads and facility locations, special attention will be given to parts of the surface use plan covering reclamation. This plan will include objectives for successful reclamation covering; soil stabilization, plant community composition, and desired vegetation density and diversity. The development of facilities on slopes between 25 and 40 % will be restricted unless soil erosion controls can

be ensured and adequate revegetation is expected. No surface occupancy will be allowed on slopes greater than 40 %. Abandoned sites must be satisfactorily rehabilitated by the lessee.

Existing road locations will be used where possible to minimize surface disturbances. Where possible, clearing of pipeline and communication line rights of way will be accomplished with the least degree of disturbance to topsoil. Where topsoil removal is necessary, it will be stockpiled and respread over the disturbance after construction and backfilling are completed. Vegetation removed from the right of way will also be required to be respread to provide protection, nutrient recycling, and a natural seed source.

Water Management: Activities authorized under water resources management may include implementation of watershed plans, identification of heavy sediment loads, monitoring and treating soil erosion, evaluating and restricting surface development activities, and monitoring water quality.

Monitoring of streams and rivers for water quality would be very small and short term in nature (a few hours or less). Monitoring would be done with small, hand held kits on site, or water samples would be collected and analyzed in a laboratory off site. Other activities would be to measure stream channelization and evaluate streambank and riparian conditions. Access for these activities would be primarily by vehicle (pickup truck, etc.) and monitoring would be done by personnel walking into and along streams and rivers. Permanent in-stream flow monitoring and continuous water quality analysis gauging stations would be small structures that would require some construction to build (backhoe, concrete truck or a lift to place a pre-built structure) and some disturbance to streams or rivers during construction and occasional maintenance activities.

Other smaller scale water resource activities would include plugging abandoned wells to prevent contamination or cross contamination of water aquifers and reclaiming (recontouring and revegetating) the associated drill pad. This activity would consist of pouring concrete into the well casing to plug the well, requiring: vehicles, concrete trucks, concrete pumper trucks, personnel, etc. Reclamation of the drill pad after plugging would require the use of loaders, backhoes, graders or bulldozers, seeding equipment, and trucks and trailers to haul the equipment. Instream flow control structures such as drop structures (made of logs, rock baskets, or concrete); weirs; revetments (streambank erosion control structures (trees, logs, etc.)); rip-rap (rocks, boulders, logs, etc.); placing gravel or concrete in streams for crossings and fish spawning; culverts, all requiring equipment and personnel to construct. Equipment might include: vehicles, backhoes, bulldozers, skid loaders, concrete trucks, etc. Planting of riparian plant species to reduce erosion and sediment movement along watercourses would be done either using hand held tools (shovels, augers, or just jamming stems into the ground (willows, cottonwoods, etc.)) or with smaller equipment like motorized augers, backhoes, tree spades, etc.).

The above types of actions associated with watershed management would take place very rarely, if at all within any grizzly bear denning or foraging habitat and would likely have minimal or no negative impacts on grizzly bear behavior or their denning or foraging habitats. The activities associated with this management action are infrequent, small in scale, and not likely to occur in grizzly bear habitat. Actions associated with watershed management are likely to improve riparian vegetation and habitat for grizzly bears and their food resources.

Determination

Management of soil, water, and air resources is not expected to detrimentally impact grizzly denning, travel, or foraging areas. Actions associated with soil, water, and air resource management will be limited in both time and extent, and are unlikely to occur at any particular locale, including grizzly bear habitat. Implementation of these resource management actions may maintain or improve the condition of some habitats and therefore may result in beneficial effects to suitable denning, travel, and foraging habitats.

Air Management: Implementation of air quality management actions, as presented in the Lander RMP (1990), will have **no effect** on the grizzly bear, due to the fact that this management activity is not anticipated to impact grizzly bear behavior, or foraging or denning habitat.

Soils Management: Implementation of soil resource management actions, as presented in the Lander RMP (1987a), is **not likely to adversely affect** the grizzly bear, due to **discountable effects**. This determination is based on the conservation measures in place that will preclude any adverse effects to the grizzly bear or its habitat and will minimize or remove impacts to grizzly bear habitat. Management of soil resources is not expected to detrimentally impact grizzly bear behavior or suitable denning or foraging areas. The activities associated with this management action are infrequent, localized or small in scale, and generally not likely to occur in grizzly bear habitat. Implementation of soil resource management actions may maintain or improve soils condition of some grizzly bear habitats and the use of native plants for re-vegetation will benefit grizzly bears, resulting in secondary beneficial effects to foraging or other habitat parameters.

Water Management: Implementation of soil resource management actions, as presented in the Lander RMP (1987a), is **not likely to adversely affect** the grizzly bear, due to **discountable effects**. This determination is based on the conservation measures in place that will preclude adverse effects to the grizzly bear or its habitat and will minimize or remove impacts to grizzly bears or their habitat. Management of water resources is not expected to detrimentally impact grizzly bear behavior or suitable denning or foraging areas. The activities associated with this management action are infrequent, localized or small in scale, and generally not likely to occur in grizzly bear habitat. Implementation of water resource management actions may maintain or improve the condition of some grizzly bear habitats and therefore may result in secondary beneficial effects to foraging habitats and are likely to improve riparian vegetation and habitat for grizzly bears and their food resources.

Livestock Grazing

Management Action

The Lander RMP includes two grazing study areas: Green Mountain and Gas Hills. Rangeland program summaries (RPSs) for these study areas are included in the RMP. There are 291 allotments in the Lander FO. Category M allotments comprise 29 % of the allotments and 27 % of the acreage in the FO. Category C allotments comprise 28 % of the allotments and 4 % of the acreage in the FO. Category I allotments comprise 43 % of the allotments and 69 % of the acreage in the FO.

Management decisions affecting grazing use will be made when monitoring data are sufficient to support those decisions. They may include changing livestock numbers, periods of use, or a combination of both. Monitoring will be a continuing process to assure that any changes in grazing use accomplish the objectives. If monitoring studies indicate a need to further modify periods of use, livestock numbers, class of livestock, or grazing systems, these adjustments will be made after consultation with the affected livestock operators and any other affected parties.

The Lander FO has three sheep operators at present, though none in the Dubois area. Sheep allotments will be phased out as the opportunity arises (Oberlie 2004). Conversion from cattle to sheep is not allowed due to concerns about bighorn sheep and contact with domestic sheep. Table B-3 lists the livestock grazing allotments within the Lander FO with overlapping grizzly bear habitat.

Wild horse herd management plans will be developed in Category I Allotments that will specify necessary measures to maintain a healthy, viable herd that is consistent with multiple-use objectives for the allotment. The 1979 population level of wild horses will be set as the maximum level for an interim population level. Wild horses will be monitored, along with the habitat, to allow further adjustments as necessary to maintain viable herds and satisfactory range condition. As funding allows, horse numbers will be reduces with roundup expected every 5 years. All horses will be removed from the East Beaver Allotment number 1801. Appropriate Management Levels were established in the RMP for the Environmental Assessments for the Evaluation of Wild Horse Herd Areas completed in 1993 and 1994. The upper and lower AMLs are 50-100 for Dishpan Butte Herd; 60-100 for Conant Creek Herd; 50-86 for Rock Creek Mountain Herd; 160-250 for Muskrat Basin Herd; 60-82 for Antelope Hills/Cyclone Rim Herd; 65-100 for Crooks Mountain Herd; and 170-300 for Green Mountain Herd.

Effects Analysis

There are stipulations for grazing permits/lease renewals. These require that the permittee transport carcasses to a location at least ½ mile from any inhabited dwelling, camping area, road, trail, or recreations site, and at least 100 yards from live water; explosives and burning (of carcasses) are permitted for this purpose. All human and prepared livestock and pet food and other odorous substances must be stored, handled, and disposed of in such a manner as to make it totally unavailable to bears (i.e. bear-resistant containers, closed vehicle, or suspended). Uneaten horse feed may not be left, and all garbage shall be packed out regularly. Any overnight camps must be at least ½ mile from any livestock carcass.

Grizzly bear issues related to livestock grazing have generally involved depredations of livestock by grizzly bears, disposal of livestock carcasses, storage of human food and stock feed, and grizzly bear habituation, food conditioning and mortality risk associated with these activities. Interaction between livestock and grizzly bears has typically led to relocation or removal of grizzly bears. This has not yet occurred on BLM grazing permits. but there is a high potential for it to occur on a BLM grazing permit at some time in the future. This is particularly true on domestic sheep allotments. In the case of sheep allotments, conflicts have been much more prevalent and more difficult to resolve without eventually phasing out sheep grazing in the PCA (ICST 2003). Grazing leases for BLM contain stipulations that sheep must be removed in the event of problems with grizzly bears.

Potential adverse effects of livestock grazing on individual bears would result from management control actions associated with livestock conflicts; and illegal, accidental, or defensive taking by grazing permittees/employees and other members of the public resulting from depredation conflicts.

The Grizzly Bear Management Guidelines recommend control actions in response to livestock depredations (outside of Management Situation 1) that involve a two-strike policy for males and a three-strike policy for females before consideration for removal. However, the proposed Response Protocol for Nuisance Grizzly Bear Actions Outside the Recovery Zone in Wyoming gives the Wyoming Game and Fish Department greater latitude to remove a bear from the population. Thus, livestock grazing will likely result in more bears being taken out of the population outside the PCA when livestock depredations occur.

Illegal, accidental, or defensive taking by grazing permittees and/or their employees may occur because of trying to protect their livestock or in self-defense in some situations (for example, a herder shooting a bear attacking livestock). Risk also exists for the taking of bears by public agency personnel, permittee personnel, or members of the public as a result of accidentally encountering bears feeding on livestock carcasses.

As grizzly bear populations expand outside the PCA, the proportion of livestock depredations occurring outside the PCA will likely increase, especially since there are more livestock grazing operations outside the PCA than inside. Grazing allotments within grizzly bear habitat will very likely have livestock depredation.

Conservation measures will reduce the potential for adverse impacts from grazing, but will not eliminate them; they include educational material packets to be distributed to permittees, the phasing out of sheep grazing as the opportunity arises, and the proper disposition of livestock carcasses.

Determination

Implementation of livestock grazing management actions, as presented in the Lander RMP (1987a), is **likely to adversely affect** the grizzly bear. This determination is based on the likelihood or inevitability that livestock grazing within grizzly bear habitat will result in depredation and removal or death of a grizzly bear.

Wild Horse Management

Management Action

Seven wild horse herd management areas have been designated in the Lander FO; no wild horse management areas occur in the Dubois area. Wild horse herd management plans will be developed in Category I Allotments that will specify necessary measures to maintain a healthy, viable herd that is consistent with multiple-use objectives for the allotment. The 1979 population level of wild horses will be set as the maximum level for an interim population level. Wild horses will be monitored, along with the habitat, to allow further adjustments as necessary to maintain viable herds and satisfactory range condition. As funding allows, horse numbers will be reduced with roundup expected every 5 years. All horses will be removed from the East Beaver Allotment number 1801. Appropriate Management Levels were established in the RMP for the Environmental Assessments for the Evaluation of Wild Horse Herd Areas completed in 1993 and 1994. The upper and lower AMLs are 50-100 for Dishpan Butte Herd; 60-100 for Conant Creek Herd; 50-86 for Rock Creek Mountain Herd; 160-250 for Muskrat Basin Herd; 60-82 for Antelope Hills/Cyclone Rim Herd; 65-100 for Crooks Mountain Herd; and 170-300 for Green Mountain Herd.

Effects Analysis

No herds of wild and free-roaming horses occur in the Dubois area of the Lander FO where the potential for interactions with grizzly bears might occur. Actions associated with wild horse management in these seven areas are expected to be limited to occasional herding, corralling, and transporting of horses. Management activities of all seven WHHMAs would occur outside of the potential management area for grizzly bears (Moody et al. 2002) and it is unlikely that bears would range very far to the east from the Shoshone National Forest to reach this area. These actions are not expected in any way to detrimentally impact grizzly bear behavior or foraging or denning habitats.

Determination

Implementation of wild horse management, as presented in the Lander RMP (1987a), will have **no effect** on the grizzly bear. This determination is based on the fact that grizzly bears would be unlikely to travel through the open terrain to any of the seven WHHMAs where the wild horse areas occur and be adversely affected by actions associated with management of wild horses.

Wilderness Management

Management Action

Three management units in the Lander FO are wilderness study areas (WSAs). These units encompass six WSAs totaling 48,000 acres and include Sweetwater Canyon, Sweetwater Rocks (four WSAs), and Cooper Mountain. The Final Wilderness EIS Supplement will be printed at a later date.

Effects Analysis

Management actions associated with wilderness management will not result in detrimental impacts to grizzly bear behavior or habitats. These actions will result in positive effect to bears by limiting harassment and disturbance to denning, travel, and foraging areas.

Determination

Implementation of the wilderness management actions, as presented in the Lander RMP (1987a), is **not likely to adversely affect** the grizzly bear, due to **beneficial effects**. This determination is based on the potential that these actions will limit the harassment and displacement of grizzly bears and maintain or protect suitable bear habitats.

Wild and Scenic Rivers Management

Management Actions

It was determined that one river/stream segment managed on public lands within the Lander RMP meet the Wild and Scenic River (WSR) eligibility and suitability factors and are within potential grizzly habitat and should be managed to maintain or enhance their outstandingly remarkable values for any possible future consideration for inclusion in the National Wild and Scenic River Suitability (NWSRS) designation. The one WSR segment is the Baldwin Creek Unit (7.9 river miles). The suitable determination is based on the unique qualities of the diverse public land resources and their regional and national significance, making them worthy of future consideration for addition to the NWSRS.

Interim management practices for the public land WSR parcel will focus on maintaining or enhancing the outstandingly remarkable scenic, recreational, and historic values and the relatively unmodified character of the area in a near-natural setting. Any activities that would conflict with this objective are prohibited. Some intrusions on the public lands involved may be allowed if they are not readily evident or are short-lived, and do not adversely affect maintaining the scenic classification.

Effects Analysis

The designation of WSR status is simply a designation, and tempers or stipulates from a WSR resource viewpoint, specific protections or management of other BLM authorized actions. WSR classifications, in and of themselves, do not place on-the-ground projects or ground disturbing activities. Because of their isolation, rugged character, and naturalness, designation as a Wild and Scenic River will not be likely to have negative impacts on wildlife. At the time of designation, further consideration of details will be given to potential impacts to grizzly bears.

Generally, WSR status is a beneficial impact on wildlife and plant species. Grizzly bear habitat that falls

within a WSR segment would generally be beneficially impacted by the more restrictive criteria applied to those stream/river segments, including protecting spawning fish habitat or berry producing plants that provide a food source for grizzly bears and security habitat. Actions associated with wild and scenic river management are not expected to detrimentally influence grizzly bear behavior or impact suitable denning, travel, and foraging habitats. These actions will likely result in positive, beneficial effects by maintaining or enhancing habitats suitable for grizzly bears.

Determination

Implementation of wild and scenic rivers management actions, as presented in the Lander RMP (1987a), is **not likely to adversely affect** the grizzly bear, due to **beneficial effects**. This determination is based on the potential that WSR status may maintain, protect or improve habitats used by grizzly bears.

Areas of Critical Environmental Concern

Management Action

Approximately 117,000 acres, representing 4.7 % of the Lander FO will be designated as areas of critical environmental concern (ACECs) and will require intensive management of all activities. The following areas will be designated ACEC in the Lander FO:

- Lander Slope Management Unit (25,000 acres of federal surface)
- Red Canyon Management Unit (15,000 acres of federal surface)
- Whiskey Mountain Management Unit (4,000 acres of federal surface)
- East Fork Management Unit (1,000 acres of federal surface)
- Dubois Badlands Management Unit (5,000 acres of federal surface)
- Majority of the South Pass Management Unit (12,000 acres of federal surface)
- Portion of Green Mountain Management Unit (18,000 acres of federal surface)
- Beaver Creek Management Unit (7,000 acres of federal surface)

Significant sites and segments along the Oregon/Mormon Pioneer Natural Historic Trails will be designated an ACEC and are located within the Beaver Creek and Gas Hills Management Units. These sites and segments include approximately 22,600 acres of protective corridor on surface lands administered by BLM; approximately 3,100 acres of current withdrawal or proposed withdrawals; and approximately 7,000 acres of trail corridor on split estate lands. There are approximately 780 acres of partially impacted sites and segments on surface lands administered by BLM that are included in the ACEC but will be considered on a case-by-case basis and approximately 450 acres on split estate.

Effects Analysis

This program analysis is for the designation and management of ACECs. Management actions associated with ACECs will be analyzed under the program covering that activity. There are no impacts to the grizzly bear in the establishment of an ACEC. There is the possibility that some management action could occur, specific to an ACEC that is not addressed by the existing program management plans. Implementation of ACEC management involves no actual ground disturbing activities and primarily involves a narrow, focused outlook on management of the ACEC providing limited uses and restricting most activities from either occurring or tempering them so that they are less disruptive in nature.

Determination

Implementation of ACEC management actions, as presented in the Lander RMP (1987a), is **not likely to adversely affect** the grizzly bear, due to possible **beneficial effects**. This determination is based on the premise that implementation of ACEC management involves no actual ground disturbing activities and therefore no anticipated disturbance to grizzly bear habitat; the low likelihood that a management action, specific to an ACEC, would occur that did not fit within the existing program management plans; no increased human presence; and likely will provide beneficial affects due to limiting activities in particular ACECs that grizzly bears might inhabit.

Summary of Determinations

The following is a summary of the effects determinations developed for each of the Lander RMP (1987a) management actions.

TABLE 4 SUMMARY OF DETERMINATIONS FOR THE LANDER RMP

Resource	***Determination***
Energy and Minerals	Not likely to adversely affect, due to discountable effects
Fish and Wildlife	Not likely to adversely affect, due to insignificant effects
Forest	Not likely to adversely affect, due to insignificant effects
Land Ownership and Utilities	Not likely to adversely affect, due to discountable effects
Recreation	Not likely to adversely affect
Off-Road Vehicles	Not likely to adversely affect
Cultural and Natural History	Not likely to adversely affect, due to discountable effects
Fire	Not likely to adversely affect, due to insignificant effects
Access	Not likely to adversely affect, due to insignificant effects
Soils, Water and Air	Not likely to adversely affect, due to discountable effects/No effect
Livestock Grazing	Not likely to adversely affect
Wild Horses	No effect
Wilderness	Not likely to adversely affect, due to beneficial effects
Wild and Scenic Rivers	Not likely to adversely affect, due to beneficial effects
ACECs	Not likely to adversely affect, due to beneficial effects

Cumulative Effects

Cumulative effects include future State, tribal, local, or private actions that are reasonably certain to occur in the Lander FO. Potential effects that could affect grizzly bears or their habitats in the Lander FO include the following:

- Subdivision development along rivers (especially along the Wind River near Dubois) that results in habitat fragmentation
- Sand and gravel operations along river corridors
- Livestock grazing on private lands
- Timber harvesting

Some of these activities are situated near important grizzly bear habitats or linkages on BLM-administered lands. Certain components of these projects, if completed, could directly or indirectly affect grizzly bear or their habitats. In addition to the cumulative impacts resulting from the BLM activities described previously, implementation of the Lander RMP could add further impacts to the grizzly bear

that may result from current non-federal actions.

PINEDALE FIELD OFFICE

The Record of Decision and Resource Management Plan (RMP) for the Pinedale Resource Area was signed in December 1988 (BLM 1988). This plan provides the management direction for approximately 931,000 acres of public surface land and 1,185,000 acres of federal mineral estate that are administered by the BLM in the Pinedale Field Office (FO). This plan addresses BLM-administered lands in Sublette, Lincoln, and Teton Counties.

Environmental Baseline

This section presents a summary of the known grizzly bear locations in the Pinedale FO and an analysis of the effects of past and ongoing human activities (including Federal, State, tribal, local and private) that may influence grizzly bears and their habitats. There are 3,000 acres of mapped grizzly bear distribution in the Pinedale FO (Schwartz et al. 2002) (**Map 5**).

The following distribution information was generously provided by Bruscino (2004). Grizzly bears have been known to use areas near New Fork Lake east of BLM lands in the McDowell Flat area. There is occasional known grizzly bear use on private, NPS, and USFS land between Moose and South Park bridge. Future expansion could reasonably occur on the Lander Slope as far as South Pass.

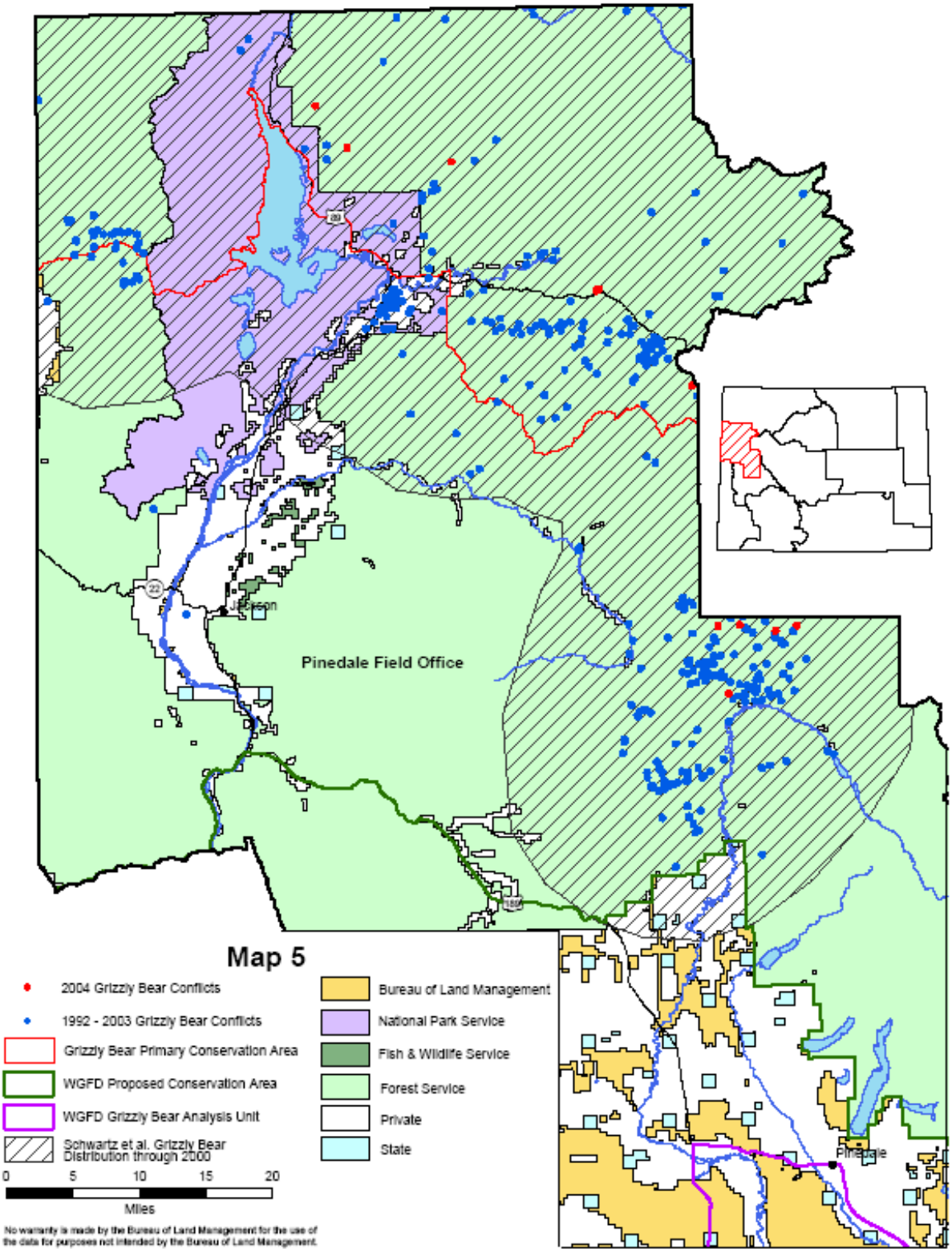
Existing Impact Minimization Measures

Most RMPs contain restrictions or measures that are incorporated as stipulations on use permits. These measures cover a broad range of protective features (protection of ungulate calving grounds, protection of raptors, greater sage-grouse, wet soils, etc.) that may provide some benefit to grizzly bears. The following section presents measures included in the Pinedale RMP that may directly or indirectly minimize impacts to the grizzly bear.

(a) “Threatened and endangered (T&E) species and their habitats will be protected. Actions which would degrade habitat to a point of jeopardizing the continued existence of a T&E species will not be allowed. The USFWS will be consulted on any action with reasonable potential to affect endangered species or their habitats. A biological assessment will be prepared on all proposals where T&E species habitat will or may be affected and a biological opinion will be requested from the USFWS. All actions will include consideration for T&E plant and animal species. The Pinedale Resource Area will continue to be inventoried to identify potential habitat and occurrence of T&E species. Identification of habitat occupied by T&E species and habitat with potential to help support these species would be managed in accordance with the national recovery plans.” (BLM 1988, p.21).

(b) “Habitat occupied by federally listed T&E plant and animal species will be monitored to ensure compliance with the Endangered Species Act)” (BLM 1988, p.21).

Map 5 Grizzly Bear Distribution 1990-2000 and Primary Conservation Area in the Pinedale Field Office. Adapted from Schwartz et al. (2002).



Analysis of Proposed Management Actions and Effects

The Pinedale RMP (BLM 1988) includes descriptions of each management prescription applied within the FO. These activities are summarized in the Introduction, above. Refer to the Pinedale RMP for a complete explanation of each prescription.

Surface Disturbance Restriction Decisions

Management Actions

Necessary protection from surface-disturbing activities will be provided for wintering wildlife on about 461,090 acres of crucial and noncrucial winter range. Seasonal restrictions will be incorporated into all land use authorizations where appropriate. This includes approximately 13,440 acres of noncrucial elk winter range in the Bench Corral area; approximately 3,400 acres of noncrucial elk winter range in the Miller Mountain area; and approximately 12,800 acres of noncrucial deer winter range in the Mesa area.

No surface occupancy will be allowed on elk feedgrounds. Exceptions may be allowed if analysis indicates that proposed activities will either benefit or cause no adverse impacts to the elk. Further public input will be required for exceptions that are not designed to specifically benefit elk. No activity or surface disturbance will be allowed in elk calving areas during periods of use, usually between May 1 and June 30.

Greater sage-grouse nesting areas will be protected in accordance with the Wyoming BLM mitigation guidelines. Surface occupancy or use, including but not limited to the drilling of wells, the construction of well pads, roads, pipelines, or other types of rights of way, and/or the installation of permanent or high profile structures (buildings, storage tanks, overhead powerlines, etc.) within 1/4 mile of a greater sage-grouse lek (strutting ground) will be restricted or prohibited unless the operator and Authorized Officer arrive at an acceptable plan to mitigate anticipated impacts. Activity will generally be restricted to existing roads and trails. Other activities may be allowed if environmental analysis indicates that nesting greater sage-grouse concentrations will not be adversely affected. Activity between the hours of 12 midnight and 9:00 a.m. will not be allowed within approximately one half mile of leks (e.g., during strutting season).

Seasonal restrictions will be applied to active raptor nests. Priority for further inventory of raptor nest locations will be given to areas where activities and surface disturbance are proposed.

No surface disturbance will be allowed within 500 feet of riparian habitat, wetland, and (or) live water unless a high potential for successful rehabilitation exists and(or) impacts will be temporary in nature. No surface disturbance will be allowed on the Upper Green River special recreation management area, except as identified in a management plan for that area. No surface disturbance will be allowed within one-quarter mile or the visual horizon (whichever is closer) of contributing segments of historic trails. Waste disposal facilities (e.g., drilling fluid pits, solid waste, and sanitary facilities) will not be authorized on floodplains, wetlands, and related riparian zones. Surface disturbance will be minimized in crucial watersheds, such as Soap Holes Basin and Tip Top, with emphasis on reducing soil erosion and sediment and salinity contributions to the Green River Basin water system. Surface-disturbing activities will be appropriately restricted in accordance with the Standard Mitigation Guidelines and standard practices applied to surface-disturbing activities.

No surface occupancy will be allowed on cultural sites 48SU301, 48SU350, and 48LN300, and on developed and semi-developed recreation sites. No exceptions will be allowed without further public input. The NSO established for cultural resource site 48SU301 was established on a 160 aliquot part subdivision so that it could be readily and legally described in land description terms. The intent of the NSO is to prohibit surface occupancy on the physical cultural resource properties of the site. It is also intended to prohibit surface occupancy within the immediate viewshed of the various site properties (i.e., that portion of the viewshed that occurs within the NSO boundary). It was not intended to prohibit surface occupancy in those portions of the NSO that occur outside the viewshed and that contain no cultural properties.

No surface occupancy will be allowed in the Rock Creek drainage within the Rock Creek Area of Critical Environmental Concern (ACEC) (approximately 4,200 acres). The only exceptions are activities proposed to benefit the Colorado River cutthroat trout habitat. No exceptions will be allowed without further public input.

Effects Analysis

Implementation of surface disturbance restrictions throughout the Pinedale RMP planning area will not detrimentally impact grizzly bear behavior or habitats. Measures intended to restrict surface disturbances and minimize the effects from activities that disturb the surface may result in secondary effects that are beneficial to the grizzly bear and its habitat. Activities proposed to benefit Colorado River cutthroat trout habitat in the Rock Creek Area of Critical Environmental Concern (ACEC) (approximately 4,200 acres), have the potential to place a short term negative impacts on grizzly bears, but would be extremely small in scope, of short duration, and would provide an improvement in trout habitat, a grizzly bear food resource. Grizzly bears do not generally frequent this area and so would not likely be displaced or impacted by these stream improvement activities.

Determination

Implementation of surface disturbance restriction management actions, as presented in the Pinedale RMP (1988), is **not likely to adversely affect** the grizzly bear, due to **beneficial effects**. Efforts intended to limit activities that disturb the surface and their potential impacts would likely benefit grizzly bears and their habitat, including improving cutthroat trout habitat.

Air Quality Management

Management Actions

No specific management actions are presented with this program. However, actions conducted under other resource programs, including fire or mining, will be conducted in a manner so as to avoid violation of the Wyoming and National ambient air quality standards.

Effects Analysis

Actions related to air quality management will result in no impacts to grizzly bear behavior, denning habitat, or foraging habitat. The actions associated with air quality management are extremely small in scope, of short duration, and unlikely to occur in grizzly bear habitat. No air quality monitoring stations are currently in any grizzly bear habitat on BLM lands within the Pinedale FO. Actions related to air quality management on other activities will not result in negative impacts to grizzly bears or their habitat. These management actions will likely result in maintaining or improving air quality conditions throughout the FO, which may have secondary benefits to grizzly bears.

Determination

Implementation of air quality management actions, as presented in the Pinedale RMP (1988), will have **no effect** on the grizzly bear, due to the fact that this management activity is not anticipated to impact grizzly bear behavior, or foraging or denning habitat.

Minerals Management

Management Action

The 7,636-acre Scab Creek area will be closed to oil and gas leasing. The remainder of the Pinedale planning area (approximately 1,185,000 acres) will be open to consideration for leasing, exploration, and development of oil and gas. Once an oil and gas lease has been issued, it constitutes a valid existing right and BLM cannot unilaterally change the terms and conditions of a lease. Therefore, in areas where oil and gas exploration and development activities are restricted or in areas closed to oil and gas leasing, an existing lease in the area would not be affected by the closure and restrictions cannot be added to the lease. Closures and additional lease restrictions could not be fully implemented until after a lease expires and new leases are issued for the same area. However, additional restrictions can be applied at the Application for Permit to Drill (APD) stage, and at subsequent development stages, that would mitigate potential impacts from oil and gas operations within existing lease areas so long as rights to develop the leases remain intact.

The BLM will evaluate industry-proposed measures to protect health and safety through the drilling permit process. Of particular concern will be the requirements of approved contingency plans for hydrogen sulfide (H_2S) release. Requirements of operators could include conducting dispersion analyses to determine ambient H_2S concentrations during well blowouts, collecting onsite meteorological data, preparing detailed evacuation plans, and placing offsite warning signs.

The Riley Ridge Project Monitoring Program will be continued. Further monitoring will include gathering of geological data in the Deadline Ridge-Graphite Hollow crucial elk winter range to aid in preparation of the proposed activity plan. Monitoring will be coordinated with other resource monitoring programs such as wildlife, surface and ground water quality, grazing, and cultural resources, as appropriate.

Geophysical notices of intent will be evaluated on a case-by-case basis. All acreage in the planning area will be subject to various appropriate limitations (e.g., vehicle use restrictions), including about 517,170 acres subject to seasonal limitations. In addition, the use of explosive charges may not be allowed in any area if analysis determines that unacceptable adverse impacts would occur. Generally, all authorizations will be issued with appropriate application of surface disturbance mitigation requirements.

Specific limitations include: Approximately 7,636 acres in the Scab Creek area will be closed to geophysical activities; areas closed to ORV use will also be closed to vehicle use for geophysical activities; in the Beaver Creek Area of Critical Environmental Concern (ACEC), geophysical vehicles will be restricted to existing roads and trails; geophysical vehicle travel through developed and semi-developed recreation sites will be restricted to established roads and trails, geophysical activities in the remaining no surface occupancy (NSO) areas (mostly cultural sites and elk feedgrounds) will be evaluated on a case-by-case basis and may be restricted if unacceptable impacts would occur to other resources (e.g., water quality, cultural, wildlife, recreation, and visual resource values).

The Rock Creek ACEC and surrounding area (about 17,000 acres) will be available for consideration for oil and gas leasing with appropriate stipulations, following the completion of an activity plan and associated environmental analysis. That portion of the Rock Creek ACEC within the Rock Creek watershed boundary will be leased with an NSO stipulation for protection of the pure strain of Colorado River cutthroat trout in Rock Creek.

Leasing guidelines and objectives in the remaining parts of the Rock Creek ACEC and portions of the adjacent Deadline Ridge-Graphite Hollow crucial elk winter range will be established in a site-specific minerals/wildlife management plan (activity plan) and environmental analysis. This plan will include an evaluation of the ongoing elk habitat use study and compilation of geologic data.

The plan will also include the following direction:

Oil and gas leasing direction, regarding related activities in the evaluation area east of the Rock Creek ACEC, will be designed to ensure continued elk winter use in the Deadline Ridge-Graphite Hollow area. Oil and gas development will be allowed if determined to be compatible with continued elk use of the crucial winter range. No substantial adverse impacts to this elk habitat will be allowed.

Oil and gas leasing direction, regarding related activities in the evaluation area west of the Rock Creek ACEC, will be guided by the RMP multiple use guidelines and objectives. Evaluation may allow for some development on this portion of the crucial elk winter range, as long as RMP planning objectives are met.

The Deadline Ridge-Graphite Hollow wildlife/leasing study and activity plan will identify any suitable areas for surface occupancy based on the previously mentioned mineral leasing guidelines and objectives. Any requests for relief from leasing restrictions that are in conflict with these guidelines and objectives will be analyzed on an individual basis. Based on the analysis, either the conflicting actions would be denied or a plan amendment would be initiated to modify the plan objectives.

Upon completion of the Deadline Ridge-Graphite Hollow activity plan, large contiguous areas may be offered for lease with the NSO stipulation. These areas may only be accessed through directional drilling. The NSO stipulation would be used, rather than a no lease provision, under the assumption that industry is the best judge of whether technology would enable access to the oil and gas resources in compliance with the terms of the lease.

Leasing with the NSO stipulation could become necessary if the area is characterized by steep, and in many cases unstable slopes, with stream/riparian zones "filling" the valley bottoms. Any disturbance on the steep slopes or in the riparian zone threatens the crucial elk and cutthroat trout habitats directly.

With the exception of withdrawn lands, the planning area will be open to mineral location. Areas identified in the future as needing total protection from locatable mineral activities will be closed to mineral location and considered for withdrawal. For example, if analysis of the Rock Creek drainage portion of the Rock Creek ACEC indicates that this level of protection is necessary, a withdrawal from mineral location will be initiated on the area (approximately 4,200 acres).

Applications for mineral sales (e.g., sand, gravel) will be analyzed and processed on a case-by-case basis and appropriate surface disturbance mitigation requirements will be included in permits. The established common use area in sections 15, 22, 27, and 34, T27N, R115W, will remain available for development. However, those portions of the common use area in sections 15 and 22 will be managed under the Interim Management Policy and Guidelines for Lands Under Wilderness Review until Congress acts upon the wilderness recommendations.

In the Pinedale FO, oil and gas drilling is occurring in high-elevation forested areas, on the east side of the Wyoming Range. The APDs are on hold, and 12 wells are waiting for APDs at present.

Effects Analysis

The increase in human activity associated with oil and gas and mineral development may negatively impact grizzly bear behavior by causing bears to avoid or abandon these areas. Construction of roads, pads, or access by OHVs, and other facilities associated with development of mineral resources may alter or destroy existing terrestrial habitats that may be suitable grizzly bear foraging habitats or linkages between suitable habitats. Increased vehicle traffic associated with mineral and geology exploration, development, and operation may lead to increases in human-bear interactions, which are the largest source of bear mortality, and vehicle collisions. Additional impacts to grizzly bears are increased access into habitat by humans, increased fragmentation, associated noise and human activity, and associated hazards (such as chemical toxins).

There are extensive seismic projects proposed in the high elevation forested areas in the Riley and Deadline Ridge areas on a combination of BLM and Forest Service land, which could lead to potential increase in development in this area. Many APDs are proposed, and many have been approved in this FO. There is a lot of existing and potential oil development (roughly 17 proposed APDs and 46 approved APDs) in the FO as well.

Grizzly bears have been documented abandoning a den that was driven over by seismic vehicle, and as a consequence of nearby gravel mining (Harding and Nagy 1977). Grizzly bears have denned successfully at distances of 1.6 to 6.4 km from mining camps. Human activity, at or within 100 m of den sites, caused abandonment by grizzly bears in 12 of 18 dens (Swenson et al. 1997).

Very little, if any, minerals management activity in the Pinedale RMP planning area will occur in areas containing occupied grizzly bear habitat. A limited amount of habitat occurs along the Bridger-Teton National Forest/BLM boundary along the east side of the Wyoming Range in the Pinedale FO. Few grizzly bears make their way onto public lands in the FO and most are young males seeking food or trying to establish a home range.

Conservation measures in place that will reduce adverse impacts include providing educational packets, planning of authorized activities with grizzly bears in mind, and implementation of strategies to reduce human-bear conflicts proactively.

Determination

Implementation of mineral management actions, as presented in the Pinedale RMP (1988), is **not likely to adversely affect** the grizzly bear due to **discountable effects**. This determination is based on the fact that minerals management activities especially in the form of seismic activity and APDs, are abundant in this FO, but rarely occur in forested or other areas used by grizzly bears, the lack of grizzly bears actually occurring within the Pinedale RMP planning area, and those conservation measures in place to protect grizzly bears. The potential for increased human access and development within grizzly bear habitat due to the implementation of minerals management activities may lead to increased human-bear interactions and presents a problem for grizzly bears, but is considered to be of low likelihood.

Natural History and Paleontological Resources Management

Management Action

Natural history and paleontological resource values will be managed to protect and preserve representative samples of these values that are present in the planning area. The standards for healthy public rangelands apply.

Paleontological sites will be protected through the use of surface and subsurface protection stipulations and discretionary management authority. Any actions to close or restrict areas for fossil protection will be evaluated on a case-by-case basis. All collection of vertebrate fossils requires a paleontological collection permit. Collection of invertebrates and plant fossils "of significant interest" requires a collection permit. Permits are required for mapping and reconnaissance work as well as for collection and/or evaluation work.

As areas of unique natural history or particular natural interest are identified, they will be nominated for designation as National Natural Landmarks, Research Natural Areas, or areas of critical environmental concern and managed for protection of the unique values. Interpretation of the natural features and public use will be emphasized.

The Pinedale-Boulder Glacial area has been proposed for designation as a National Natural Landmark (NNL). The area will be studied in conjunction with the Forest Service to determine applicability of the designation. Should the designation occur, the site will be managed to protect the unique geological and ecological features and provide for public interpretation of these features.

Effects Analysis

Actions associated with natural history and paleontological resource management are unlikely to occur (they are very infrequent), are typically in a very small area, have little impact, and are of short duration. These activities are very unlikely to occur in grizzly bear habitat.

Determination

Implementation of natural history and paleontological resource management actions, as presented in the Pinedale RMP (1988), is **not likely to adversely affect** the grizzly bear, due to **discountable effects**. This determination is based on the conservation measures in place that will preclude any adverse effects to the grizzly bear or its habitat and will minimize or remove impacts to grizzly bear habitat and these activities are very unlikely to occur in or near grizzly bear habitat.

Soils and Watershed Management

Management Action

The Wyoming BLM Standard Mitigation Guidelines for Surface-Disturbing Activities and the standard practices applied to surface-disturbing activities are used to control nonpoint sources of water pollution. These are examples of best management practices (BMPs) relative to the Clean Water Act of 1972, as amended. As other BMPs for nonpoint sources of water pollution are developed, they will be incorporated into the guidance for this plan where they conform with the RMP objectives.

Projects proposed on BLM-administered lands will be evaluated on a case-by-case basis for affects on soil and water resources. Soil management practices will be applied on a site-specific basis using soil survey data, and will be related to the soil characteristics such as the steepness of slopes, the length of slope, and soil chemistry and composition. Watershed management practices will follow similar guidelines.

Examples of management practices to be applied throughout the planning area include seasonal closures due to saturated soil conditions and the standard practices applied to surface-disturbing activities. At certain times of the year, use will be precluded until soil moisture is such that the use or activity will not result in degradation of the soil resource and watershed condition. These closures occur predominately in the spring and autumn.

A monitoring program for specific surface waters will be continued to identify trends on water quality. Public drinking water at recreation sites will also be protected and monitored to be in compliance with EPA safe-drinking water standards.

A Level II ground water study of the Riley Ridge/LaBarge area will be completed to define the ground water resource and to determine what additional ground water monitoring and protective measures are necessary in regard to subsurface activities conducted in the area (e.g., oil and gas drilling activities).

Ground water protection will continue to be provided by applying appropriate procedures. Special precautions will be taken to ensure protection of ground water quality when surface disturbance is to occur on ground water recharge zones.

An activity plan for reducing erosion and channel degradation will be prepared for the Tip Top watershed. Specific actions could include road maintenance, recontouring, and reseeding of disturbed sites to help achieve soil stabilization.

A watershed/recreation plan will be prepared on the Stuart Point-Mount Airy area for reducing sedimentation while still allowing off-road vehicle (ORV) use. A more detailed description of this area can be found in the ORV section.

All actions will comply with Executive Orders 11988 Floodplain Management and 11990 Protection of Wetlands, and the State of Wyoming Department of Environmental Quality water quality standards.

Effects Analysis

Management of soil and water resources is not expected to detrimentally impact grizzly bear behavior or suitable denning or foraging areas. The activities associated with this management action are infrequent, small in scale, and not likely to occur in grizzly bear habitat. Implementation of soil and water resource management actions may maintain or improve the condition of some habitats and therefore may result in beneficial effects to foraging or linkage habitats.

Soils Management: The protection of trees, shrubs, and ground cover from damage during construction activities will be required. Backfill will be required to be replaced in a similar sequence and density to preconstruction conditions. The restoration of normal surface drainage will be required. Any mulch used will be free of mold, fungi, or noxious weed seeds. The grantee or lessee will be responsible for the control of all noxious weed infestations on surface disturbances.

Recognized roads will be used when the alignment is acceptable for the proposed use. Generally, roads will be required to follow natural contours; be constructed in accordance with acceptable standards; and

be reclaimed to BLM standards. On newly constructed roads and permanent roads, the placement of topsoil, seeding and stabilization will be required on all cut and fill slopes. No unnecessary side-casting of material on steep slopes will be allowed. Reclamation of abandoned roads will include requirements for reshaping, recontouring, resurfacing with topsoil, installation of water bars, and drill seeding on the contour. Stripped vegetation will be spread over the disturbance for nutrient recycling, where practical.

On well pads and facility locations, special attention will be given to parts of the surface use plan covering reclamation. This plan will include objectives for successful reclamation covering; soil stabilization, plant community composition, and desired vegetation density and diversity. The development of facilities on slopes between 25 and 40 % will be restricted unless soil erosion controls can be ensured and adequate revegetation is expected. No surface occupancy will be allowed on slopes greater than 40 %. Abandoned sites must be satisfactorily rehabilitated by the lessee.

Existing road locations will be used where possible to minimize surface disturbances. Where possible, clearing of pipeline and communication line rights of way will be accomplished with the least degree of disturbance to topsoil. Where topsoil removal is necessary, it will be stockpiled and respread over the disturbance after construction and backfilling are completed. Vegetation removed from the right of way will also be required to be respread to provide protection, nutrient recycling, and a natural seed source.

Water Management: Activities authorized under water resources management may include implementation of watershed plans, identification of heavy sediment loads, monitoring and treating soil erosion, evaluating and restricting surface development activities, and monitoring water quality.

Monitoring of streams and rivers for water quality would be very small and short term in nature (a few hours or less). Monitoring would be done with small, hand held kits on site, or water samples would be collected and analyzed in a laboratory off site. Other activities would be to measure stream channelization and evaluate streambank and riparian conditions. Access for these activities would be primarily by vehicle (pickup truck, etc.) and monitoring would be done by personnel walking into and along streams and rivers. Permanent in-stream flow monitoring and continuous water quality analysis gauging stations would be small structures that would require some construction to build (backhoe, concrete truck or a lift to place a pre-built structure) and some disturbance to streams or rivers during construction and occasional maintenance activities.

Other smaller scale water resource activities would include plugging abandoned wells to prevent contamination or cross contamination of water aquifers and reclaiming (recontouring and revegetating) the associated drill pad. This activity would consist of pouring concrete into the well casing to plug the well, requiring: vehicles, concrete trucks, concrete pumper trucks, personnel, etc. Reclamation of the drill pad after plugging would require the use of loaders, backhoes, graders or bulldozers, seeding equipment, and trucks and trailers to haul the equipment. Instream flow control structures such as drop structures (made of logs, rock baskets, or concrete); weirs; revetments (streambank erosion control structures (trees, logs, etc.)); rip-rap (rocks, boulders, logs, etc.); placing gravel or concrete in streams for crossings and fish spawning; culverts, all requiring equipment and personnel to construct. Equipment might include: vehicles, backhoes, bulldozers, skid loaders, concrete trucks, etc. Planting of riparian plant species to reduce erosion and sediment movement along watercourses would be done either using hand held tools (shovels, augers, or just jamming stems into the ground (willows, cottonwoods, etc.)) or with smaller equipment like motorized augers, backhoes, tree spades, etc.).

The above types of actions associated with watershed management would take place very rarely, if at all within any grizzly bear denning or foraging habitat and would likely have minimal or no negative impacts on grizzly bear behavior or their denning or foraging habitats. The activities associated with this management action are infrequent, small in scale, and not likely to occur in grizzly bear habitat. Actions

associated with watershed management are likely to improve riparian vegetation and habitat for grizzly bears and their food resources.

Determination

Management of soil and water resources is not expected to detrimentally impact grizzly denning, travel, or foraging areas. Actions associated with soil and water resource management will be limited in both time and extent, and are unlikely to occur at any particular locale, including grizzly bear habitat. Implementation of these resource management actions may maintain or improve the condition of some habitats and therefore may result in beneficial effects to suitable denning, travel, and foraging habitats.

Soils Management: Implementation of soil resource management actions, as presented in the Pinedale RMP (1988), is **not likely to adversely affect** the grizzly bear, due to **discountable effects**. This determination is based on the conservation measures in place that will preclude any adverse effects to the grizzly bear or its habitat and will minimize or remove impacts to grizzly bear habitat. Management of soil resources is not expected to detrimentally impact grizzly bear behavior or suitable denning or foraging areas. The activities associated with this management action are infrequent, localized or small in scale, and generally not likely to occur in grizzly bear habitat. Implementation of soil resource management actions may maintain or improve soils condition of some grizzly bear habitats and the use of native plants for re-vegetation will benefit grizzly bears, resulting in secondary beneficial effects to foraging or other habitat parameters.

Water Management: Implementation of soil resource management actions, as presented in the Pinedale RMP (1988), is **not likely to adversely affect** the grizzly bear, due to **discountable effects**. This determination is based on the conservation measures in place that will preclude adverse effects to the grizzly bear or its habitat and will minimize or remove impacts to grizzly bears or their habitat. Management of water resources is not expected to detrimentally impact grizzly bear behavior or suitable denning or foraging areas. The activities associated with this management action are infrequent, localized or small in scale, and generally not likely to occur in grizzly bear habitat. Implementation of water resource management actions may maintain or improve the condition of some grizzly bear habitats and therefore may result in secondary beneficial effects to foraging habitats and are likely to improve riparian vegetation and habitat for grizzly bears and their food resources.

Wildlife Habitat Management

Management Actions

In the Deadline Ridge-Graphite area, management emphasis will be placed on maintaining crucial elk winter habitat. In elk feedgrounds, management emphasis will be on maintenance of habitat quality and continued use of the areas as elk feedgrounds. To maintain the integrity of the elk feedgrounds, certain activities would be constrained on lands near them. The NSO restriction would be imposed for all activities except those that have impacts which are temporary in nature or that are compatible with elk habitat management.

The USFWS will be consulted on any action with reasonable potential to affect endangered species or their habitats. A biological assessment (BA) will be prepared on all proposals where T&E species habitat will or may be affected and a biological opinion will be requested from the USFWS.

Threatened and endangered (T&E) species and their habitats will be protected. Actions that would degrade habitat to a point of jeopardizing the continued existence of a T&E species will not be allowed.

The Pinedale planning area will continue to be inventoried to identify potential habitat and occurrence of T&E species. Identification of habitat occupied by T&E species and habitat with potential to help support these species would be managed in accordance with the national recovery plans. Potential habitat includes high density prairie dog towns for black-footed ferrets, wetlands for whooping cranes, high cliffs over riparian zones for peregrine falcons, and cottonwood stands along the Green, New Fork, and East Fork rivers for bald eagles. Management prescriptions for potential habitat will include consideration for future occupancy by T&E species. Key habitat characteristics will be identified to help ensure maintenance of high quality areas for natural reoccupation.

Habitat occupied by federally listed T&E plant and animal species will be monitored to ensure compliance with the Endangered Species Act. The Colorado River cutthroat trout (a Category 2 species) will be monitored in cooperation with the Wyoming Game and Fish Department.

Areas with habitat having potential to support transplanted or introduced wildlife species (other than T&E species) will be identified in the development of activity plans and managed in accordance with the RMP objectives. Proposals for introductions or species transplants to BLM-administered public lands will be evaluated and analyzed, and the impact to and of other resources will be considered. Cooperative agreements will be developed, if necessary, to facilitate species transplants and habitat management.

Mule deer, elk, antelope, and greater sage-grouse use patterns will be monitored. Habitat trend for the species will be interpreted through survey data collected, in cooperation with livestock and watershed studies and monitoring activities. Interdisciplinary selection of key areas and plant species will ensure that crucial habitats are monitored.

The East Front Aquatic Habitat Management Plan (HMP) will be implemented to promote riparian habitat management and protect the Colorado River cutthroat trout. In addition, this HMP and the Upper Green River HMP will include consideration of habitat improvement and related projects for enhancing habitat for waterfowl and aquatic species.

Riparian area maintenance, improvement, and restoration will help promote quality fish habitat on streams and lakes. Coordination with WGFD will continue on the Comprehensive Management and Enhancement Plan for the Colorado River cutthroat trout in Wyoming to improve habitat and expand the range of these trout so they are no longer in threat of extinction. Efforts to control siltation into the East Fork and New Fork rivers will be pursued to improve the water quality of these fisheries. Water Quality Standards for other fishing streams and lakes will be coordinated with WGFD and the State Department of Environmental Quality. Adherence to these standards will help maintain existing fish habitat.

High priority will be given to improvement of wildlife habitat through vegetation manipulation. Any areas identified in the future as suitable for treatment to benefit wildlife will be considered.

Vegetation treatments for livestock grazing and other resource objectives will include consideration of wildlife objectives and related restrictions. Habitat will also be enhanced by other improvements, such as development of water facilities. During development and implementation of activity plans (e.g., allotment, timber, watershed, or wildlife habitat management plans), consideration of habitat improvement needs and locations will be included. Waterfowl habitat will be considered for enhancement through improvements, specifically the Upper Green River HMP and East Front Aquatic HMP update, will provide waterfowl and fisheries habitat improvement projects. Road closures may be imposed to protect fisheries and elk habitat. The Wyoming Game and Fish Department is conducting a study of big game response to oil and gas development on the Riley Ridge natural gas project area. Findings and recommendations from this study will be used in considering future development of minerals on big game ranges.

Effects Analysis

The implementation of management actions associated with wildlife habitat management will likely have positive effects by maintaining or improving existing habitat conditions that will benefit grizzly bears and their habitat. Many of the actions are, in fact, directed at such habitat improvement. There is the possibility that in some cases, grizzly bears would avoid areas where activities would create a minor and temporary disturbance to the animals.

Determination

Implementation of wildlife habitat management actions, as presented in the Pinedale RMP (1988), is **not likely to adversely affect** the grizzly bear due to **insignificant effects.** Fish and wildlife management actions will be designed to enhance grizzly bear habitat, grizzly bear conservation measures will protect grizzly bears and their habitat during project construction, and many of the projects are designed to benefit grizzly bears by maintaining and improving habitat for the bears and/or their food resources.

Livestock Grazing Management

Management Actions

The current grazing preference objective of 107,907 animal unit months (AUMs) will be maintained or increased through implementation of allotment management plans (AMPs), range improvements, and vegetation manipulation. If these measures fail to provide the grazing preference objective, while providing for protection of other resource values as established in the plan, livestock reductions may become necessary. Any adjustments in livestock grazing use will be made as a result of monitoring and in consultation with grazing permittees and other affected interests.

The 20,991 acres of unallotted forage on public lands will be considered for allocation on a case-by-case basis in accordance with RMP goals and objectives. The number of AUMs to be allocated will be determined after the lands have been evaluated. Adequate stock trails will be maintained to support livestock trailing needs. Adequate forage for wintering elk will be provided to the extent possible (population levels based on Wyoming Game and Fish Department 1987 population objectives) in the Bench Corral, Miller Mountain-Fort Hill, Riley Ridge, and Graphite elk winter ranges. In cases where adequate forage for wintering elk is not available, adequate forage could be provided through a combination of management practices, including livestock grazing systems, grazing adjustments, and vegetation manipulation. Livestock water developments on crucial elk winter ranges will only be allowed if they do not result in adverse impacts to the crucial range.

Initial categorization is 41 “I” allotments, 141 “M” allotments, and 26 “C” allotments. New allotment management plans (AMPs) will be written and implemented on “I” allotments. New AMPs or activity plans will require environmental analyses. All grazing systems will be designed to maintain or improve plant diversity. Specific objectives will be determined during AMP preparation to provide forage diversity for antelope, mule deer, and greater sage-grouse as well as livestock. Grazing systems will be designed to limit forage competition for forbs and other desirable plants, particularly in the spring of the year.

Some allotments have very small acreages available for treatment. Because of the high cost of treating such small areas, they are not likely to be treated. Other allotments containing large acreages may not receive the total projected treatment due to resource considerations (e.g., greater sage-grouse nesting areas and erodible soils). Acreage of brush control may increase or decrease on certain allotments depending on rangeland management needs addressed in AMPs and other activity plans.

All brush control projects will involve site-specific environmental analysis; coordination with affected livestock operators and the WGFD; and will include multiple use objectives for other resource uses including livestock, wildlife, and watershed.

Prescribed fire will generally be the preferred method of vegetation manipulation for the conversion of brushland to grassland. Wildfires occurring in areas with a fire prescription will be allowed to burn as long as they remain within the prescriptions and meet land use objectives. Other vegetation manipulation methods will be considered on a case-by-case basis.

To reduce streambank degradation, salt blocks for livestock and wildlife use will not be placed within 500 feet of live water, wetland, or riparian areas, unless activity plans show that it is necessary to meet management objectives.

Any forage increases realized from management prescriptions and range improvement practices will be allocated to wildlife, watershed, and livestock. Site-specific objectives for wildlife, watershed, and livestock grazing will be developed to identify each resource use to receive a forage allocation.

Actual forage allocation from forage increases will be based on site-specific analysis and must conform to the multiple use objectives of the activity plans. The allocation of forage resulting from treatments financed by permittees, as in “M” category allotments that do not have crucial wildlife ranges, will be evaluated on a case-by-case basis. More forage may be allocated to livestock grazing than to other resource uses, in accordance with the current federal grazing regulations, including consistency with the multiple use management objectives set forth in this document. Consultation with the affected parties will be necessary at the outset of planning for the project allocating increased forage to ensure satisfactory proportioning of the additional forage.

Monitoring of the range and the vegetation resource will be conducted at a level sufficient to detect changes in grazing use, trend, and range conditions. These data will be used to support and direct grazing management decisions consistent with national policy. Ecological range site condition mapping will be completed. There are no sheep allotments in the Pinedale FO. Table B-4 lists the livestock grazing allotments within the Pinedale FO with overlapping grizzly bear habitat.

Effects Analysis

The Guidelines for Livestock Grazing Management on BLM land in Wyoming apply (see Standards for healthy rangelands and guidelines for livestock grazing management for public lands administered by the Bureau of Land Management in the state of Wyoming). Grazing permit stipulations require that livestock carcasses be transported ½ mile from areas of human activity, that human and prepared livestock and pet food, beverages, and garbage be handled and disposed in a manner so as to make it unavailable to bears, and garbage and uneaten horse feed may not be left or buried.

Grizzly bear issues related to livestock grazing have generally involved depredations of livestock by grizzly bears, disposal of livestock carcasses, storage of human food and stock feed, and grizzly bear habituation, food conditioning and mortality risk associated with these activities. Interaction between livestock and grizzly bears has typically led to relocation or removal of grizzly bears. This has not yet occurred on BLM grazing permits. but there is a high potential for it to occur on a BLM grazing permit at some time in the future. This is particularly true on domestic sheep allotments. In the case of sheep allotments, conflicts have been much more prevalent and more difficult to resolve without eventually phasing out sheep grazing in the PCA (ICST 2003). Grazing leases for BLM contain stipulations that sheep must be removed in the event of problems with grizzly bears.

Potential adverse effects of livestock grazing on individual bears would result from management control actions associated with livestock conflicts; and illegal, accidental, or defensive taking by grazing permittees/employees and other members of the public resulting from depredation conflicts.

The Grizzly Bear Management Guidelines recommend control actions in response to livestock depredations (outside of Management Situation 1) that involve a two-strike policy for males and a three-strike policy for females before consideration for removal. However, the proposed Response Protocol for Nuisance Grizzly Bear Actions Outside the Recovery Zone in Wyoming gives the Wyoming Game and Fish Department greater latitude to remove a bear from the population. Thus, livestock grazing will likely result in more bears being taken out of the population outside the PCA when livestock depredations occur.

Illegal, accidental, or defensive taking by grazing permittees and/or their employees may occur because of trying to protect their livestock or in self-defense in some situations (for example, a herder shooting a bear attacking livestock). Risk also exists for the taking of bears by public agency personnel, permittee personnel, or members of the public as a result of accidentally encountering bears feeding on livestock carcasses.

As grizzly bear populations expand outside the PCA, the proportion of livestock depredations occurring outside the PCA will likely increase, especially since there are more livestock grazing operations outside the PCA than inside. Grazing allotments within grizzly bear habitat will very likely have livestock depredation.

Frqvhuydwlrq#p hdvxuhv#z lo#hgxfh#wkh#srwhqwldo#ru#bgyhuvh#p sdfw#urp #jud}lqj/#exw#z lo#qrw# hdp lqdwh#wkhp #they include educational material packets to be distributed to permittees, the phasing out of sheep grazing as the opportunity arises, and the proper disposition of livestock carcasses.
#

Determination

Implementation of livestock grazing management actions, as presented in the Pinedale RMP (1988), is **likely to adversely affect** the grizzly bear. This determination is based on the likelihood or inevitability that livestock grazing within grizzly bear habitat will result in depredation and removal or death of a grizzly bear.

Riparian Management

Management Actions

The objectives for riparian management will be to maintain, improve, or restore riparian value to enhance forage, habitat, and stream quality. Priority for riparian management will be given to those areas identified as Colorado River cutthroat trout habitat. Management actions may include reductions in livestock numbers, adjustments in grazing distribution patterns, fencing, herding, livestock conversions, etc. Unallotted public lands containing riparian areas will be managed according to the same objective, with emphasis on wildlife and watershed objectives, but not necessarily to the exclusion of livestock uses. Refer to management actions described under all other programs for accomplishing riparian objectives. Riparian management is an integral part of all resources and related management programs. Those activities that affect or are affected by riparian values, will take into account the riparian objectives and direction. Resource values and uses that affect or are affected by riparian values include: wildlife and fisheries habitat, forest resources, livestock grazing, ORV use, visual resources, cultural and historical resources, minerals exploration and development activities, lands and realty activities, watershed and soils

resources, recreation uses, fire management, and access.

Effects Analysis

Actions associated with riparian management include increased human presence and use of machinery or fire to implement management actions that may detrimentally influence grizzly bear behavior briefly while they are being conducted. The potential for these effects is low and the intensity is not expected to have lasting detrimental effects. Implementation of vegetation management actions are likely to result in positive effects to grizzly bears by increasing sedges and berries in riparian areas.

Determination

Implementation of the riparian management actions, as presented in the Pinedale RMP (1988), is **not likely to adversely affect** the grizzly bear, due to **beneficial effects**. This determination is based on the premise that riparian management in and of itself will not produce and surface disturbing activities and long-term results of riparian management would generally benefit the grizzly bears by creating or supplementing available food resources.

Wild Horse Management

Management Actions

The objective of wild horse management will be to resolve conflicts for water and forage between wild horses and other resource uses. All wild horses will be removed from the planning area and made available for adoption through BLM sponsored adoption program. No forage or other resources will be provided to wild horses.

Effects Analysis

Actions associated with wild horse management are expected to be limited to occasional herding, corralling, and transporting of horses. These activities will not occur in forested habitats. These actions are not expected to detrimentally impact the behavior of grizzly bears or foraging, denning, or travel habitats.

Determination

Implementation of wild horse management, as presented in the Pinedale RMP (1988), would have **no effect** on the grizzly bear. This determination is based on the extremely low likelihood that grizzly bears would be adversely affected by actions associated with management of wild horses, and the fact that horses are restricted to basins where grizzly bears do not occur.

Forest Management

Management Actions

The objectives of forest management will be to provide a supply of forest products to the various segments of the public and to maintain or enhance other resource management objectives. Consistent with forest management and other resource management objectives, the forested lands are classified into four management categories:

Category 1, Intensive Management, will include areas where the forested lands would be managed for multiple-use, but with emphasis placed on forest product utilization and forest management activities.

Category 2, Restricted Management, will include forested lands where wildlife, watershed, and recreation resource values will be emphasized and actions such as partial cutting, extended forest crop rotations, etc., or other restrictions to forest management, would be applied.

Category 3, Management to Enhance or Maintain Other Resources, will only allow forest management activities (e.g., harvesting or thinning) on lands in this category when such activities will benefit resources or values other than forestry or will promote public safety. All forestlands included in this category are not included in the forest management base or in timber harvest calculations.

Category 4, No Forest Management, includes all areas where forest management is excluded.

Approximately 24,223 acres of commercial conifer would be available for production of forest products. Of this 24,223 acres, approximately 20,836 acres would be subject to harvest method/equipment use and minimum cover level restrictions (Category 2). The remaining 3,387 acres would be unrestricted, except for general forest management guidelines applicable to all forest management activities (Category 1). Approximately 13,506 acres of woodland (Categories 1 and 2) will be available for forest product disposals on a demand basis. An additional 3,113 commercial conifer and woodland acres will be removed from the forest base (Categories 3 and 4). The 1,611 acres in Category 3 will be available for forest management activities when such activities are deemed necessary to maintain the integrity of the resource being protected (e.g., wildlife, watershed) or to promote public safety. All forestlands in categories 1, 2, and 3 will be available for emergency salvage of timber damaged or killed through insects, disease, wildfire, or other such events.

Forested lands in Categories 1 and 2 will be managed to harvest an estimated 18.2 million board feet of timber over a 20-year period. Average annual harvest level will involve approximately 137 acres, but may vary to meet individual sale area objectives, depending on proposed harvest methods and individual sale conditions.

Sales of forest products (sawtimber, firewood, Christmas trees, posts, poles, and wildlings) will be made available to individuals and to commercial vendors. Forest product sales will be conducted on all forest areas, except where specifically excluded (e.g., the Rock Creek drainage and 7,636 acres in the Scab Creek area).

In addition to harvest, approximately 1,200 acres of precommercial thinning will occur during the 20-year period (BLM 1985a). Precommercial thinning projects will generally be designed to achieve an 8-foot spacing (e.g., roughly 680 trees per acre would be left uncut) and should not significantly affect cover levels.

Within the general forest management objective and guidelines, each of the following four management units has separate sub-objectives and planned actions. The Deadline-Pinegrove unit will be managed to give full protection to the Colorado River cutthroat trout in the Rock Creek drainage and to maintain October 1985 levels of forest cover for wildlife in the remainder of the unit. Approximately 953 acres will be available for harvest over a 20-year period. All forest management activities will be excluded in the Rock Creek drainage. A minimum of 90 % of the conifer acreage in the Graphite and Riley Ridge crucial elk winter ranges will be maintained. Annual cover level fluctuations will not be allowed except for emergency salvage. No clearcutting or road construction will be allowed within 1,000 feet of Beaver Creek. Exceptions will be granted only if additional site-specific analysis verifies that such actions will

not adversely affect crucial Colorado River cutthroat trout habitat.
The North Piney unit will be managed to give full protection to the elk feedgrounds and to maintain October 1985 levels of forest cover for wildlife, primarily elk. All forest management activities will be excluded from the Finnegan and North Piney elk feedgrounds, except when such management would be necessary to maintain the integrity of the feedground environment. Approximately 680 acres will be harvested for forest products over a 20-year period.

The Miller Mountain unit will be managed to provide full protection to forested portions of the Fort Hill-Fontenelle elk winter range and to maintain approximately 90 % of the conifer acreage in the remainder of the unit in cover for wildlife. Forest management activities will be excluded from the Fort Hill elk winter range. Exceptions will be allowed for emergency salvage when the wildlife will benefit. Approximately 396 acres or 10 % of the conifer base, excluding the Fort Hill winter range, will be harvested over a 20-year period.

The Eastside-Hoback unit will be managed to give full protection to the forested portions of the elk feedgrounds and to manage the remaining forested lands for forest products on an allowable harvest/sustained yield basis. Approximately 781 acres will be harvested for forest products over the next 20 years. Forest management activities will be excluded from the Franz and Scab Creek elk feedground, except for salvage and sanitation harvests when necessary to maintain the integrity of the feedground environment to benefit the elk.

Effects Analysis

Forestland management actions occur in coniferous habitats, which are the same areas that can be used by grizzly bears. Although there is the potential for these activities to be conducted during winter when bears are hibernating, this is often impractical due to the complications of snow cover and severe weather conditions.

Timber harvest, especially selection and group selection cuts and small clearcuts with no dozer piling of slash and no mechanical soil scarification, leads to openings in which successional processes produce important amounts of herbs and shrubs bearing fruits eaten by grizzlies. Production of grizzly food sources in these cuts is often greater than in uncut sites in the same habitat types. This indicates that certain timber harvest practices can be used in some forest stands to provide habitat diversity, and that habitat quality can probably be increased or enhanced by creating openings producing grizzly food (IGBC 1986). Thinning and seedcuts would open up the canopy and produce more diverse and productive vegetation types, and would increase early spring foraging opportunities.

New roads created for timber harvest activities, and not immediately revegetated, can lead to an increase in the number of people using an area and to potential interactions with grizzlies, depending on the access to the created roads. Controlling access via locked gates could avoid this problem. Bear-human interactions are one of the highest sources of mortality for bears (Schwartz et al. 2003). Grizzly bears are sensitive to disturbance associated with roads, and may avoid areas within 2.5 miles of roads (Mattson et al. 1986). Such displacement from quality habitats may prevent dispersal, force bears to use poorer quality sites, and cause social disruption (Kasworm and Manley 1989, McLellen 1989). Road avoidance may result in higher mortality and lower fecundity of displaced individuals (Mattson et al. 1986). However, forested habitat on BLM lands mainly provided cover for grizzly bears and do not provide the significant resources known from the areas inside the PCA.

In summary, forestry management can lead to more human intrusion and some loss of cover but those are the only potential adverse affects likely on BLM land. A number of conservation measures apply to forestland management, including planning of authorized activities with grizzly bears in mind, providing

educational packets, food and garbage safeguards, no whitebark pine cutting,. These protective measures will substantially reduce impacts to grizzly bears from forest management activities.

Determination

Implementation of forest management actions, as presented in the Pinedale RMP (1988), is **not likely to adversely affect** the grizzly bear, due to **insignificant effects**. This determination is based on the limited amount of forest management activities that occur and conservation measures that can be incorporated into proposed forest management projects to avoid the potential for adverse affects to grizzly bears.

Wilderness Management

Management Actions

Proposed wilderness areas will be managed for wilderness values in accordance with the decision of Congress. The two wilderness study areas (WSAs) in the planning area, the Scab Creek WSA and the Lake Mountain WSA, were evaluated in two previous wilderness environmental impact statements (BLM 1981 and BLM 1983). As a result of these analyses, the BLM recommended the Scab Creek WSA for designation as wilderness and the Lake Mountain WSA for nondesignation as wilderness. Both recommendations are pending further processing and Congressional decision. Both of these WSAs are within potential grizzly bear habitat.

Until Congress acts, these WSAs will be managed under the "Interim Management Policy and Guidelines for Lands Under Wilderness Review" (BLM 1987b). Congressional decisions on the Scab Creek and Lake Mountain WSAs will be incorporated into the approved Pinedale RMP. Should Congress designate one or both of the WSAs (partially or entirely) as wilderness, the management of the designated areas will be for wilderness values, as described in the appropriate wilderness EIS. Should Congress not designate one or both areas (partially or entirely) as wilderness, the management of the nondesignated areas will be in accordance with the approved Pinedale RMP. The undesignated areas will lose their identity as WSAs and will be managed along with the adjoining area as prescribed in the approved Pinedale RMP.

Effects Analysis

Management actions associated with wilderness management will not result in detrimental impacts to grizzly bear behavior or habitat. These actions will likely result in positive effects to grizzly bears by limiting harassment and disturbance in denning, travel, and foraging areas.

Determination

Implementation of the wilderness management actions, as presented in the Pinedale RMP (1988), is **not likely to adversely affect** the grizzly bear, due to **beneficial effects**. This determination is based on the potential that these actions will limit the harassment and displacement of grizzly bears and maintain or protect suitable habitat.

Visual Resource Management

Management Actions

VRM classes have been established in line with overall resource management objectives of the approved Pinedale RMP. These are subject to change and further definition as more inventories and evaluations are

conducted. A program will be initiated to improve the visual quality of oil fields in the planning area by working with the companies to reduce the visual impact of existing facilities. Projects of all types within established VRM class areas will generally be required to conform with the objectives and characteristics of the classification, or the project will be modified in order to meet the VRM class objective. Short-term modifications in portions of visual class areas may be approved if a site specific environmental analysis determines that impacts would be acceptable. The VRM class areas will be monitored periodically for cumulative impacts that may potentially conflict with their classifications.

Effects Analysis

Actions associated with visual resource management will not directly impact grizzly bear behavior or habitat. The exclusion of some activities and structures from designated view sheds may have a secondary positive effect of limiting disturbance in habitats suitable for grizzly bears.

Determination

Implementation of VRM actions, as presented in the Pinedale RMP (1988), is **not likely to adversely affect** the grizzly bear, due to possible **beneficial effects**. This determination is based on the fact that implementation of the visual resources management involves no actual ground disturbing activities and therefore no anticipated disturbance to grizzly bear habitat, no increased human presence, and likely will provide beneficial affects due to limiting activities in particular viewsheds that grizzly bears inhabit.

Off-Road Vehicle Management

Management Actions

The Bench Corral elk winter range will be closed to all ORV use, including over-the-snow vehicles, from November 15 through April 30. Lands around the Franz, Finnegan, Scab Creek, Fall Creek, and North Piney feedgrounds will also be closed to ORV use and unauthorized human presence from November 15 through April 30. The Deer Hills, Oil Field, and Mesa deer and antelope winter ranges will have a winter travel limitation restricting vehicle travel from November 15 through April 30 on an as-needed basis. These seasonal limitations will be implemented in cooperation with the Wyoming Game and Fish Department during severe winters or periods of disturbance of the wildlife wintering in these areas of concern. One hundred twenty acres in the Holden Hill area will be closed to all ORV use.

In general, off-road vehicle use will be monitored periodically to determine actual use and public demands. Monitoring of high density roaded areas will be conducted as described in the section on Access Management. The Desert General Use area will remain open to generalized ORV uses. This is an area of over 224,000 contiguous acres of public land. The Desert Open Area will be monitored to determine if unacceptable impact levels are occurring or being approached, which will require that ORV use be re-evaluated and limited accordingly.

Effects Analysis

The Pinedale RMP (1988) restricts ORV use to existing roads and trails. OHV use on BLM lands is almost entirely on rough, 4-wheel drive roads receiving limited maintenance, so the possibility of a grizzly bear mortality by an OHV, would be extremely remote. Two-track roads occur throughout the mountainous areas where grizzly bears also roam, although not many actually occur in grizzly bear habitat in the Pinedale FO. Most OHV incidents involving grizzly bears would occur when drivers leave improperly stored food in a vehicle and a bear would break into the vehicle to extract it.

ORV use is one of the main methods of access by humans into grizzly bear habitat, and can lead to disturbance to the bears by encouraging greater access in undeveloped habitat, causing some potential for the bears to avoid areas and reducing habitat availability. In areas designated as "closed" or "restricted," there will be little or no impacts from ORV use to grizzly bears and their habitat. In other areas, even where ORV use is limited to existing trails, these definitions are sometimes loosely interpreted by the user group and new roads may be created as well as the deepening of unofficial roads. Sometimes these roads become very abundant in some areas. In such cases, habitat becomes fragmented and the human activity may reach the point of disturbance, causing grizzly bears to abandon a foraging area. Although spring antler-collecting using ORVs as grizzly bears come out of hibernation has presented problems in other field offices, this does not occur in the Pinedale FO due to extensive snow cover (Solberg 2004). Such encounters could lead to human-caused mortality, which accounts for as much as 90% of recorded mortalities (Schwartz et al. 2003).

Determination

Implementation of OHV management actions, as presented in the Pinedale RMP (1988), is **not likely to adversely affect** the grizzly bear due to **insignificant effects.** This determination is based on the very limited potential for OHV use to occur in grizzly bear habitat and disrupt foraging and movement, fragmenting habitat, and leading to human-bear encounters which may result in death for grizzly bears and grizzly bear conservation measures in place that will protect grizzly bears and their habitat from ORV users.

Recreation Management

Management Actions

Management emphasis will be placed on the current recreation management areas including Scab Creek, the Green and New Fork rivers, Oregon Trail routes, and Boulder Lake. Recreation facilities will be installed where needed to accommodate the anticipated recreation uses and use levels and to provide for adequate public health and safety.

The order of priority for recreation management will be:

- Congressionally designated areas,
- Major rivers and lakes where BLM has clear jurisdiction,
- Areas with outstanding recreation resource values not already provided for in the area, and
- Areas where the recreation capacity is regularly exceeded, threatening other important resource values.

Cooperative recreation projects and those with contributed funding can be given priority for development in conformance with established recreation objectives and priorities. Withdrawals from exploration and development of locatable minerals will be pursued, as necessary, on developed and semi-developed recreation sites (currently about 585 acres). Recreation management for the Scab Creek area, the Green and New Fork rivers, and the Oregon Trail routes will emphasize maintaining or improving the quality of the sites and the recreation experience. Public lands along the Green and New Fork rivers will be managed to provide fishing and floatboating opportunities. Necessary facilities will be developed to provide for protection of users and the resources. Boulder Lake will be established as a special recreation management area and related recreation facilities will be developed to improve public access and use opportunities. A maximum 16-day camping limit will be implemented throughout the planning area.

Areas requiring shorter limits will be posted. Written authorizations will be required for longer periods. A temporary, no overnight camping stipulation may be imposed in an emergency. Where applicable, recreation facilities will be developed and managed in a manner that will maintain, restore, and improve riparian values. Special recreation permits, commercial recreation uses, and major competitive recreation events will include mitigation developed to ensure the protection of other resources in accordance with objectives of all resource values involved.

Effects Analysis

People enjoy recreational activities, such as fishing, hiking, and hunting in montane areas inhabited by grizzly bears. This type of activity is on the increase throughout the western United States. Antler-hunting is also a popular recreational activity. Antler hunting, on foot and on horseback, typically occurs in the spring, after the antlers are shed and when grizzly bears are emerging from hibernation and in particular need of food resources vulnerable to disturbance. Hunters occasionally encounter grizzly bears while hunting and grizzly bears may approach a hunter harvested animal to consume the carcass or entrails. Human intrusions can displace or disturb grizzly bears. Anticipated impacts to grizzly bears may possibly be reduced somewhat, but the general increase in recreational use of BLM lands is likely to cause increases in the potential for bear-human conflicts, especially as bear populations also expand. The public lands are generally open (with limited exceptions) to use by the public for many uses, with recreational activities one of the primary uses. These recreational activities are allowed, by generally not regulated by the BLM (hunting, fishing and antler-gathering are regulated by the WGFD).

Conservation measures in place that will reduce adverse impacts include providing educational packets, installation of bear-resistant refuse containers in developed campgrounds, specifications for food and garbage handling in operation plans and special use permits, planning of authorized activities with grizzly bears in mind, and implementation of strategies to reduce human-bear conflicts proactively. Few new recreational projects (campground or trail-head construction, signs, etc.) or activities will take place in grizzly bear habitat.

Determination

Implementation of recreation management actions, as presented in the Pinedale RMP (1988), is **not likely to adversely affect** the grizzly bear due to **insignificant effects.** This determination is based on the premise that increases in human recreational use of BLM lands have occurred in recent years and will inevitably continue to increase, resulting in the increased potential for human-bear conflicts resulting in the potential harm to grizzly bears, but that the grizzly bear conservation measures will protect grizzly bears and their habitat from recreation uses, projects, or activities and human-bear interactions by recreationists on BLM lands are extremely infrequent to non-existent.

Wild and Scenic Rivers Management

Management Actions

It was determined that four river/stream segments managed on public lands within the Pinedale RMP meet the Wild and Scenic River (WSR) eligibility and suitability factors and are within potential grizzly habitat and should be managed to maintain or enhance their outstandingly remarkable values for any possible future consideration for inclusion in the National Wild and Scenic River Suitability (NWSRS) designation. The four WSR segments are: five upstream segments along the Green River (8.56 river miles); the Scab Creek Unit (4.21 miles); Silver Creek Unit (1.8 miles); and East Fork River Unit (2.91 miles). The suitable determination is based on the unique qualities of the diverse public land resources

and their regional and national significance, making them worthy of future consideration for addition to the NWSRS.

Interim management practices for the four public land WSR parcels will focus on maintaining or enhancing the outstandingly remarkable scenic, recreational, and historic values and the relatively unmodified character of the area in a near-natural setting. Any activities that would conflict with this objective are prohibited. Some intrusions on the public lands involved may be allowed if they are not readily evident or are short-lived, and do not adversely affect maintaining the scenic classification.

Effects Analysis

The designation of WSR status is simply a designation, and tempers or stipulates from a WSR resource viewpoint, specific protections or management of other BLM authorized actions. WSR classifications, in and of themselves, do not place on-the-ground projects or ground disturbing activities. Because of their isolation, rugged character, and naturalness, designation as a Wild and Scenic River will not be likely to have negative impacts on wildlife. At the time of designation, further consideration of details will be given to potential impacts to grizzly bears.

Generally, WSR status is a beneficial impact on wildlife and plant species. Grizzly bear habitat that falls within a WSR segment would generally be beneficially impacted by the more restrictive criteria applied to those stream/river segments, including protecting spawning fish habitat or berry producing plants that provide a food source for grizzly bears and security habitat. Actions associated with wild and scenic river management are not expected to detrimentally influence grizzly bear behavior or impact suitable denning, travel, and foraging habitats. These actions will likely result in positive, beneficial effects by maintaining or enhancing habitats suitable for grizzly bears.

Determination

Implementation of wild and scenic rivers management actions, as presented in the Pinedale RMP (1988), is **not likely to adversely affect** the grizzly bear, due to **beneficial effects**. This determination is based on the potential that WSR status may maintain, protect or improve habitats used by grizzly bears.

Cultural Resource Management

Management Actions

Cultural resource management activity plans (such as the Oregon/Mormon Pioneer National Historic Trails Management Plan) will be completed and implemented to identify, salvage, and protect cultural and historical sites. Activity plans will be prepared for any current or future sites listed on, or determined eligible for the National Register of Historic Places (NRHP), including sites 48LN300, 48SU350, and 48SU301, and the Overlook Rock Shelter, the Aspen Stone Circle site, the Cora Butte alignment site, the Willow Lake site, and the Boulder Lake site. Site-specific management prescriptions will be developed in the activity plans. Significant cultural resource sites will be nominated to the National Register of Historic Places. As necessary, withdrawal from exploration and development of locatable minerals on significant cultural resource sites will be pursued.

Effects Analysis

Actions associated with cultural resource and paleontological management are sparsely distributed across

the landscape, are very small in physical extent, and involve very little disturbance to the area. Frequently, the goal is to leave the area intact with no disturbance. These activities are unlikely to occur in grizzly bear habitat.

Determination

Implementation of cultural resource management actions, as presented in the Pinedale RMP (1988b), is **not likely to adversely affect** the grizzly bear, due to **discountable effects**. This determination is based on the premise that cultural surveys implemented for other projects could lead to people working in occupied grizzly bear habitat, creating some possibility for conflict, although these activities are very unlikely to occur in or near grizzly bear habitat. Behavior guidelines for humans in occupied bear country and application of the grizzly bear conservation measures should minimize the potential for such conflicts.

Lands and Realty Management

Management Actions

Prior to taking any disposal action, an environmental analysis will be conducted on the proposal and the involved lands will be evaluated for compliance with the disposal criteria listed in and for consistency with objectives of this RMP. Approximately 6,400 acres have been identified as suitable for future consideration for disposal, and another 14,500 acres have been identified as suitable for consideration for disposal only by exchange. Proposals to dispose of any other BLM-administered public lands will be considered and evaluated on a case-by-case basis. Special attention will be given to retaining enough public lands at the Cora Y highway crossing, at the south end of Fremont Lake, and at other important wildlife migration routes to provide for free movement of migrating big game animals. Acquisition of nonfederal lands will be pursued by BLM, if needed, to accomplish management objectives of this RMP. Such acquisition will primarily be considered in areas of predominantly federal ownership, when other management options such as cooperative agreements are not available, and then primarily through exchange. Lands actions (e.g., exchanges) will be pursued to enhance and maintain key wildlife habitats. Land exchanges to acquire state and private lands in crucial habitats in important and predominantly federal management areas (e.g., Rock Creek ACEC, New Fork Potholes, key riparian areas) will be pursued.

Desert Land Entry petition applications will be disqualified when the public lands are identified as:

Lands within the capability classes that the Department of Agriculture, Agricultural Stabilization and Conservation Service, is seeking to remove from cultivation under the Conservation Reserve Program.

Lands that the Department of the Agriculture, Soil Conservation Service show as being "nonirrigable."

Lands identified as sensitive, unique, or necessary to fulfill the management objectives of this RMP.

Agricultural land entry petition applications will also be disqualified when the public lands would be utilized for the growth of government price-supported crops, or when use of water supplies would deplete an underground water supply beyond its annual recharge capability, thus threatening existing water users.

Whenever necessary, withdrawals in support of other resource management objectives and actions will be pursued. Public lands within active livestock driveways that are continuing to serve their designated purpose, will continue to be segregated from all forms of disposal under the public land laws. The

withdrawals for stock driveways that are not serving their designated purpose will be terminated. Mineral locations on stock driveways will be handled under 43 CFR 3815. Disposal proposals that will not be compatible with the continued use or purpose of stock driveways will not be approved. Existing land withdrawals (held by agencies other than BLM) currently encumbering public lands will be reviewed to determine the need for continuation, modification, revocation, or termination of the withdrawals. Classification and Multiple Use Act retention and disposal classifications (Orders W-19140, W-25810, and W-12668) in Sublette and Lincoln counties will be terminated. In areas covered by these orders, discretionary management under the provisions of the Federal Land Policy and Management Act (FLPMA) will be consistent with the provisions of the RMP.

Areas closed to mineral leasing, having a no surface occupancy (NSO) restriction, or other otherwise identified as unsuitable for surface disturbance or occupancy in other sections of this RMP will be managed as avoidance or exclusion areas for rights of way. Such areas include, but are not limited to, recreation and cultural sites, the Rock Creek ACEC, and the Deadline Ridge-Graphite evaluation area. However, following a supporting environmental analysis, some types of rights of way projects may be allowed in such areas if they: a) would not create substantial surface disturbance; b) would be located in areas with a high potential for reclamation; c) would have impacts which would be temporary in nature; and d) would be compatible with the resource values being protected.

Areas requiring mitigations and restrictions for surface-disturbing activities will be managed as restricted areas for rights of way. Restrictions include, but are not limited to, seasonal restrictions for wildlife, sensitive watersheds, steep slopes, ORV designations, and other measures necessary to prevent degradation of cultural, historical, and recreational sites. Restricted areas for rights of way include wildlife crucial winter ranges, the Beaver Creek ACEC, the Upper Green River Special Recreation Management Area (SRMA), and the Soap Holes area. Areas that are not identified as avoidance, exclusion, or restriction areas are considered open to rights of way. Two transportation/transmission corridors are designated. Actual corridor widths will be flexible within the constraints provided in the various resource objectives of the RMP.

Corridors are preferred routes for transportation and transmission facilities. Identification of corridors does not preclude location of transportation and transmission facilities in other areas, if environmental analysis indicates that the facilities are compatible with other resource values and objectives. Further identification of corridors does not mandate that transportation and transmission facilities will be located there if they are not compatible with other resource uses, values, and objectives in and near the corridors or if the corridors are saturated. Each right of way application will be reviewed and analyzed using the environmental data that exist for the area as a basis to determine compatibility with existing uses and resource values.

Effects Analysis

Management of existing access or acquisition of new access to lands administered by BLM is not expected to alter grizzly bear behavior. Lands under new administration may result in positive effects to grizzly bear habitats by securing these lands and managing them under BLM provisions.

Lands and realty management actions associated with exchanges are not expected to negatively impact grizzly bear behavior or habitats. Current BLM land holdings would be evaluated for unique characteristics prior to disposal, including suitability and use by grizzly bears. Lands identified as important for grizzly bears would not likely be available for disposal. Lands not under BLM jurisdiction that are suitable or occupied grizzly bear habitats may be targeted for acquisition and subsequent management by BLM. Such acquisitions would provide benefits to grizzly bear habitats that may not be afforded under non-federal ownership.

Corridors are designated and managed to accommodate power lines, communication towers, pipelines, and roads. Roads can be a source of fragmentation of grizzly bear habitat resulting in reduced mobility and reduced ability to utilize otherwise secure habitat. Roads and other linear access are significant factors in habitat deterioration and increased mortality of grizzly bears (Schwartz et al. 2003). Roads increase the opportunity for human access and result in an increase in human-bear interactions, a major source of mortality for bears.

Disposal or transfer of public lands with potential grizzly bear habitat through Desert Land Entry, public sale, exchange, Wyoming indemnity selection, or Recreation and Public Purposes (R&PP) leases or patents may affect the bear's ability to utilize suitable habitat and travel corridors linking desirable habitats. The overall goal of field office staff is to maintain lands that contain potential habitat for the bear; however, large transfer of acreage due to land tenure actions may occur.

The issuance of ROWs and leases (utility transportation corridors), specifically ROWs for ditches, canals, and roads may affect the grizzly bear if the associated construction is within the vicinity of travel corridors or areas between different seasonal foraging sites. This may cause short-term behavioral avoidance of these areas by the grizzly bear due to the presence of human activity. The issuance of temporary use permits, and construction activities associated with fencing of revegetation sites require an analysis to determine if they are present in potential habitat areas and travel corridors and would have similar short-term avoidance impacts.

The acquisition of access easements as well as Rights-of-way/leases include powerlines, communication sites, pipelines, ditches and canals, roads (includes stream crossings), well pads, reservoirs, buried telephone and fiber optic lines, wind power generation farms and facilities, compressor stations and other facilities, temporary use permits, and fence re-vegetation sites and designate, cancel, or change stock trail driveways activities may cause short-term behavioral avoidance of these areas during construction/maintenance operations and would have an insignificant effect on the grizzly bear. The establishment of withdrawals, acquisition of conservation easements, and road closures/rehabilitation would close areas from certain activities that could have a negative effect on the grizzly bear; closing areas creates undisturbed habitat for grizzly bear.

Actions associated with classifications and multiple use are not expected to impact grizzly bear behavior or habitats.

Conservation measures in place that will reduce adverse impacts include providing educational packets, planning of authorized activities with grizzly bears in mind, and implementation of strategies to reduce human-bear conflicts proactively.

Determination

Implementation of land resource management actions, as provided in the Pinedale RMP (1988) is **not likely to adversely affect** the grizzly bear due to **discountable effects**. This determination is based on the premise that land resource management activities occur in areas outside of habitat typically used by grizzly bears; the conservation measures in place to protect grizzly bears; the limited potential for an increase in roads with added human-bear interactions; disposal or transfer of public land within grizzly bear habitat; issuance of right-of-way and leases for utility transportation corridors, ditches and canals, and roads; temporary use permits; and fencing of re-vegetation sites to disturb grizzly bear behavior, affect their ability to use suitable habitat and travel corridors between habitats; and increases in direct mortality as a consequence of interactions with humans. The potential for increased human access and

development within grizzly bear habitat at the higher elevations favored by the bears and need for a right-of-way for access, etc., is considered to be of very low likelihood, as land resource management activities typically occur outside of grizzly bear habitat in the Pinedale RMP (1988) planning area.

Access Management

Management Actions

The objective for access management is to provide suitable public access to BLM-administered public lands. This may include acquiring new access where needed, maintaining existing access and expanding existing access facilities, or abandoning and closing access where it is not compatible with resource values and objectives. The standards for healthy public rangelands, described in Appendix G, apply.

Access across private lands will be pursued as needed through a variety of methods, including but not limited to purchase of rights-of-way or easements, land exchange, reciprocal rights-of-way, and other statutory authorities. Refer to USDI 1985b for a description of specific access acquisition procedures; Map 16 and Table 10 in that document show general locations of possible access routes or areas where legal access is needed. Specific routes and acquisition procedures for securing access will be determined through route analyses and environmental analyses as part of specific project and activity planning. Where appropriate, land exchanges or cooperative agreements will be considered to provide access needs.

A detailed evaluation of high density roaded areas in the planning area will be completed to determine needs for specific road closures and/or rehabilitation. Priority evaluation areas include the Red Canyon, Red Castle Creek, and Fish Creek areas, as well as oil and gas fields in the southwestern portion of the resource area. Some existing roads may be closed except for administrative purposes. Specific mitigation measures and design requirements for roads will be developed through environmental analyses as part of specific project or activity planning.

Access closure, abandonment, and acquisition will be considered and established through activity planning and environmental analysis processes. Road or trail closure and abandonment will be based on desired road or trail densities; demands for new roads; closure methods (e.g., abandonment and rehabilitation, closures by signing, temporary or seasonal closures); type of access needed; resource development or protection needs; and existing uses.

Effects Analysis

Management of existing access or acquisition of new access to lands administered by BLM is not expected to alter grizzly bear behavior. Lands under new administration may result in positive effects to grizzly bear habitats by securing these lands and managing them under BLM provisions.

Corridors are designated and managed to accommodate power lines, communication towers, pipelines, and roads. Roads can be a source of fragmentation of grizzly bear habitat resulting in reduced mobility and reduced ability to utilize otherwise secure habitat. Roads and other linear access are significant factors in habitat deterioration and increased mortality of grizzly bears (Schwartz et al. 2003). Roads increase the opportunity for human access and result in an increase in human-bear interactions, a major source of mortality for bears.

The issuance of ROWs and leases (utility transportation corridors), specifically ROWs for ditches, canals, and roads may affect the grizzly bear if the associated construction is within the vicinity of travel

corridors or areas between different seasonal foraging sites. This may cause short-term behavioral avoidance of these areas by the grizzly bear due to the presence of human activity. The issuance of temporary use permits, and construction activities associated with fencing of revegetation sites require an analysis to determine if they are present in potential habitat areas and travel corridors and would have similar short-term avoidance impacts.

The acquisition of access easements as well as Rights-of-way/leases include powerlines, communication sites, pipelines, ditches and canals, roads (includes stream crossings), well pads, reservoirs, buried telephone and fiber optic lines, wind power generation farms and facilities, compressor stations and other facilities, temporary use permits, and fence re-vegetation sites and designate, cancel, or change stock trail driveways activities may cause short-term behavioral avoidance of these areas during construction/ maintenance operations and would have an insignificant affect on the grizzly bear. The establishment of withdrawals, acquisition of conservation easements, and road closures/rehabilitation would close areas from certain activities that could have a negative affect on the grizzly bear; closing areas creates undisturbed habitat for grizzly bear.

Conservation measures in place that will reduce adverse impacts include providing educational packets, planning of authorized activities with grizzly bears in mind, and implementation of strategies to reduce human-bear conflicts proactively.

Determination

Implementation of access management actions, as presented in the Pinedale RMP (1988), is **not likely to adversely affect** the grizzly bear, due to **insignificant effects**. This determination is based on the extremely low likelihood that access actions will occur in or destroy suitable grizzly bear habitat, disturb grizzly bear behavior, or affect their ability to use suitable habitat and travel corridors between habitats, due to the application of grizzly bear conservation measures.

Fire Management

Management Actions

The objective of fire management is to protect public safety, life, and property while providing the maximum benefits of both prescribed fire and wildfire to overall resource management. Fire will be considered a vegetative manipulation option to:

- Convert brush to other desired species,
- Rejuvenate desired species,
- Increase forage,
- Increase vegetation nutrient value and palatability,
- Promote wildlife habitat diversity,
- Improve vegetative cover on areas with insufficient protective ground cover, and
- Maintain or improve range, wildlife habitat, and watershed condition.

Fire will also be considered a management option for disposal of timber slash, seedbed preparation, hazard reduction, control of disease or insects, thinning, or species manipulation in support of forest management objectives. In preparing activity plans, consideration will be given to fire applications in meeting resource management objectives. A fire management action plan will be written for the planning area. Specific boundaries and fire management prescriptions will be consistent with or in support of the other identified resource values and management objectives.

Areas will be identified where a prescribed set of conditions will be acceptable in the event of an ignition. Prescribed fires will generally be confined to 200 acres or less in areas where current vegetation stages are desirable. Fire protection on public lands will be managed by taking appropriate suppression actions through the fire management plan. Resource and operational support for presuppression and suppression planning will be coordinated with the Forest Service, Sublette County Sheriff's Office, Wyoming State Forestry Division, and local fire protection districts.

Wilderness areas will be managed as prescribed fire areas. Fire suppression in wilderness areas requires restraint in suppression methods. In any designated wilderness areas, the fire management objective will be to manage fire in ways that will cause the least degradation to wilderness values.

Prescribed burning will be conducted so as to:

- Not violate ambient air quality standards,
- Avoid visibility impairment,
- Minimize public nuisance, and
- Minimize smoke intrusions into sensitive areas.

Effects Analysis

Fire management actions, particularly actions associated with wildfire suppression and prescribed fire, whether planned or unplanned, have the potential to occur in habitats occupied by grizzly bears. Fire exclusion alters the natural mosaic of successional stages that promote a mixture of forest openings and structural diversity on the landscape level. This limits the function of fire in perpetuating certain vegetation conditions, such as the development of early successional shrubs that can provide berry food resources for bears. Burns resulting from wildfires in this century are important producers of fruiting shrubs which provide food energy for the bears (IGBC 1986). Control of such natural fires would reduce these potential future foods for grizzly bears. Roads constructed in association with fire suppression, if not revegetated, can lead to increased access into higher altitude sites by humans, the main cause of mortality for grizzly bears (Schwartz et al. 2002).

Prescribed burning can lead to an increase in early seral stages that promote shrub development. This can provide food resources for bears. Some grizzlies appear to derive much of their energy from the fruits of shrubs, including huckleberry and buffaloberry.

Prescribed burning, construction of firelines, use of off-road vehicles, and use of hand tools and heavy equipment all have the potential for disturbing grizzly bears by causing them to abandon or avoid particular habitats temporarily. However, these disturbances are anticipated to be temporary and of relatively short duration. They could pose a problem if they were located at a concentrated food resource, especially as bears are eating large quantities of food to put on fat for hibernation (hyperphagia).

Conservation measures in place that will reduce adverse impacts include providing educational packets, specifications for food and garbage handling on operation plans and special use permits, and planning of authorized activities with grizzly bears in mind. Prescribed fires are not planned in grizzly habitat at this time in the Pinedale RMP (1988) planning area.

Determination

Implementation of fire management actions, as presented in Pinedale RMP (1988), is **not likely to adversely affect** the grizzly bear, due to **insignificant effects**. This determination is based on the low

potential for activities associated with wildfire suppression and prescribed burning to substantively reduce the potential for grizzly bears to utilize the landscape and find food and denning sites and the conservation measures in place to protect grizzly bears and their habitat. Fire suppression affecting the development of berry producing shrubs and the creation of temporary roads during fire suppression activities are anticipated to be infrequent. Other disturbances are minor and temporary in nature. In the event of a wildfire and immediate suppression is required in grizzly bear habitat, as many conservation measures as possible will be applied that do not hinder safety or property protection. The USFWS will be contacted and emergency consultation will take place at the earliest possible time if grizzly bear habitat is affected or impacted.

Determination

Implementation of fire management actions, as presented in Pinedale RMP (1988), is **not likely to adversely affect** the grizzly bear, due to **discountable effects**. This determination is based on the low potential for activities associated with wildfire suppression and prescribed burning to substantively reduce the potential for grizzly bears to utilize the landscape and find food and denning sites. Fire suppression affecting the development of shrubs, and the creation of temporary roads during fire suppression activities are anticipated to be infrequent. Prescribed burns may function to replace the areas of fire suppression. Other disturbances are minor and temporary in nature.

Areas of Critical Environmental Concern

Management Actions

The objective for managing the Rock Creek ACEC is protection of the Rock Creek drainage to assure quality aquatic habitat for the sensitive Colorado River cutthroat trout and to provide crucial winter range for a portion of the Piney elk herd. The entire ACEC area and the Deadline-Graphite elk winter range area (approximately 17,100 combined acres) will be deferred from mineral leasing until a mineral and wildlife evaluation is completed. The entire ACEC will be managed as a right of way avoidance or exclusion area, where rights of way will not be allowed unless a supporting environmental analysis indicates that the action meets the objective for the ACEC, minimal impacts would occur, and(or) the action would benefit the Colorado River cutthroat trout or elk habitat.

A No Surface Occupancy (NSO) restriction for leasable minerals and other surface-disturbing activities will be applied in the 4,200-acre Rock Creek drainage (unless activities are for the purpose of benefiting the Colorado River cutthroat trout). Geophysical exploration activities in this area are restricted to portable methods only. The use of explosive charges will be prohibited if analysis determines that unacceptable adverse resource impacts would result. If analysis indicates this level of protection is necessary, the drainage area will be closed to exploration and development of locatable minerals, and a withdrawal from mineral location and surface entry will be pursued. Livestock grazing and related improvements will continue to be allowed, provided no adverse affects occur to the Rock Creek drainage. No forest management activities will be allowed within the drainage. The drainage will be managed as a Class I VRM area and will be closed to ORV use, including over-the-snow vehicles (43 CFR 8340.0-5).

Approximately 1,000 acres of the ACEC (that portion outside the drainage) will be evaluated to identify any locations where surface occupancy can be allowed. Geophysical exploration activities in this area will be evaluated on a case-by-case basis and will be restricted if analysis determines that unacceptable adverse impacts would occur to the water quality, fisheries, wildlife, recreation, or visual values in the area. This portion of the ACEC will be open to exploration and development of locatable minerals. A plan of operations will be required for any locatable minerals activities in the area. This portion of the ACEC

will be managed as a Class II VRM area, and ORV use will be limited to existing roads and trails with seasonal restrictions to protect wintering wildlife.

The objectives for managing the Beaver Creek ACEC are to assure quality aquatic habitat for the sensitive Colorado River cutthroat trout and to protect elk calving habitat. The area is open for consideration of mineral leasing and related activities. All vehicle use, including geophysical exploration vehicles, will be limited to existing roads and trails. This area will be closed to the use of explosive charges if analysis determines that unacceptable adverse impacts would occur to the water quality, fisheries, wildlife, recreation, or visual values in the area. The Beaver Creek ACEC will be managed to maintain, improve, or restore riparian habitat conditions. The ACEC will be managed as a Class III VRM area.

A detailed activity plan will be prepared to establish guidelines for uses that could affect or jeopardize habitat quality for the Colorado River cutthroat trout and elk calving. Management prescriptions in the activity plan will include identifying specific transportation routes to reduce the potential for spills of toxic materials, and needs for seasonal use or other types of restrictions, in compliance with the decisions stated above.

Surface disturbance within 1,000 feet of the streams and on slopes of 25 % or greater will be prohibited. Partial timber cutting will be allowed provided that no adverse impacts will occur to the Colorado River cutthroat trout. Clearcutting or road construction within 1,000 feet of Beaver Creek will not be allowed. Exceptions will be granted only if additional site-specific analysis verifies that such actions will not adversely affect crucial Colorado River cutthroat trout habitat. Roads and rights of way will follow existing alignments unless design criteria will preclude adverse impacts to the trout and elk calving habitat. Stream crossings will be limited to lower elevations and gentler slopes. Use of equipment and vehicles, including geophysical exploration activities, will be allowed if consistent with the objectives of the ACEC.

Both the Rock Creek and Beaver Creek ACECs are within potential grizzly bear habitat.

Effects Analysis

This program analysis is for the designation and management of ACECs. Management actions associated with ACECs that could result in detrimental impacts to grizzly bear behavior or habitat, such as allowed minerals development, will be analyzed under that management action. There are no impacts to the grizzly bear in the establishment of an ACEC. There is the possibility that some management action could occur, specific to an ACEC that is not addressed by the existing program management plans. Implementation of ACEC management involves no actual ground disturbing activities and primarily involves a narrow, focused outlook on management of the ACEC providing limited uses and restricting most activities from either occurring or tempering them so that they are less disruptive in nature.

Determination

Implementation of ACEC management actions, as presented in the Pinedale RMP (1988), is **not likely to adversely affect** the grizzly bear, due to possible **beneficial effects**. This determination is based on the premise that implementation of ACEC management involves no actual ground disturbing activities and therefore no anticipated disturbance to grizzly bear habitat; the low likelihood that a management action, specific to an ACEC, would occur that did not fit within the existing program management plans; no increased human presence; and likely will provide beneficial affects due to limiting activities in particular ACECs that grizzly bears might inhabit.

Summary of Determinations

The following is a summary of the effects determinations developed for each of the Pinedale RMP (1988) management actions.

TABLE 5 SUMMARY OF DETERMINATIONS FOR THE PINEDALE RMP	
Resource	***Determination***
Surface Disturbance Restrictions	Not likely to adversely affect, due to beneficial effects
Air Quality	No effect
Minerals	Not likely to adversely affect, due to discountable effects
Natural History and Paleontological Resources	Not likely to adversely affect, due to discountable effects
Soils and Watershed	Not likely to adversely affect, due to discountable effects
Wildlife Habitat	Not likely to adversely affect, due to insignificant effects
Livestock Grazing	Likely to adversely affect
Riparian	Not likely to adversely affect, due to beneficial effects
Wild Horse	No effect
Forest	Not likely to adversely affect, due to insignificant effects
Wilderness	Not likely to adversely affect, due to beneficial effects
Visual Resources	Not likely to adversely affect, due to beneficial effects
Off-road Vehicle	Not likely to adversely affect, due to insignificant effects
Recreation	Not likely to adversely affect, due to insignificant effects
Wild and Scenic Rivers	Not likely to adversely affect, due to beneficial effects
Cultural Resources	Not likely to adversely affect, due to discountable effects
Lands and Realty	Not likely to adversely affect, due to discountable effects
Access	Not likely to adversely affect, due to insignificant effects
Fire	Not likely to adversely affect, due to insignificant effects
Areas of Critical Environmental Concern	Not likely to adversely affect, due to beneficial effects

Cumulative Effects

Cumulative effects include future State, tribal, local, or private actions that are reasonably certain to occur in the Pinedale planning area.

Potential effects that could affect grizzly bear or their habitats in the Pinedale FO include the following:

Subdivision development along rivers (especially along the New Fork and Green Rivers)
Natural gas development south of Pinedale
Sand and gravel operations along river corridors

Certain components of these projects, if completed, could directly or indirectly affect grizzly bear or their habitats. In addition to the cumulative impacts resulting from the BLM activities described previously, implementation of the Pinedale RMP could add further impacts to the grizzly bear that may result from current non-federal actions.

SNAKE RIVER RMP - PINEDALE FIELD OFFICE

The Snake River RMP record of decision (ROD) was completed in April 2004. The Snake River planning area occupies 1,345 acres within Pinedale Field Office. A biological assessment was prepared and completed for the Snake River RMP in January of 2004.

Environmental Baseline

See the Pinedale Field Office for the general discussion of this section. Two BLM parcels are located within Grand Teton National Park and will likely be transferred (Andrews 2003). The Biological Opinion on the BA for the Snake River RMP returned a **No Effect** decision for grizzly bear as no grizzly bear habitat is present on lands managed by the BLM within this planning area. No further analyses will be pursued on the Snake River RMP.

GREEN RIVER RMP - ROCK SPRINGS FIELD OFFICE

The Record of Decision and approved Resource Management Plan (RMP) for the Green River Resource Area was signed in August 1997 (BLM 1997). The Green River RMP provides management direction for approximately 3.6 million acres of public land surface and 3.5 million acres of federal mineral estate. The Rock Springs FO occurs in the southwestern portion of Wyoming and includes portions of Sweetwater, Lincoln, Sublette, Fremont, and Uinta counties.

Environmental Baseline

This section presents a summary of the known grizzly bear distribution in the Rock Springs FO and an analysis of the effects of past and ongoing human activities (including Federal, State, tribal, local and private) that may influence grizzly bears and their habitats. There are no grizzly bears in the Rock Springs FO, and the current grizzly bear distribution does not enter the FO. The proposed outer boundary of grizzly bear occupancy, as prepared by WGFD, does extend down into the FO (**Map 2**). Grizzly bears are anticipated to reoccupy the Wind River Range as far south as South Pass, at the northeastern boundary of the FO.

Existing Impact Minimization Measures

Most RMPs contain restrictions or measures that are incorporated as stipulations on use permits. These measures cover a broad range of protective features (protection of ungulate calving grounds, protection of raptors, greater sage-grouse, wet soils, etc.) that may provide some benefit to grizzly bears. The following section presents measures included in the Rock Springs/Green River RMP that may directly or indirectly minimize impacts to the grizzly bear.

(a) “Timber harvesting activities will be restricted seasonally, as appropriate, to protect big game wintering and parturition activity, grouse, (sage, sharptail, etc.) strutting and nesting, and raptor nesting activity” (BLM 1997, p.8).

(b) “Timing limitations (seasonal restrictions) will be applied when activities occur during crucial periods or would adversely affect crucial or sensitive resources. Such resources include, but are not limited to, soils during wet and muddy periods, crucial wildlife seasonal use areas, and raptor nesting areas” (BLM 1997, p.12).

(c) “The Coal Occurrence and Development Potential area is subject to continued field investigations, studies, and evaluations to determine if certain methods of coal mining can occur without having a significant long-term impact on wildlife, cultural, and watershed resources, in general, and on threatened and endangered plant and animal species and their essential habitats. These studies include keeping resource databases current (e.g., where existing raptor nests become abandoned or where new raptor nests become established, etc.), analysis of effects to wildlife and threatened and endangered species habitats and populations, and the cumulative effects of mining operations and other activities in the area” (BLM 1997, p. 13).

Analysis of Proposed Management Actions and Effects

The RMP includes descriptions of each management prescription included in the FO. The following text briefly summarizes the activities and any specific mitigation measures associated with each management prescription. The Wyoming BLM Mitigation Guidelines for Surface Disturbing and Disruptive Activities

will be applied to all surface disturbing or disruptive activities. As described previously in this document, these guidelines include timing limitations and no surface occupancy restrictions that will minimize potential effects to grizzly bears and their habitat. Refer to the Green River RMP for a complete explanation of each management action.

Air Quality Management

Management Action

Special requirements (e.g., use authorization stipulations, mitigation measures, conditions of approval, etc.) to alleviate air quality impacts will be identified on a case-by-case basis and included in use authorizations (including mineral leases). Examples of such requirements would include: limiting emissions, spacing of source densities, requiring the collection of meteorological and/or air quality data, covering conveyors at mine sites (to lower dust emissions), and placing restrictions on flaring of natural gas (to reduce sulfur emissions).

Plant facilities could be authorized where they minimize air quality impacts over the FO, particularly the Flaming Gorge National Recreation Area. They may not be authorized where they might cause heavy fog conditions that are hazardous to public health by causing black ice on major highways, or possibly extreme and continual fog that could inhibit transportation or recreation activities.

The State of Wyoming has the authority and responsibility to regulate air quality impacts within the state, including Class I areas. The BLM will continue to cooperate and coordinate with the USDA-Forest Service, U.S. Environmental Protection Agency, and the State of Wyoming, in managing and monitoring air resources. For example, air quality data (e.g., atmospheric deposition, or acid rain, monitoring data) will be used to determine actual impacts from air pollutant emission sources, and emission levels will be inventoried and tracked to predict potential impacts, including effects on the Bridger Wilderness Area (which is a Prevention of Significant Deterioration Class I area) and to provide detailed information on proposed emission sources.

Effects Analysis

Actions related to air quality management will not result in negative impacts to grizzly bear behavior or habitat. No air quality monitoring stations are currently in any grizzly bear habitat on BLM lands within the Kemmerer FO. Actions related to air quality management on other activities will not result in negative impacts to grizzly bears or their habitat. These management actions will likely result in maintaining or improving air quality conditions throughout the FO, which may have secondary benefits to grizzly bears.

Determination

Implementation of air quality management actions, as presented in the Green River RMP (1997), will have **no effect** on the grizzly bear, due to the fact that this management activity is not anticipated to impact grizzly bear behavior, or foraging or denning habitat as no grizzly bears currently occur in the Rock Springs FO.

Cultural, Natural History, and Paleontological Resource Management

Management Action

The BLM will cooperate with the National Park Service in implementing the Oregon/Mormon Pioneer National Historic Trails Management Plan. Developments such as roads, pipelines, and power lines may be allowed to cross trails in areas where previous disturbance has occurred and the trail segment has lost the characteristics that contribute to its National Register significance. Motorized vehicles, such as those used for geophysical exploration, or large heavy vehicles such as buses used in recreational tours, or similar activities, could cross and drive down the trails, provided a site specific analysis determines that no adverse effects will occur. Geophysical activities such as shotholes, blasting, and vibroseis locations could, generally, be allowed, provided they are at least 300 feet from the trail, do not occur directly on the trail, and a site specific analysis determines that visual intrusions and adverse effects will not occur. No blading will be allowed on any historic trail unless necessary to protect life or property. Historic trails are not available for use as industrial access roads (e.g., oil and gas drilling access roads, haul roads for heavy truck traffic).

The Parting-of-the-Ways historical site will be protected by closing it to exploration and development of locatable and saleable minerals and pursuing a withdrawal from mineral location. An existing 40-acre mineral location withdrawal in the area will be retained. The site will be managed under the prescriptions for management in the Oregon/Mormon Pioneer National Historic Trails Management Plan.

Management of historic roads and trails that are eligible for the NRHP but are not congressionally designated include the Overland Trail, the Cherokee Trail, and the Point of Rocks to South Pass Road. LaClede Stage Station and Dug Springs Stage Station on the Overland Trail will be protected as exclusion areas and will be closed to surface disturbing activities that could adversely affect the sites. These sites will be closed to exploration and development of locatable minerals and entry under the land laws, and withdrawals will be pursued. Cultural resource management plans may be written for these sites, and interpretive and visitor management efforts would be allowed as necessary.

Five significant rock art sites and their surrounding viewsheds (within 1/2 mile) will be managed to protect their cultural and historical values. Surface disturbing activities and visual intrusions will be prohibited within these areas if they would adversely affect these values. Management of visitor use at rock art sites may include interpretive signing, fencing, barriers, and other activities. The Cedar Canyon, LaBarge Bluffs, Sugarloaf, Tolar, and White Mountain rock art sites are exclusion areas, and are closed to surface disturbing activities that could adversely affect rock art resources. These sites are closed to:

- The location of mining claims and entry under the land laws (withdrawals will be pursued as necessary and the existing Sugarloaf and White Mountain withdrawals will be retained;
- Mineral material sales for sand, gravel, or other types of construction or building materials;
- The use of explosives and blasting; and
- The use of fire retardant chemicals containing dyes. Off-road vehicular use, including vehicles used for geophysical exploration activities, are limited to designated roads and trails.

The Tri-Territory Marker is an exclusion area and is closed to surface disturbing activities that could adversely affect it; and exploration and development of locatable minerals. A withdrawal will be pursued. The site will be open for consideration of activities such as fencing, interpretive signs, or barriers to ensure protection of the area. A cultural resource activity plan may be prepared for the site, if necessary.

Archeological data will be synthesized in the Little Colorado Desert, Greater Nitchie Gulch, and Wamsutter Arch concentrated oil and gas development areas and the areas will be managed with the objective of facilitating surface disturbing or disrupting activities without sacrificing significant archeological values. These areas may be eligible for listing on the NRHP because of their scientific information content. Playa lake areas with high cultural site density would be managed as historic districts. Management prescriptions for surface disturbing activities in playa lake areas will be developed on a case-by-case basis. A programmatic memorandum of agreement for data recovery with the SHPO and ACHP would also be pursued. Each playa may be managed as an NRHP eligible historic district (Blue Forest, Blue Point, and Adobe Town Rim).

The Pine Springs ACEC (6,030 acres) is closed to surface disturbing activities. About 2,000 acres in the area will be closed to exploration and development of locatable minerals and entry under the land laws. Withdrawal from these activities will be pursued. The existing 90-acre withdrawal will be retained. Cultural resource management plans may be written for the site, and interpretive and visitor management efforts may be allowed as necessary.

Consultation with appropriate Native American tribes concerning areas of concern to them for traditional cultural purposes will be in accordance with the American Indian Religious Freedom Act and BLM Manual 8160-1 Handbook. Native American consultation would occur within the context of specific development proposals, but will also be an ongoing process between BLM and affected Indian tribes and traditional cultural leaders.

Collecting of vertebrate fossils may be allowed with written authorization, which may be issued only to an academic, scientific, governmental, or other qualified institution or individual. Collection of common invertebrate fossils and petrified wood for hobby purposes is allowed on public lands and is regulated under 43 CFR 3600, 43 CFR 3622, and 43 CFR 8365. A site protection plan may be written and implemented for the Farson Fossil Fish Beds.

The Steamboat Mountain and Boars Tusk-Killpecker Sand Dunes areas will be managed to protect the unique geological and ecological features and to provide for public interpretation of these features. The road around Boars Tusk is closed.

Effects Analysis

Actions associated with cultural, natural history, and paleontological resource management are unlikely to occur (they are very infrequent), are typically in a very small area, have little impact, and are of short duration. These activities are very unlikely to occur in grizzly bear habitat.

Determination

Implementation of cultural resource management actions, as presented in the Green River RMP (1997), will have **no effect** on the grizzly bear. This determination is based on the premise that cultural surveys implemented for other projects could lead to people working in occupied grizzly bear habitat, creating some possibility for conflict, although these activities are very unlikely to occur in or near grizzly bear habitat. Currently grizzly bears very seldom occur within the Rock Springs FO area. Behavior guidelines for humans in occupied bear country and application of the grizzly bear conservation measures should minimize the potential for such conflicts.

Fire Management

Management Action

Ambient air quality standards will be maintained during prescribed fire operations. Heavy equipment or actions that will cause surface disturbance will be used only after a site-specific analysis has been performed and approved. Activities that cause surface disturbance will be considered on a case-by-case basis. Priority areas for wildfire suppression will be identified in fire management activity plans for the FO. A site-specific analysis will be prepared for sensitive areas such as special status plant species, cultural sites, historic trails, and ACECs to determine the appropriate suppression activity that will be acceptable. Use of chemical fire suppression agents is prohibited in rock art sites. Generally, use of chemical fire suppression agents is prohibited in special management areas, unless or until a wildland fire situation analysis is completed or an activity plan for the special management areas identifies chemical suppression agents as an allowable use. Wildfires occurring in forested areas will be appropriately suppressed in accord with resource values threatened, as determined on a case-by-case basis. Wildfires occurring in or directly threatening a developed or active timber sale will receive priority suppression control action. Non-commercial timber stands may be included in prescribed fire activities. Standard management practices such as pile and broadcast burning may be permitted in all forested areas.

Effects Analysis

Fire management actions, particularly actions associated with wildfire suppression and prescribed fire, whether planned or unplanned, have the potential to occur in habitats occupied by grizzly bears. Fire exclusion alters the natural mosaic of successional stages that promote a mixture of forest openings and structural diversity on the landscape level. This limits the function of fire in perpetuating certain vegetation conditions, such as the development of early successional shrubs that can provide berry food resources for bears. Burns resulting from wildfires in this century are important producers of fruiting shrubs which provide food energy for the bears (IGBC 1986). Control of such natural fires would reduce these potential future foods for grizzly bears. Roads constructed in association with fire suppression, if not revegetated, can lead to increased access into higher altitude sites by humans, the main cause of mortality for grizzly bears (Schwartz et al. 2002).

Prescribed burning can lead to an increase in early seral stages that promote shrub development. This can provide food resources for bears. Some grizzlies appear to derive much of their energy from the fruits of shrubs, including huckleberry and buffaloberry.

Prescribed burning, construction of firelines, use of off-road vehicles, and use of hand tools and heavy equipment all have the potential for disturbing grizzly bears by causing them to abandon or avoid particular habitats temporarily. However, these disturbances are anticipated to be temporary and of relatively short duration. They could pose a problem if they were located at a concentrated food resource, especially as bears are eating large quantities of food to put on fat for hibernation (hyperphagia).

Conservation measures in place that will reduce adverse impacts include providing educational packets to, specifications for food and garbage handling on operation plans and special use permits that authorize activities plan with grizzly bears in mind. Prescribed fires are not planned in grizzly habitat at this time in the Green River RMP (1997) planning area.

Determination

Implementation of fire management actions, as presented in Green River RMP (1997), is **not likely to**

adversely affect the grizzly bear, due to **insignificant effects**. This determination is based on the low potential for activities associated with wildfire suppression and prescribed burning to substantively reduce the potential for grizzly bears to utilize the landscape and find food and denning sites, the conservation measures in place to protect grizzly bears and their habitat, and the lack of grizzly bears currently occupying the Rock Springs FO area. Fire suppression affecting the development of berry producing shrubs, and the creation of temporary roads during fire suppression activities are anticipated to be infrequent. Other disturbances are minor and temporary in nature. In the event of a wildfire and immediate suppression is required in grizzly bear habitat, as many conservation measures as possible will be applied that do not hinder safety or property protection. The USFWS will be contacted and emergency consultation will take place at the earliest possible time if grizzly bear habitat is affected or impacted.

Forests and Woodlands Management

Management Action

The FO is divided into four timber compartments for timber management: Wind River Front, Pine Mountain, Little Mountain, and Hickey Mountain-Table Mountain. Hickey Mountain-Table Mountain will be managed as described in the woodland prescriptions. The Wind River Front is a restricted forest management area where forest resources will be managed for commercial forest values, to improve the health, vigor, and diversity of forest stands, and still give full consideration to other resource values such as watershed, wildlife, minerals, recreation, and scenic values. Pine and Little Mountain areas will be managed to enhance other resources, and activities will be designed to benefit these other resource uses. Priority for timber harvesting will be given to mature, decadent, and diseased trees.

Where possible, and within RMP objectives, timber compartments (commercial and woodland forest lands) will be managed to meet the local demand for minor forest products. These are typically small scale timber sales that occur every 3rd or 4th year only, as well as annual firewood sales, including some commercial sales on the Wind Rivers; there are also cordwood sales with 3-5 cords as the limit (Dunder 2003). The major consideration for timber harvesting in the Wind River Front is to improve the condition of the forest stand with emphasis on meeting wildlife habitat needs. The major consideration for harvesting in other areas is to provide watershed stability and habitat for wildlife needs. Soil, watershed, and wildlife cover are important considerations. Timber stand conditions and management considerations will dictate harvest methods and size and shape of units.

Clearcutting is not allowed within 100 feet of drainages or standing and flowing waters. Other logging activity, such as thinning or cable logging, could occur within the 100-foot zone if other resource values will not be adversely affected. Timber harvesting activities will be restricted seasonally, as appropriate, to protect big game wintering and parturition activity, grouse (sage, sharptail, etc.) strutting and nesting, and raptor nesting activity. Approximately 1,436 acres of commercial timber within big game winter ranges are closed to logging activity, usually from November 15 to April 30. If the logging unit encompasses big game parturition habitats, the area is closed to timber harvest activities usually from May 1 through June 30. There will be no logging activity within grouse nesting sites and raptor nesting sites usually from February 1 to July 31.

Commercial conifer stands will be managed under the guidelines for suppression of wildfires. Aspen and juniper stands will be open to prescribed fire activities to enhance watershed and wildlife values. Habitat fragmentation will be prevented if it has a negative ecological effect. Special management areas (old growth, scientific research areas) will be identified and appropriate management incorporated into activity plans. Woodland Forests - Juniper, Aspen, and Limber Pine Woodland forest areas will be managed using silvicultural practices that promote stand viability. Treatments could include thinning, harvesting, chaining, and burning. The vegetative material resulting from these treatments will normally be sold

through public demand sales. Woodland forest acreage will be maintained. Treatments may be implemented that influence successional stages, but such treatments will not permanently convert the areas to another vegetation type. Old aspen stands may be replaced by stands of sprouting aspen by various treatment methods (e.g., burning). Old decadent trees may be left standing or downed to provide cover or other habitat for wildlife, and juniper stands may be replaced where they are encroaching into other vegetation types. Silvicultural treatments in mature timber stands will be designed to improve wildlife habitat and watershed condition, i.e., create small openings to provide forage for wildlife and accumulate snow drifts to increase moisture.

Effects Analysis

Forestland management actions occur in coniferous habitats, which are the same areas that can be used by grizzly bears. Although there is the potential for these activities to be conducted during winter when bears are hibernating, this is often impractical due to the complications of snow cover and severe weather conditions.

Timber harvest, especially selection and group selection cuts and small clearcuts with no dozer piling of slash and no mechanical soil scarification, leads to openings in which successional processes produce important amounts of herbs and shrubs bearing fruits eaten by grizzlies. Production of grizzly food sources in these cuts is often greater than in uncut sites in the same habitat types. This indicates that certain timber harvest practices can be used in some forest stands to provide habitat diversity, and that habitat quality can probably be increased or enhanced by creating openings producing grizzly food (IGBC 1986). Thinning and seedcuts would open up the canopy and produce more diverse and productive vegetation types, and would increase early spring foraging opportunities.

New roads created for timber harvest activities, and not immediately revegetated, can lead to an increase in the number of people using an area and to potential interactions with grizzlies, depending on the access to the created roads. Controlling access via locked gates could avoid this problem. Bear-human interactions are one of the highest sources of mortality for bears (Schwartz et al. 2003). Grizzly bears are sensitive to disturbance associated with roads, and may avoid areas within 2.5 miles of roads (Mattson et al. 1986). Such displacement from quality habitats may prevent dispersal, force bears to use poorer quality sites, and cause social disruption (Kasworm and Manley 1989, McLellen 1989). Road avoidance may result in higher mortality and lower fecundity of displaced individuals (Mattson et al. 1986). However, forested habitat on BLM lands mainly provided cover for grizzly bears and do not provide the significant resources known from the areas inside the PCA.

In summary, forestry management can lead to more human intrusion and some loss of cover but those are the only potential adverse affects likely on BLM land. A number of conservation measures apply to forestland management, including planning of authorized activities with grizzly bears in mind, providing educational packets, food and garbage safeguards, no whitebark pine cutting,. These protective measures will substantially reduce impacts to grizzly bears from forest management activities.

Determination

Implementation of forest management actions, as presented in the Green River RMP (1997), is **not likely to adversely affect** the grizzly bear, due to **insignificant effects**. This determination is based on the limited amount of forest management activities that occur, the conservation measures that can be incorporated into proposed forest management projects to avoid the potential for adverse affects to grizzly bears, and because grizzly bears rarely occur in the Rock Springs FO area at present, although they are anticipated to reoccupy the Wind River Range in the future.

Hazardous Materials and Other Hazards Management

Management Action

The objectives for management of hazardous materials and waste are to: 1) protect public and environmental health and safety on BLM-administered public lands; 2) comply with applicable federal and state laws; 3) prevent waste contamination due to any BLM-authorized actions; 4) minimize federal exposure to the liabilities associated with waste management on public lands; and 5) integrate hazardous materials and waste management policies and controls into all BLM programs.

For BLM-authorized activities that involve hazardous materials or their use, precautionary measures will be used to guard against releases or spills into the environment. If safety hazards are identified as a result of hazardous waste spills on BLM- administered public lands, the BLM will provide appropriate warnings.

Sale or transfer of public lands on which storage or disposal of hazardous substances has been known to occur will require public notification of the type and quantity of these substances.

BLM-administered public land sites contaminated with hazardous wastes will be reported, secured, and cleaned up according to applicable federal and state regulations and contingency plans. Parties responsible for contamination will be liable for cleanup and resource damage costs, as prescribed in federal and state regulations.

Certain wastes generated by the oil and gas industry are exempt from regulation as hazardous wastes. These exemptions are too complex in detail to be listed here but are on file in BLM offices. Pits containing produced water or drilling fluids at well sites or other locations may be tested for TCLP constituents if nonexempt, hazardous wastes are indicated. Costs for testing and proper disposal will be borne by the operator if analysis confirms the presence of a nonexempt waste.

See other resource management prescriptions in this document for other prescriptions and guidance that may apply to hazardous materials management activities.

Effects Analysis

Emergency responses to hazardous materials, hazardous waste, and other hazards occur very infrequently, are limited in scale, and typically restricted to roadways or other areas of human activity, that grizzly bears will likely avoid.

Determination

Implementation of hazardous materials management actions, as presented in the Green River RMP (1997), is **not likely to adversely affect** the grizzly bear, due to **discountable effects**. This determination is based on the extremely low likelihood that releases of hazardous materials and subsequent response actions will occur in or destroy suitable grizzly bear habitat and that grizzly bears have not occupied the Rock Springs FO area on a permanent basis. In the event a hazardous materials cleanup is required in grizzly bear habitat, as many conservation measures as possible will be applied that do not hinder safety or property protection. The USFWS will be contacted and emergency consultation will take place at the earliest possible time if grizzly bear habitat is affected or impacted.

Lands and Realty Management

Management Action

Areas are designated for avoidance or exclusion to rights of way where these uses are incompatible with management of sensitive resources and/or would have unacceptable impacts. Areas designated as utility windows, rights of way concentration areas, and existing communication sites will be preferred locations for future grants.

Withdrawals that no longer serve the purpose for which they were established will be revoked. Prior to revocation, withdrawn lands will be reviewed to determine if any other resource values require withdrawal protection. The Multiple Use Management Classification as it affects public lands in the FO (200 acres) will be revoked. An additional 63 acres inundated by water under Flaming Gorge Reservoir may be withdrawn for the Bureau of Reclamation. Public Water Reserves will be terminated where no longer needed, and acquired where the need exists. No BLM-administered public lands within the FO are available for agricultural entry under Desert Land Entry (43 CFR 2520).

Access to public lands will be provided throughout the FO. Where necessary and consistent with ORV designations, access will be closed, or restricted in specific areas to protect public health and safety, and to protect significant resource values (see ORV Management discussion). Easements will be pursued where practical, to provide access to public lands for recreational, wildlife, range, cultural/historical, mineral, special management area, and other resource management needs (about 300 acres).

Effects Analysis

Management of existing access or acquisition of new access to lands administered by BLM is not expected to alter grizzly bear behavior. Lands under new administration may result in positive effects to grizzly bear habitats by securing these lands and managing them under BLM provisions.

Lands and realty management actions associated with exchanges are not expected to negatively impact grizzly bear behavior or habitats. Current BLM land holdings would be evaluated for unique characteristics prior to disposal, including suitability and use by grizzly bears. Lands identified as important for grizzly bears would not likely be available for disposal. Lands not under BLM jurisdiction that are suitable or occupied grizzly bear habitats may be targeted for acquisition and subsequent management by BLM. Such acquisitions would provide benefits to grizzly bear habitats that may not be afforded under non-federal ownership.

Corridors are designated and managed to accommodate power lines, communication towers, pipelines, and roads. Roads are a major source of fragmentation of grizzly bear habitat resulting in reduced mobility and reduced ability to utilize otherwise secure habitat. Roads and other linear access are significant factors in habitat deterioration and increased mortality of grizzly bears (Schwartz et al. 2003). Roads increase the opportunity for human access and result in an increase in human-bear interactions, a major source of mortality for bears.

Disposal or transfer of public lands with potential grizzly bear habitat through Desert Land Entry, public sale, exchange, Wyoming indemnity selection, or Recreation and Public Purposes (R&PP) leases or patents may affect the bear's ability to utilize suitable habitat and travel corridors linking desirable habitats. The overall goal of field office staff is to maintain lands that contain potential habitat for the bear; however, large transfer of acreage due to land tenure actions may occur.

The issuance of ROWs and leases (utility transportation corridors), specifically ROWs for ditches, canals, and roads may affect the grizzly bear if the associated construction is within the vicinity of travel corridors or areas between different seasonal foraging sites. This may cause short-term behavioral avoidance of these areas by the grizzly bear due to the presence of human activity. The issuance of temporary use permits, and construction activities associated with fencing of revegetation sites require an analysis to determine if they are present in potential habitat areas and travel corridors and would have similar short-term avoidance impacts.

The acquisition of access easements as well as Rights-of-way/leases include powerlines, communication sites, pipelines, ditches and canals, roads (includes stream crossings), well pads, reservoirs, buried telephone and fiber optic lines, wind power generation farms and facilities, compressor stations and other facilities, temporary use permits, and fence re-vegetation sites and designate, cancel, or change stock trail driveways activities may cause short-term behavioral avoidance of these areas during construction/maintenance operations and would have an insignificant effect on the grizzly bear. The establishment of withdrawals, acquisition of conservation easements, and road closures/rehabilitation would close areas from certain activities that could have a negative effect on the grizzly bear; closing areas creates undisturbed habitat for grizzly bear.

Actions associated with classification and multiple use are not expected to impact grizzly bear behavior or habitats.

Conservation measures in place that will reduce adverse impacts include providing educational packets, planning of authorized activities with grizzly bears in mind, and implementation of strategies to reduce human-bear conflicts proactively.

Determination

Implementation of land management actions, as provided in the Green River RMP (1997) is **not likely to adversely affect** the grizzly bear, due to **discountable effects**. This determination is based on the premise that land resource management activities occur in areas outside of habitat typically used by grizzly bears; the conservation measures in place to protect grizzly bears; grizzly bears very rarely occur in this field office, although they may reoccupy the Wyoming Range eventually; the limited potential for an increase in roads with added human-bear interactions; disposal or transfer of public land within grizzly bear habitat; issuance of right-of-way and leases for utility transportation corridors, ditches and canals, and roads; temporary use permits; and fencing of re-vegetation sites to disturb grizzly bear behavior, affect their ability to use suitable habitat and travel corridors between habitats; and increases in direct mortality as a consequence of interactions with humans. The potential for increased human access and development within grizzly bear habitat at the higher elevations favored by the bears and need for a right-of-way for access, etc., is considered to be of very low likelihood, as land resource management activities typically occur outside of grizzly bear habitat in the Green River RMP (1997) planning area.

Access Management

Management Action

Access to public lands will be provided throughout the Green River RMP planning area. Where necessary and consistent with ORV designations, access will be closed, or restricted in specific areas to protect public health and safety, and to protect significant resource values (see ORV Management discussion). Easements will be pursued where practical, to provide access to public lands for recreational,

wildlife, range, cultural/ historical, mineral, special management area, and other resource management needs (about 300 acres).

Effects Analysis

Management of existing access or acquisition of new access to lands administered by BLM is not expected to alter grizzly bear behavior. Lands closed to access may result in positive effects to grizzly bear habitats by securing these lands and managing them under BLM provisions.

Corridors are designated and managed to accommodate power lines, communication towers, pipelines, and roads. Roads can be a source of fragmentation of grizzly bear habitat resulting in reduced mobility and reduced ability to utilize otherwise secure habitat. Roads and other linear access are significant factors in habitat deterioration and increased mortality of grizzly bears (Schwartz et al. 2003). Roads increase the opportunity for human access and result in an increase in human-bear interactions, a major source of mortality for bears.

Conservation measures in place that will reduce adverse impacts include providing educational packets, planning of authorized activities with grizzly bears in mind, and implementation of strategies to reduce human-bear conflicts proactively.

Determination

Implementation of access management actions, as presented in the Green River RMP (1997), is **not likely to adversely affect** the grizzly bear, due to **discountable effects**. This determination is based on the extremely low likelihood that access actions will occur in or destroy suitable grizzly bear habitat, disturb grizzly bear behavior, or affect their ability to use suitable habitat and travel corridors between habitats, due to the application of grizzly bear conservation measures, and the fact that grizzly bears rarely occur in the Rock Springs FO area, although they may reoccupy the Wind River Range eventually.

Livestock Grazing Management

Management Action

Authorized grazing use will not exceed the recognized permitted active AUMs (318,647 AUMs). Public lands will be made available for livestock grazing while considering the needs of other resources. Livestock grazing will be managed on 31 I category allotments, 18 M category, and 29 C category Allotments, and one allotment may not be categorized.

Interdisciplinary monitoring studies will be conducted at a level sufficient to detect changes in grazing use, trend, and range conditions and to determine if vegetation objectives will be met for all affected resource values and uses (livestock grazing, wild horses, wildlife, watershed, etc.).

The Palmer Draw area (970 acres) and special management exclosures are closed to livestock grazing. All developed and some semi-developed recreation areas are closed to livestock grazing and will be fenced to reduce conflicts between uses. Authorized grazing preference may be reduced in areas with excessive soil erosion and poor range condition, if allotment evaluation warrants such a change, or to provide forage for wildlife, wild horse, and recreational uses.

Site-specific analyses will be conducted where necessary to help determine how to alleviate conflicts between wildlife use, livestock grazing, and development activities. Unallotted forage on public lands will be appropriately allocated to wildlife, wild horses, livestock grazing, and for watershed improvement on a

case-by-case basis. Salt or mineral supplements for livestock are prohibited within 500 feet of water, wetlands, or riparian areas unless analysis shows that watershed, riparian, and wildlife objectives and values would not be adversely affected. Salt or mineral supplements are prohibited on areas inhabited by special status plant species or other sensitive areas. Range improvements will be directed at resolving or reducing resource concerns, improvement of wetland/riparian areas, and overall improvement of vegetation/ground cover.

Water sources may be developed in crucial wildlife winter ranges only when consistent with wildlife habitat needs. Such sources will be designed to benefit livestock, wild horses, and wildlife. Alternative water supplies or facilities for livestock may be provided to relieve livestock grazing pressure along stream bottoms and improve livestock distribution. Construction of fences may be considered to meet management objectives. Fence construction in big game use areas and known migration routes will require site-specific analysis. Fences on public lands will be removed, modified, or reconstructed if documented wildlife or wild horse conflicts occur. Requests for conversions of kinds of livestock and changes in seasons of grazing use will be considered on a case-by-case basis through an environmental analysis. Noxious weed infestations will be controlled through livestock management or by environmentally acceptable mechanical, chemical, or biological means.

Effects Analysis

The Guidelines for Livestock Grazing Management on BLM land in Wyoming apply (see Standards for healthy rangelands and guidelines for livestock grazing management for public lands administered by the Bureau of Land Management in the state of Wyoming). Grazing permit stipulations require that livestock carcasses be transported ½ mile from areas of human activity, that human and prepared livestock and pet food, beverages, and garbage be handled and disposed in a manner so as to make it unavailable to bears, and garbage and uneaten horse feed may not be left or buried.

Grizzly bear issues related to livestock grazing have generally involved depredations of livestock by grizzly bears, disposal of livestock carcasses, storage of human food and stock feed, and grizzly bear habituation, food conditioning and mortality risk associated with these activities. Interaction between livestock and grizzly bears has typically led to relocation or removal of grizzly bears. This has not yet occurred on BLM grazing permits, but there is a high potential for it to occur on a BLM grazing permit at some time in the future. This is particularly true on domestic sheep allotments. In the case of sheep allotments, conflicts have been much more prevalent and more difficult to resolve without eventually phasing out sheep grazing in the PCA (ICST 2003). Grazing leases for BLM contain stipulations that sheep must be removed in the event of problems with grizzly bears.

Potential adverse effects of livestock grazing on individual bears would result from management control actions associated with livestock conflicts; and illegal, accidental, or defensive taking by grazing permittees/employees and other members of the public resulting from depredation conflicts.

The Grizzly Bear Management Guidelines recommend control actions in response to livestock depredations (outside of Management Situation 1) that involve a two-strike policy for males and a three-strike policy for females before consideration for removal. However, the proposed Response Protocol for Nuisance Grizzly Bear Actions Outside the Recovery Zone in Wyoming gives the Wyoming Game and Fish Department greater latitude to remove a bear from the population. Thus, livestock grazing will likely result in more bears being taken out of the population outside the PCA when livestock depredations occur.

Illegal, accidental, or defensive taking by grazing permittees and/or their employees may occur because of trying to protect their livestock or in self-defense in some situations (for example, a herder shooting a bear

attacking livestock). Risk also exists for the taking of bears by public agency personnel, permittee personnel, or members of the public as a result of accidentally encountering bears feeding on livestock carcasses. Grazing allotments within grizzly bear habitat will very likely have livestock depredation. Grizzly bears have not occupied habitat within the Rock Springs FO area to date. Only very rare occasional sightings of grizzly bears occur along the extreme northern edge of the FO area along the southwestern end of the Wind River Range, but they are likely young males seeking food resources or home ranges. There have been no depredations by bears on BLM land within the Rock Springs FO to date.

As grizzly bear populations expand outside the PCA, the proportion of livestock depredations occurring outside the PCA will likely increase, especially since there are more livestock grazing operations outside the PCA than inside.

Conservation measures will reduce the potential for adverse impacts from grazing, they include: educational material packets to be distributed to permittees, the proper disposition of livestock carcasses and the best management practice of phasing out of sheep grazing as the opportunity arises.
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Determination

Implementation of wildlife habitat management actions, as presented in the Green River RMP (1997), is **not likely to adversely affect** the grizzly bear due to **discountable effects.** This determination is based on the premise that grizzly bears have not occupied habitat within the Rock Springs FO area, the likelihood that grazing will result in depredation and removal or death of a grizzly bear is extremely low at this time, and the implementation of the grizzly bear conservation measures would currently reduce adverse affects to grizzly bears and their habitat.

Minerals Management

Management Action

The objective of minerals management is to maintain or enhance opportunities for mineral exploration and development while protecting other resource values. Public lands within the checkerboard areas of land ownership are open to mineral leasing and development with mitigation measures to be applied on a case-by-case basis.

Public lands within the checkerboard area are open to mineral leasing and development (to promote mineral resource recovery) with appropriate mitigation measures to be applied on a case-by-case basis. BLM-administered public lands not specifically closed are open to consideration for oil and gas leasing. Public lands closed to leasing include lands within the Red Creek ACEC and portions of the Wind River Front. The remainder of the public lands in the Rock Springs FO are open to consideration for oil and gas leasing with appropriate mitigation measures. Where maximum protection of resources is necessary, a No Surface Occupancy requirement will be imposed. Timing limitations (seasonal restrictions) will be applied when activities occur during crucial periods or would adversely affect crucial or sensitive resources. Such resources include, but are not limited to, soils during wet and muddy periods, crucial wildlife seasonal use areas, and raptor nesting areas. Where controlled use or restrictions on specific activities are needed but do not necessarily exclude activities, controlled surface use or surface disturbance restrictions will be designed to protect those resources. These restrictions will be placed on areas where resources could be avoided or adverse effects could be mitigated. To the extent that laws and regulations allow, the areas closed to oil and gas leasing will remain closed to leasing of oil and gas

unless drainage results in a loss of federal minerals through production on adjacent private or state lands (drainage).

Geothermal resources are open to leasing consideration in areas that are open to oil and gas leasing consideration. Areas closed to oil and gas leasing, are also closed to geothermal leasing. Exploration and development of geothermal resources are subject to application of mitigation requirements for surface disturbing activities and other activities in the same manner as they are applied to oil and gas exploration and development activities.

With appropriate limitations and mitigation requirements for the protection of other resource values, all BLM-administered public lands and Federal coal lands in the Rock Springs FO, except for those lands identified as closed, are open to coal resource inventory and exploration to help identify coal resources and their development potential.

The Coal Occurrence and Development Potential area is subject to continued field investigations, studies, and evaluations to determine if certain methods of coal mining can occur without having a significant long-term impact on wildlife, cultural, and watershed resources, in general, and on threatened and endangered plant and animal species and their essential habitats. Such investigations, studies and evaluations may be conducted on an as-needed or case-by-case basis in reviewing individual coal leasing or development proposals (e.g., mine plans) or, if opportunities or needs arise, area-wide studies may be conducted. These studies include keeping resource databases current (e.g., where existing raptor nests become abandoned or where new raptor nests become established, etc.), analysis of effects to wildlife and threatened and endangered species habitats and populations, and the cumulative effects of mining operations and other activities in the area. Consultation with other agencies (e.g., USFWS, WGFD), interested parties, and industry, will occur as needed or required.

Big game crucial winter ranges and birthing areas are open to further consideration for federal coal leasing and development with a provision for maintaining a balance between coal leasing and development, and adequate crucial winter range and birthing area habitats to prevent significant adverse impacts to important big game species. This will be accomplished through controlled timing and sequencing of federal coal leasing and development in these areas.

The greater Cooper Ridge and Elk Butte areas are open to further consideration for federal coal leasing and development, pending further study (about 25,368 acres). This study is for the purpose of defining the extent of any deer and antelope crucial winter range in the area and for determining if certain methods of coal mining can occur in the area without having a significant long-term impact on the deer and antelope herds.

For the protection of important rock art sites, other important cultural resource values, and important geologic and ecologic features, Federal coal lands with these important values are open to consideration for further leasing and development by subsurface mining methods only.

In general, cultural sites on federal coal lands are avoidance areas for surface disturbing activities. As avoidance areas, cultural sites are open to consideration for coal leasing and development with appropriate measures to protect these resources. Surface disturbing activities associated with such actions as surface coal mining methods, exploration drilling, construction and location of ancillary facilities, roads and other types of rights of way, etc., will be avoided, if possible. In cases where it is not possible to avoid these areas, intensive mitigation of the surface disturbing activities (primarily excavation and other data recovery measures) will be emphasized.

Active grouse leks (sage and sharptail grouse) and the area within a 1/4 mile radius of active leks are avoidance areas for surface disturbing activities and are open to consideration for federal coal leasing and development with the following requirements:

Surface disturbing activities associated with such actions as surface coal mining methods, exploration drilling, construction of roads and other types of rights of way, etc., will be avoided in these areas, if possible. In cases where it is not possible to avoid these areas, intensive mitigation of the surface disturbing activities will be emphasized.

Permanent and high profile structures, such as buildings, overhead powerlines, other types of ancillary facilities, etc., are prohibited in these areas.

During the greater sage-grouse mating season, surface uses and activities are prohibited between the hours of 8:00 p.m. and 8:00 a.m., within one quarter to one-half mile of the perimeter of active leks (i.e., those leks occupied by mating birds).

Wetland and riparian areas on Federal coal lands are avoidance areas for surface disturbing activities and are open to consideration for coal leasing and development with the following requirements: surface disturbing activities associated with such actions as surface coal mining methods, exploration drilling, construction of ancillary facilities, roads and other types of rights of way, etc., will be avoided in these areas, if possible. In cases where it is not possible to avoid these areas, intensive mitigation of the surface disturbing activities will be required.

Most of the Rock Springs FO is open to consideration of mineral material sales and activity except for areas where such activity would cause unacceptable impacts. As sale areas, community pits, and localized common use areas become established to provide for sales of mineral materials, such as moss rock and sand, their use and management will be in conformance with other resource objectives.

The mineral classification withdrawals in the Rock Springs FO (phosphate, coal, oil shale) will be revoked. In some areas, these classification withdrawals will remain in effect until replaced with an appropriate withdrawal for other, appropriate purposes (see Special Management Area section). Other withdrawals from mineral location will be pursued to provide protection to important resource values.

Most of the Rock Springs FO is open to consideration of geophysical activities except where off-road vehicle use or explosive charges would cause unacceptable impacts. Geophysical activities will generally be required to conform to the ORV designations and ORV management prescriptions for the FO. However, geophysical exploration has been and will continue to be routinely granted site-specific authorization for off-road vehicle use subject to appropriate limitations to protect various resources identified during analysis of proposed actions.

Generally, shotholes and vibroseis activity will be restricted or disallowed within 300 feet of historic and recreational trails; however, exceptions may be allowed if supported by a site-specific analysis. Geophysical travel through developed and semi-developed recreation sites is restricted to existing roads and trails. Geophysical exploration on sections of the Sweetwater River, identified as having potential for wild classification under the Wild and Scenic Rivers Act requirements, is limited to foot access and placement of surface cables. No motorized vehicle use is allowed in these areas. Surface charges may be allowed if a site specific analysis determines no adverse impacts would occur to river values.

Effects Analysis

The increase in human activity associated with oil and gas and mineral development may negatively impact grizzly bear behavior by causing bears to avoid or abandon these areas. Construction of roads, pads, or access by OHVs, and other facilities associated with development of mineral resources may alter or destroy existing terrestrial habitats that may be suitable grizzly bear foraging habitats or linkages between suitable habitats. Increased vehicle traffic associated with mineral and geology exploration, development, and operation may lead to increases in human-bear interactions, which are the largest source of bear mortality, and vehicle collisions. Additional impacts to grizzly bears are increased access into habitat by humans, increased fragmentation, associated noise and human activity, and associated hazards (such as chemical toxins).

Grizzly bears have been documented abandoning a den that was driven over by seismic vehicle, and as a consequence of nearby gravel mining (Harding and Nagy 1977). Grizzly bears have denned successfully at distances of 1.6 to 6.4 km from mining camps. Human activity, at or within 100 m of den sites, caused abandonment by grizzly bears in 12 of 18 dens (Swenson et al. 1997).

Very little, if any, minerals management activity in the Green River RMP planning area will occur in areas containing occupied grizzly bear habitat. A very limited amount of habitat occurs along the Bridger-Teton and Shoshone National Forest/BLM boundaries Rock Springs FO. Few grizzly bears make their way onto public lands in the FO and most are young males seeking food or trying to establish a home range. However, there are some small mining claims for locatable minerals in potential grizzly bear habitat, including infrequent gold mining. In addition, placers for recreational gold mining are being installed with the use of backhoes, screens, etc. The South Pass Historic Landscape ACEC is open to exploration and development of locatable minerals. These activities may result in disturbance to grizzly bears as well as the potential for improper garbage disposal and the presence of dog food, both of which can lead to human-bear interactions.

Conservation measures in place that will reduce adverse impacts include providing educational packets, planning of authorized activities with grizzly bears in mind, and implementation of strategies to reduce human-bear conflicts proactively.

Determination

Implementation of mineral management actions, as presented in the Green River RMP (1997), is **not likely to adversely affect** the grizzly bear due to **discountable effects**. This determination is based on the fact that minerals management activities occur outside of potential grizzly bear habitat in areas not typically frequented by grizzly bears, the lack of grizzly bears within the Green River RMP planning area, and those conservation measures in place to protect grizzly bears. The potential for increased human access and development within grizzly bear habitat due to implementation of minerals management actions is considered to be of low likelihood.

Off-Road Vehicle Management

Management Action

Areas for ORV rallies, cross-country races, and outings may be provided on a permit basis. Approximately 170,000 acres are closed to off-road vehicle use to protect naturalness and outstanding opportunities for solitude, or primitive and unconfined recreation. In areas designated as either “limited” to designated roads and trails or “limited” to existing roads and trails for off-road vehicle use, motorized

vehicles must stay on designated or existing roads and trails, unless allowed an exception by the authorized officer. This limitation applies to all activities involving motorized vehicles. Vehicular travel in crucial and important wildlife habitats and during crucial and important periods will be restricted seasonally, as necessary (strutting grounds, spawning beds, big game ranges, calving/fawning periods, etc.). The 500 acres associated with the Arabis pusilla portion of the Special Status Plants ACEC is closed to ORV use. In the remainder of the unit, ORV use is limited to designated roads and trails.

Effects Analysis

Much of the Rock Springs FO area is not subject to open ORV use. ORV use in the Rock Springs FO is best characterized as limited in frequency and intensity. OHV use on BLM lands is almost entirely on rough, 4-wheel drive roads receiving limited maintenance, so the possibility of a grizzly bear mortality by an OHV, would be extremely remote. Two-track roads occur throughout the mountainous areas where grizzly bears also roam, although not many actually occur in any grizzly bear habitat in the Rock Springs FO area. Most OHV incidents involving grizzly bears would occur when drivers leave improperly stored food in a vehicle and a bear would break into the vehicle to extract it.

ORV use is one of the main methods of access by humans into grizzly bear habitat, and can lead to disturbance to the bears by encouraging greater access in undeveloped habitat, causing some potential for the bears to avoid areas and reducing habitat availability. In the spring, as bears are coming out of hibernation, people may drive out on these roads to search for and collect antlers. Very limited antler gathering is done on foot, by horseback or by OHV along the southwestern portion of the Rock Springs FO area along the Wind River Range, which to date has not had any verified grizzly bear occurrences. Such encounters lead to human-caused mortality, which accounts for as much as 90% of recorded mortalities (Schwartz et al. 2003). ORV management and use in the Rock Springs FO is not expected to result in detrimental effects to grizzly bear behavior or denning, travel, or foraging habitats.

Determination

Implementation of the OHV management actions, as presented in the Green River RMP (1997), is n**ot likely to adversely affect** the grizzly bear, due to **discountable effects**. This determination is based on the rare occupancy of the Rock Springs FO area by grizzly bears, the very limited potential for OHV use to occur in grizzly bear habitat and disrupt foraging and movement, fragmenting habitat, and leading to human-bear encounters which may result in death for grizzly bears and grizzly bear conservation measures in place that will protect grizzly bears and their habitat from ORV users.

Recreation Resource Management

Management Action

Most public lands in the Rock Springs FO area are open to consideration of all individual, commercial, and competitive outdoor recreation uses. Camping in other riparian areas is allowed within 200 feet of water. Areas will be closed to camping if resource damage occurs. Special recreation permits will be considered on a case-by-case basis.

The Continental Divide National Scenic Trail, Continental Divide Snowmobile Trail, the Green River, and the Wind River Front are designated special recreation management areas (SRMAs) to place management emphasis on enhancing recreation opportunities and to focus management on areas with high recreation values or areas where there are conflicts between recreation and other uses. The remainder of the FO will be managed as an extensive recreation management area (ERMA).

The Wind River Front is a designated SRMA. The Wind River Front SRMA is all of the BLM-administered public lands that lie north of Township 27, east of Highway 191, northwest of Highway 28, and south of the Bridger-Teton and Shoshone National Forests. To facilitate management, the area is divided into two units. The boundary between the two units is the Continental Divide, and the eastern unit includes the Prospect Mountains.

The management objective emphasis for the Eastern Unit of the SRMA is for scenic, watershed, and wildlife values; recreation use; riparian and vegetation resources; and to provide protection to the Class I airshed in the Bridger Wilderness. Major facilities (including linear facilities) are generally prohibited in this unit. Some facilities could be allowed if analysis indicates that the management objectives for the unit could be met. The Eastern Unit of the SRMA is closed to mineral leasing. Surface disturbing activities must conform to unit management objectives.

The management objective emphasis for the Western Unit of the SRMA is for dispersed recreation uses such as camping, hunting, and fishing, with full consideration given to wildlife, cultural, vegetation, watershed values, and mineral development activity. This unit of the SRMA is open to mineral leasing. Transportation planning will be completed prior to allowing development in the unit. Linear facilities will be required to conform with the transportation plan and follow existing routes and previously disturbed areas. Surface disturbing activities are prohibited in the Dry Sandy Swales and the area within 1 mile of Dry Sandy Swales.

No new recreational programs or activities are anticipated or foreseen in the Rock Springs FO area.

Effects Analysis

People enjoy recreational activities, such as fishing, hiking, and hunting in montane areas inhabited by grizzly bears. This type of activity is on the increase throughout the western United States. Antler-hunting is also a popular recreational activity. Antler hunting, on foot and on horseback, typically occurs in the spring, after the antlers are shed and when grizzly bears are emerging from hibernation and in particular need of food resources vulnerable to disturbance. Hunters occasionally encounter grizzly bears while hunting and grizzly bears may approach a hunter harvested animal to consume the carcass or entrails. Human intrusions can displace or disturb grizzly bears. Anticipated impacts to grizzly bears may possibly be reduced somewhat, but the general increase in recreational use of BLM lands is likely to cause increases in the potential for bear-human conflicts, especially as bear populations also expand. The public lands are generally open (with limited exceptions) to use by the public for many uses, with recreational activities one of the primary uses. These recreational activities are allowed, by generally not regulated by the BLM (hunting, fishing and antler-gathering are regulated by the WGFD).

Conservation measures in place that will reduce adverse impacts include providing educational packets, installation of bear-resistant refuse containers in developed campgrounds, specifications for food and garbage handling in operation plans and special use permits, planning of authorized activities with grizzly bears in mind, and implementation of strategies to reduce human-bear conflicts proactively. No new recreational projects (campground or trail-head construction, signs, etc.) or activities are planned to take place in grizzly bear habitat..

Determination

Implementation of recreation resource management actions, as presented in the Green River RMP (1997), is **not likely to adversely affect** the grizzly bear due to **discountable effects.** This determination is based on the fact that the grizzly bear does not presently occur in the Rock Springs FO area, conservation

measures in place, and the fact that this activity will rarely if ever result in human/bear conflicts within this FO.

Special Status Species Management

Management Action

The objectives of special status species management are to:

- Maintain or enhance essential and important habitat and prevent destruction or loss of species' communities and important habitat;
- Provide opportunities for enhancing or expanding the habitat; and
- Prevent the need for listing these species as threatened or endangered.

Special Status species are those plant and animal species which are proposed for listing, officially listed (threatened and endangered), or candidates for listing as threatened or endangered by the Secretary of the Interior under the provisions of the Endangered Species Act; those listed or proposed for listing by a state in a category implying potential endangerment or extinction; and those designated by each BLM State Director as sensitive. The management actions for special status species apply only to BLM-administered public lands. Emphasizing management of these species on public lands and preventing these species from being listed as threatened or endangered would benefit all parties within the Rock Springs FO. When species are listed as threatened and endangered, by law they become more universally protected on private, and state-owned lands, in addition to federal lands.

Any management actions on potential habitat of special status plant species communities on federal land or on split estate lands (i.e., non-federal land surface ownership with BLM-administered federal minerals ownership) will require searches for the plant species prior to project or activity implementation to determine the locations of special status plant species and essential and/or important habitats. Special status plant populations are closed to activities that could adversely affect these species and their habitat. Management requirements in habitat areas may include prohibiting or limiting motorized vehicle use, surface uses, and explosive charges or any other surface disturbing or disruptive activity that may cause adverse effects to the plants.

Locations of special status plant species are open to consideration for mineral leasing with a no surface occupancy requirement. Should new special status plant species be identified, they will be managed under the same prescriptions described above for the known species. Management prescriptions for threatened and endangered species and proposed threatened and endangered species will be developed on a case-by-case basis in consultation with the U.S. Fish and Wildlife Service. Known locations of special status species will be evaluated on a case-by-case basis to determine if they meet the relevance and importance criteria to be considered for ACEC designation. Currently no special status plant species occur within grizzly bear habitat within the Green River planning area.

Effects Analysis

Management actions associated with special status plant species will not result in any detrimental impacts to grizzly bear behavior or habitat. These actions would likely result in positive effects to grizzly bear by limiting harassment and disturbance to denning, travel, and foraging areas. Currently no special status plant species occur within grizzly bear habitat within the Green River planning area.

Determination

Implementation of special status plant species management actions, as presented in the Green River RMP (1997), will have **no effect** on the grizzly bear.. This determination is based on the premise that currently no special status plant species occur within grizzly bear habitat within the Green River planning area, and if grizzly bears did occur within these areas, the potential that these actions will limit the harassment and displacement of grizzly bears and human/bear conflicts, and minimize adverse effects to denning, travel, and foraging habitats would be a secondary beneficial affect.

Vegetation Management

Management Action

Riparian habitat will be maintained, improved, or restored to provide wildlife and fish habitat, improve water quality, and enhance forage conditions. Where possible, acquisition of additional riparian area acreage will be pursued to enhance riparian area management. The minimum management goal for riparian areas is to achieve proper functioning condition. This is considered the first priority for vegetation management. Desired plant communities must meet the criteria for proper functioning condition.

Desired plant community objectives for upland and riparian areas will be established for the FO through individual site-specific activity and implementation planning and as updated ecological site inventory data become available. All activity and implementation plans will incorporate desired plant community objectives.

Prescribed fire will generally be the preferred method of vegetation manipulation to convert stands of brush to grasslands and to promote regeneration of aspen stands and/or shrub species.

Vegetation manipulation projects will be conducted to reach multiple use objectives and will involve site-specific environmental analysis and coordination. All vegetation manipulation projects will involve site-specific environmental analysis; coordination with affected livestock operators and the WGFD; and will include multiple use objectives for resource uses including livestock grazing, wildlife, recreation, and watershed. Vegetation treatments will be designed to be compatible with special status plant species. For example, spraying, burning, mechanical disturbances, etc. will not be allowed to adversely affect these plant species.

Riparian habitat in proper functioning condition is the minimum acceptable status or level within the Rock Springs FO. Under this RMP, 75 % of the riparian areas should, within 10 years, have activity and implementation plans in various states of implementation that will allow riparian areas to achieve or maintain proper functioning condition. Site-specific activity and implementation plans will be used to identify methods to achieve or maintain proper functioning condition in riparian areas.

The next step beyond basic proper functioning condition of riparian areas is the achievement of desired plant communities. Desired plant community objectives will be developed on riparian areas based on any of several different methods, including Ecological Site Inventory, comparison areas (comparison areas would have similar soils, aspect, vegetation, and precipitation), and estimating the structural component that can be achieved in the short term. Desired plant community objectives can be short and long term.

While the desired plant community establishes objectives for the riparian area or upland plant community, the Desired Future Condition establishes goals for entire watersheds (or larger blocks of land) involving all activities and resources.

Effects Analysis

Actions associated with vegetation management, including increased human presence and use of machinery or fire to implement management actions, may occasionally have a detrimental influence on grizzly bear behavior. The potential for these effects is low. Riparian habitats are most likely to experience vegetation management actions. These habitats are diverse and widespread throughout the FO and therefore, isolated disturbances resulting from vegetation management practices are not expected to limit the availability or quality of riparian habitats. The use of prescribed fire as vegetation manipulation to convert stands of brush to mixed brush and grasslands are very unlikely to cause disturbance to grizzly bears because this is not their primary habitat. The promotion of aspen stands and/or shrub species regeneration may benefit grizzly bears by increasing the amount and quality of sedges and berries as food resources.

Determination

Implementation of the vegetation management actions, as presented in the Green River RMP (1997), is n**ot likely to adversely affect** the grizzly bear, due to **discountable effects**. This determination is based on the unlikely potential for these actions to harass or displace grizzly bears or occur in core grizzly bear habitat, and the strong likelihood that vegetation management actions will benefit grizzly bears in the long run by enhancing their food resources and cover and hibernation sites.

Riparian Management

Management Actions

Riparian habitat in proper functioning condition is the minimum acceptable status or level within the Rock Springs FO Area. Under the Green River RMP (1997), 75 percent of the riparian areas should, within 10 years, have activity and implementation plans in various states of implementation that will allow riparian areas to achieve or maintain proper functioning condition.

The Rock Springs FO uses BLM Technical Reports on Proper Functioning Condition (TR 1737-9 and TR 1737-11) to guide the effort in classifying or rating all lotic (moving water) and lentic (still water) riparian areas.

Site specific activity and implementation plans will be used to identify methods to achieve or maintain proper functioning condition in riparian areas.

Methods applied where grazing occurs include (but are not limited to) fencing, establishment of pastures and exclosures, off-site water development, off-site salt or mineral supplement placement, timing and seasons of use, establishment of allowable use levels for key riparian species, herding, grazing systems, etc. The Green River RMP (1997) contains examples of methods that would be considered. Methods applied where surface disturbing activities occur include (but are not limited to) distance restrictions, timing constraints, sediment containment and control design, and reclamation practices.

The next step beyond basic proper functioning condition of riparian areas is the achievement of desired plant communities. Desired plant community objectives will be developed on riparian areas based on any of several different methods, including Ecological Site Inventory, comparison areas (comparison areas would have similar soils, aspect, vegetation, and precipitation), and estimating the structural component that can be achieved in the short term. Desired plant community objectives can be short and long term. Desired plant community objectives take into consideration all uses of the riparian area which can include livestock grazing, wildlife, recreation, fisheries, flood control, etc.

While the desired plant community establishes objectives for the riparian area or upland plant community, the Desired Future Condition establishes goals for entire watersheds (or larger blocks of land) involving all activities and resources. Achieving proper functioning condition and a desired plant community are integral steps in the process of establishing and achieving the Desired Future Condition of an area.

See other resource management prescriptions in this document for other prescriptions and guidance that may apply to riparian management activities.

Effects Analysis

Actions associated with riparian management include increased human presence and use of machinery or fire to implement management actions that may detrimentally influence grizzly bear behavior briefly while they are being conducted. The potential for these effects is low and the intensity is not expected to have lasting detrimental effects. Implementation of vegetation management actions are likely to result in positive effects to grizzly bears by increasing sedges and berries in riparian areas.

Determination

Implementation of the riparian management actions, as presented in the Green River RMP (1997), is **not likely to adversely affect** the grizzly bear, due to **beneficial effects**. This determination is based on the premise that riparian management in and of itself will not produce and surface disturbing activities and long-term results of riparian management would generally benefit the grizzly bears by creating or supplementing available food resources.

Visual Resource Management

Management Action

The objectives for management of visual resources are to: 1) maintain or improve scenic values and visual quality; and 2) establish priorities for managing the visual resources in conjunction with other resource values. Visual resource classes will be retained or modified to enhance other resource objectives such as those for cultural resource and recreation management, wild horse viewing, and special management areas. Projects and facilities will be designed to meet the objectives of the established visual classifications and appropriate mitigation will be included. Facilities (either in place or new), including linear rights-of-way, etc., must be screened, painted, or designed to blend with the surrounding landscape.

Management actions on public lands with a Class II visual resource management classification must be designed to blend into and retain the existing character of the natural landscape. Management actions on

public lands with a Class III visual resource management classification must be designed to partially retain the existing character of the landscape.

Management actions on public lands with a Class IV visual resource management classification could result in major modification of the character of the landscape.

All surface disturbing actions, regardless of the visual resource management class, are required to be mitigated to reduce visual impacts. This will be achieved by designing and locating the disturbances in a manner that most closely meets the minimum degree of contrast acceptable for the visual resource management class.

Management actions in areas classified as rehabilitation areas will be designed to reclaim and improve visual resource values to achieve a higher classification.

The scenic values along Highway 28 within Fremont County will be protected. All proposed lands actions and other activities within view of the highway will be evaluated for impacts and will require mitigation to protect the scenic and historic values of this area. Class II visual resource management classifications on public lands will be retained.

The public lands along all other major highways in the planning area will be managed under their respective visual resource management classifications.

Suitable wild horse herd viewing area(s) may be developed to enhance public viewing of horses. Viewing areas plus a 1/2 mile distance surrounding them will be closed to long-term or permanent intrusions and surface disturbing activities that could interfere with opportunities to view horses (e.g., structures, mineral activities, powerlines, roads, etc.). Short-term intrusions that will blend with the landscape or will benefit the intent of the wild horse herd viewing areas will be considered on a case-by-case basis.

All activities that could be viewed from the Fontenelle Reservoir will be designed to be subordinate to the landscape.

Effects Analysis

Actions associated with visual resource management will not directly impact grizzly bear behavior or habitats. The exclusion of some activities and structures from designated view sheds may have a secondary positive effect of limiting disturbance of habitats that may be suitable for grizzly bears.

Determination

Implementation of VRM actions, as presented in the Green River RMP (1997), is **not likely to adversely affect** the grizzly bear, due to possible **beneficial effects**. This determination is based on the fact that implementation of the visual resources management involves no actual ground disturbing activities and therefore no anticipated disturbance to grizzly bear habitat, grizzly bears have not occupies the Rock Springs FO area, no increased human presence, and likely will provide beneficial affects due to limiting activities in particular viewsheds that grizzly bears inhabit.

Watershed/Soils Management

Management Action

Management in the Green River RMP (1997), will emphasize:

- Reduction of sediment, phosphate, and salinity load in drainages where possible;
- Maintaining and improving drainage channel stability; and
- Restoring damaged wetland areas.

Surface disturbing and construction activities (e.g., mineral exploration and development activities, pipelines, powerlines, roads, recreation sites, fences, wells, etc.) that could adversely affect water quality, and wetland and riparian habitat, will avoid the area within 500 feet of or on 100-year floodplains, wetlands, or perennial streams and within 100 feet of the edge of the inner gorge of intermittent and large ephemeral drainages. Proposals for linear crossings in these areas will be considered on a case-by-case basis.

Effects Analysis

Management of soil and water resources is not expected to detrimentally impact grizzly bear behavior or suitable denning or foraging areas. The activities associated with this management action are infrequent, small in scale, and not likely to occur in grizzly bear habitat. Implementation of soil and water resource management actions may maintain or improve the condition of some habitats and therefore may result in beneficial effects to foraging or linkage habitats.

Soils Management: The protection of trees, shrubs, and ground cover from damage during construction activities will be required. Backfill will be required to be replaced in a similar sequence and density to preconstruction conditions. The restoration of normal surface drainage will be required. Any mulch used will be free of mold, fungi, or noxious weed seeds. The grantee or lessee will be responsible for the control of all noxious weed infestations on surface disturbances.

Recognized roads will be used when the alignment is acceptable for the proposed use. Generally, roads will be required to follow natural contours; be constructed in accordance with acceptable standards; and be reclaimed to BLM standards. On newly constructed roads and permanent roads, the placement of topsoil, seeding and stabilization will be required on all cut and fill slopes. No unnecessary side-casting of material on steep slopes will be allowed. Reclamation of abandoned roads will include requirements for reshaping, recontouring, resurfacing with topsoil, installation of water bars, and drill seeding on the contour. Stripped vegetation will be spread over the disturbance for nutrient recycling, where practical.

On well pads and facility locations, special attention will be given to parts of the surface use plan covering reclamation. This plan will include objectives for successful reclamation covering; soil stabilization, plant community composition, and desired vegetation density and diversity. The development of facilities on slopes between 25 and 40 % will be restricted unless soil erosion controls can be ensured and adequate revegetation is expected. No surface occupancy will be allowed on slopes greater than 40 %. Abandoned sites must be satisfactorily rehabilitated by the lessee.

Existing road locations will be used where possible to minimize surface disturbances. Where possible, clearing of pipeline and communication line rights of way will be accomplished with the least degree of disturbance to topsoil. Where topsoil removal is necessary, it will be stockpiled and respread over the disturbance after construction and backfilling are completed. Vegetation removed from the right of way

will also be required to be respread to provide protection, nutrient recycling, and a natural seed source.

Water Management: Activities authorized under water resources management may include implementation of watershed plans, identification of heavy sediment loads, monitoring and treating soil erosion, evaluating and restricting surface development activities, and monitoring water quality.

Monitoring of streams and rivers for water quality would be very small and short term in nature (a few hours or less). Monitoring would be done with small, hand held kits on site, or water samples would be collected and analyzed in a laboratory off site. Other activities would be to measure stream channelization and evaluate streambank and riparian conditions. Access for these activities would be primarily by vehicle (pickup truck, etc.) and monitoring would be done by personnel walking into and along streams and rivers. Permanent in-stream flow monitoring and continuous water quality analysis gauging stations would be small structures that would require some construction to build (backhoe, concrete truck or a lift to place a pre-built structure) and some disturbance to streams or rivers during construction and occasional maintenance activities.

Other smaller scale water resource activities would include plugging abandoned wells to prevent contamination or cross contamination of water aquifers and reclaiming (recontouring and revegetating) the associated drill pad. This activity would consist of pouring concrete into the well casing to plug the well, requiring: vehicles, concrete trucks, concrete pumper trucks, personnel, etc. Reclamation of the drill pad after plugging would require the use of loaders, backhoes, graders or bulldozers, seeding equipment, and trucks and trailers to haul the equipment. Instream flow control structures such as drop structures (made of logs, rock baskets, or concrete); weirs; revetments (streambank erosion control structures (trees, logs, etc.)); rip-rap (rocks, boulders, logs, etc.); placing gravel or concrete in streams for crossings and fish spawning; culverts, all requiring equipment and personnel to construct. Equipment might include: vehicles, backhoes, bulldozers, skid loaders, concrete trucks, etc. Planting of riparian plant species to reduce erosion and sediment movement along watercourses would be done either using hand held tools (shovels, augers, or just jamming stems into the ground (willows, cottonwoods, etc.)) or with smaller equipment like motorized augers, backhoes, tree spades, etc.).

The above types of actions associated with watershed management would take place very rarely, if at all within any grizzly bear denning or foraging habitat and would likely have minimal or no negative impacts on grizzly bear behavior or their denning or foraging habitats. The activities associated with this management action are infrequent, small in scale, and not likely to occur in grizzly bear habitat. Actions associated with watershed management are likely to improve riparian vegetation and habitat for grizzly bears and their food resources.

Determination

Management of soil and water resources is not expected to detrimentally impact grizzly denning, travel, or foraging areas. Actions associated with soil and water resource management will be limited in both time and extent, and are unlikely to occur at any particular locale, including grizzly bear habitat. Implementation of these resource management actions may maintain or improve the condition of some habitats and therefore may result in beneficial effects to suitable denning, travel, and foraging habitats.

Soils Management: Implementation of soil resource management actions, as presented in the Green River RMP (1997), is **not likely to adversely affect** the grizzly bear, due to **discountable effects**. This determination is based on the conservation measures in place that will preclude any adverse effects to the grizzly bear or its habitat and will minimize or remove impacts to grizzly bear habitat. Management of soil resources is not expected to detrimentally impact grizzly bear behavior or suitable denning or

foraging areas. The activities associated with this management action are infrequent, localized or small in scale, and generally not likely to occur in grizzly bear habitat. Implementation of soil resource management actions may maintain or improve soils condition of some grizzly bear habitats and the use of native plants for re-vegetation will benefit grizzly bears, resulting in secondary beneficial effects to foraging or other habitat parameters.

Water Management: Implementation of soil resource management actions, as presented in the Green River RMP (1997), is **not likely to adversely affect** the grizzly bear, due to **discountable effects**. This determination is based on the conservation measures in place that will preclude adverse effects to the grizzly bear or its habitat and will minimize or remove impacts to grizzly bears or their habitat. Management of water resources is not expected to detrimentally impact grizzly bear behavior or suitable denning or foraging areas. The activities associated with this management action are infrequent, localized or small in scale, and generally not likely to occur in grizzly bear habitat. Implementation of water resource management actions may maintain or improve the condition of some grizzly bear habitats and therefore may result in secondary beneficial effects to foraging habitats and are likely to improve riparian vegetation and habitat for grizzly bears and their food resources.

Wild Horse Management

Management Action

Wild horses will be managed within five Wild Horse Herd Management Areas. These are the White Mountain, Divide Basin, Adobe Town, Salt Wells, and Little Colorado Wild Horse Herd Management Areas. An appropriate management level of 1,105 to 1,600 wild horses will be maintained among the five herd management areas.

The site specific activity plans for the five wild horse herd management areas in the FO will be maintained to conform with RMP objectives for vegetation management and implemented. Specific habitat objectives for herd management areas will be developed. Water developments will be provided if necessary, to improve herd distribution and manage forage utilization. Water developments on crucial winter ranges could be allowed if they conform with wildlife objectives and do not result in adverse impacts to the crucial winter range. Wild horse herd management will be directed to ensure that adequate forage (about 17,400 AUMs) will be available to support appropriate management levels in the herd units and that herds maintain appropriate age, sex, and color ratios. Selective gathering programs will be implemented in each of the wild horse herd management areas. Gathering plans will be prepared for removal of excess horses from inside and outside the wild horse herd management areas. Other resource uses will be maintained and protected consistent with those resource management objectives while maintaining viable, healthy wild horse herds and appropriate herd management levels.

Effects Analysis

Actions associated with wild horse management are expected to be limited to occasional herding, corralling, and transporting of horses. These actions are not expected in any way to detrimentally impact the behavior or habitat of the grizzly bear, as they do not occur in or near grizzly bear habitat.

Determination

Implementation of wild horse management, as presented in the Green River RMP (1997), will have **no effect** on the grizzly bear. This determination is based on the fact that grizzly bears would be unlikely to travel through the open terrain where the wild horse areas occur and be adversely affected by actions associated with management of wild horses.

Wild and Scenic Rivers Management

Management Actions

It was determined that one river/stream segment managed on public lands within the Green River RMP (1997) meet the Wild and Scenic River (WSR) eligibility and suitability factors and are within potential grizzly habitat and should be managed to maintain or enhance their outstandingly remarkable values for any possible future consideration for inclusion in the National Wild and Scenic River Suitability (NWSRS) designation. The one WSR segment is the Sweetwater River (9.7 river miles). The suitable determination is based on the unique qualities of the diverse public land resources and their regional and national significance, making them worthy of future consideration for addition to the NWSRS.

Interim management practices for the public land WSR parcel will focus on maintaining or enhancing the outstandingly remarkable scenic, recreational, and historic values and the relatively unmodified character of the area in a near-natural setting. Any activities that would conflict with this objective are prohibited. Some intrusions on the public lands involved may be allowed if they are not readily evident or are short-lived, and do not adversely affect maintaining the scenic classification.

Effects Analysis

The designation of WSR status is simply a designation, and tempers or stipulates from a WSR resource viewpoint, specific protections or management of other BLM authorized actions. WSR classifications, in and of themselves, do not place on-the-ground projects or ground disturbing activities. Because of their isolation, rugged character, and naturalness, designation as a Wild and Scenic River will not be likely to have negative impacts on wildlife. At the time of designation, further consideration of details will be given to potential impacts to grizzly bears.

Generally, WSR status is a beneficial impact on wildlife and plant species. Grizzly bear habitat that falls within a WSR segment would generally be beneficially impacted by the more restrictive criteria applied to those stream/river segments, including protecting spawning fish habitat or berry producing plants that provide a food source for grizzly bears and security habitat. Actions associated with wild and scenic river management are not expected to detrimentally influence grizzly bear behavior or impact suitable denning, travel, and foraging habitats. These actions will likely result in positive, beneficial effects by maintaining or enhancing habitats suitable for grizzly bears.

Determination

Implementation of wild and scenic rivers management actions, as presented in the Green River RMP (1997), is **not likely to adversely affect** the grizzly bear, due to **beneficial effects**. This determination is based on the potential that WSR status may maintain, protect or improve habitats used by grizzly bears.

Wilderness Management

Management Action

The objective of wilderness management is to retain the wilderness quality and manage the Wilderness Study Areas (WSAs) in the Rock Springs FO in accordance with the Interim Management Policy and Guidelines for Lands Under Wilderness Review, until Congress acts on designation.

Discretionary uses within or adjacent to WSAs will be reviewed to ensure they do not create conflicts with management and preservation of wilderness values. Should Congress designate the WSAs in the FO

(partially or wholly) as wilderness, the management of the designated areas will be for wilderness values, either as described in the appropriate wilderness EIS or as directed by Congress. Should Congress not designate areas (partially or wholly) as wilderness, the management of the nondesignated areas will be in accordance with the approved Green River RMP or as otherwise directed by Congress. Eleven wilderness study areas (WSAs) occur in the Green River RMP planning area.

Effects Analysis

None of the eleven WSAs are in or near grizzly bear habitat. Management actions associated with wilderness management will not result in detrimental impacts to grizzly bear behavior or habitats. These actions will likely result in positive effects to bears by limiting harassment and disturbance to denning, travel, and foraging areas.

Determination

Implementation of wilderness management, as presented in the Green River RMP (1997), will have **no effect** on the grizzly bear. This determination is based on the premise that no grizzly suitable habitat occurs in or near any WSAs in the Green River RMP planning area.

Wildlife Management

Management Action

To the extent possible, suitable wildlife habitat and forage will be provided to support the Wyoming Game and Fish Department (WGFD) 1989 Strategic Plan objectives. Changes within WGFD planning objective levels will be considered based on habitat capability and availability and site specific analysis. High value wildlife habitats will be maintained or improved by reducing habitat loss or alteration and by applying appropriate distance and seasonal restrictions and rehabilitation standards to all appropriate activities.

Needed special management and riparian management exclosures will be developed and/or maintained, and exclosure plans will be implemented for enhancement of wildlife habitat. Exclosures are closed to livestock grazing use and no AUMs in these areas will be available for livestock use. Aquatic, wetland, and riparian habitat are not suitable for disposal unless opportunities exist for land exchange for lands of equal or better value.

Habitat management plans will be developed, where needed, particularly for highly developed and disturbed areas to mitigate wildlife habitat losses. Plans could include habitat expansion efforts, T&E species reintroduction, and population goals and objectives. Such actions as preparing transportation plans and reclaiming roads, seeding, and vegetation enhancement (vegetation treatments, fencing), water developments, and reclamation actions to reduce the amount of disturbance, will be considered. Areas identified for consideration of such plans include, but are not limited to, the Little Colorado Desert (including the Fontenelle II and Blue Forest units), Nitchie Gulch, Wamsutter Arch, Patrick Draw, and Cedar Canyon areas.

Management activities at present are limited to water development projects for big game at lower elevations, inventories and monitoring, and exclosures.

Effects Analysis

Management actions associated with wildlife habitat management may influence grizzly bear behavior by causing them to avoid or abandon habitats experiencing active management projects. Potential impacts are dependent on several factors including the number of people involved with each field effort, the time of year, duration of field activities, use of heavy machinery versus hand tools, and type of habitat affected. The implementation of these actions will likely have positive effects by maintaining or improving existing habitat conditions that will benefit grizzly bear and their habitat. Overall very little activity is occurring under this management prescription.

Determination

Implementation of wildlife habitat management actions, as presented in the Green River RMP (1997), is **not likely to adversely affect** the grizzly bear due to **insignificant effects.** Wildlife management actions will be designed to enhance grizzly bear habitat, grizzly bear conservation measures will protect grizzly bears and their habitat during project construction, grizzly bears have minimally occupied the Rock Springs FO area, and many of the projects are designed to benefit grizzly bears by maintaining and improving habitat for the bears and/or their food resources.

Special Designation Management Areas

Management Action

Several Areas of Critical Environmental Concern (ACEC) are identified in the Rock Springs FO. These ACECs are each managed to achieve specific goals and objectives unique to the resource values identified within each ACEC. A detailed description of specific management goals and objectives for each ACEC is available in the Green River RMP (BLM 1997).

Effects Analysis

This program analysis is for the designation and management of ACECs. Management actions associated with ACECs that could result in detrimental impacts to grizzly bear behavior or habitat, such as allowed minerals development, will be analyzed under that management action. There are no impacts to the grizzly bear in the establishment of an ACEC. There is the possibility that some management action could occur, specific to an ACEC that is not addressed by the existing program management plans. Implementation of ACEC management involves no actual ground disturbing activities and primarily involves a narrow, focused outlook on management of the ACEC providing limited uses and restricting most activities from either occurring or tempering them so that they are less disruptive in nature. The small candidate plant ACEC (R101W, T29N) is on the south end of the Wind River Range and would be the only ACEC to be close to grizzly bear habitat. It is extremely unlikely that a grizzly bear would ever find its way into this ACEC.

Determination

Implementation of ACEC management actions, as presented in the Green River RMP (1997), will have **no effect** on the grizzly bear. This determination is based on the premise that no grizzly suitable habitat occurs in or near any ACECs, and grizzly bears have not occupied any ACECs in the Green River RMP planning area. Implementation of ACEC management involves no actual ground disturbing activities and therefore no anticipated disturbance to grizzly bear habitat; the low likelihood that a management action, specific to an ACEC, would occur that did not fit within the existing program management plans; no increased human presence; and likely will provide beneficial affects due to limiting activities in particular

ACECs that grizzly bears might inhabit. However, the small candidate plant ACEC on the south end of the Wind River Range is extremely unlikely to provide any habitat for grizzly bears.

Summary of Determinations

The following is a summary of the effects determinations developed for each of the Green River RMP (1997) management actions.

TABLE 6 SUMMARY OF THE DETERMINATIONS FOR THE GREEN RIVER RMP

Resource	***Determination***
Air Quality	No effect
Cultural, Natural History, and Paleontological Resources	No effect
Fire	Not likely to adversely affect, due to insignificant effects
Forest and Woodlands	Not likely to adversely affect, due to insignificant effects
Hazardous Materials	Not likely to adversely affect, due to discountable effects
Lands and Realty	Not likely to adversely affect, due to discountable effects
Access	Not likely to adversely affect, due to discountable effects
Livestock Grazing	Not likely to adversely affect, due to discountable effects
Minerals	Not likely to adversely affect, due to discountable effects
Off-Road Vehicles	Not likely to adversely affect, due to discountable effects
Recreation	Not likely to adversely affect, due to discountable effects
Special Status Plant Species	No effect
Vegetation	Not likely to adversely affect, due to beneficial effects
Riparian	Not likely to adversely affect, due to beneficial effects
Visual Resources	Not likely to adversely affect, due to beneficial effects
Watershed/Soils	Not likely to adversely affect, due to discountable effects
Wild Horses	No effect
Wild and Scenic Rivers	Not likely to adversely affect, due to beneficial effects
Wilderness	No effect
Wildlife	Not likely to adversely affect, due to insignificant effects
Special Designation Areas	No effect

Cumulative Effects

Cumulative effects include future State, tribal, local, or private actions that are reasonably certain to occur in the Rock Springs FO and that might affect the grizzly bear and its habitat. Existing and proposed activities on non-federal lands that could affect grizzly bears or their habitats include:

- Coal mine operations
- Coalbed methane
- Transmission lines
- Seismic exploration
- Trona (soda ash) mining
- A proposed power plant
- Proposed wind farms
- Livestock grazing on private lands
- Municipal dump expansions
- Housing developments

Most of these activities are situated away from potential grizzly bear habitat. However, certain components of these projects, if completed, could directly or indirectly affect grizzly bears or their habitats. Implementation of the Green River RMP would not change any potential effects to the grizzly bear that may result from current non-federal actions.

GRASS CREEK RMP – WORLAND FIELD OFFICE

The Record of Decision and Approved Resource Management Plant (RMP) for the Grass Creek Resource Area of the Worland BLM Office was signed in September 1998 (BLM 1998). The resource management plan (RMP) provides the management direction for approximately 968,000 acres of public land surface and 1,171,000 acres of federal mineral estate. The Worland Field Office occurs in the north-central portion of Wyoming, occupying portions of Big Horn, Hot Springs, Park, and Washakie counties.

Environmental Baseline

This section presents a summary of the known grizzly bear distribution, and an analysis of the effects of past and ongoing human activities (including Federal, State, tribal, local and private) that may influence grizzly bears and their habitats in the Grass Creek RMP. The distribution of grizzly bears extends into the Worland FO for 16,842 acres (Schwartz et al. 2002) (**Map 6**). There is periodic use, primarily in the spring and fall, along the Absaroka Front foothills east of the Shoshone National Forest. This area includes the upper reaches of Owl, Cottonwood, Grass, and Gooseberry drainages. BLM has approximately 20-50% of the ownership in this region (Stephens 2004).

Existing Impact Minimization Measures

Most RMPs contain restrictions or measures that are incorporated as stipulations on use permits. These measures cover a broad range of protective features (protection of ungulate calving grounds, protection of raptors, greater sage-grouse, wet soils, etc.) that may provide some benefit to grizzly bears. The following section presents measures included in the Grass Creek RMP that may directly or indirectly minimize impacts to the grizzly bear or its habitat:

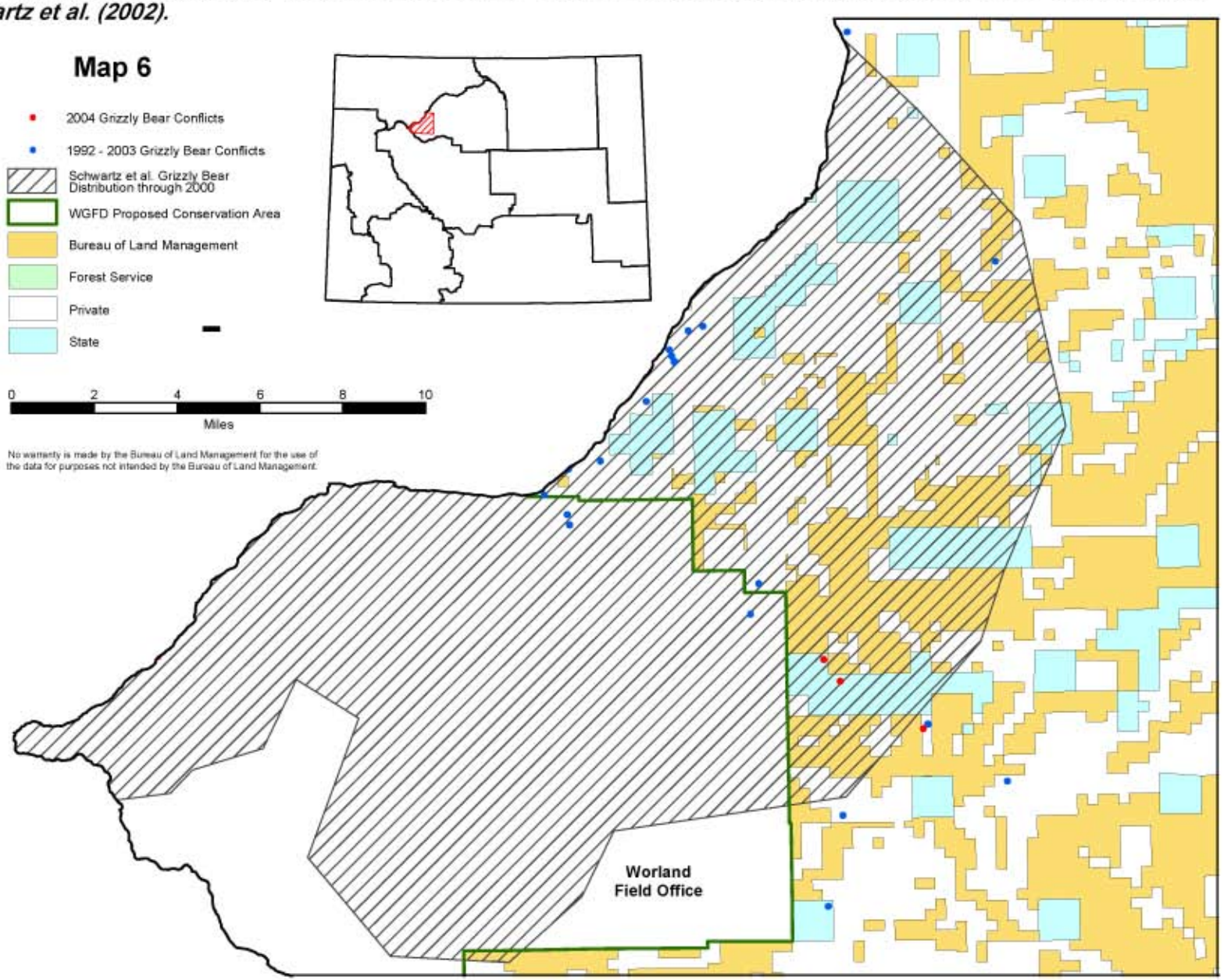
(a) “The BLM will participate with the FWS in the evaluation and designation of critical habitat for threatened or endangered species on BLM-administered lands. If proposed surface-disturbing or disruptive activities could affect these species, the BLM will consult with the FWS as required by the Endangered Species Act” (BLM 1998, p. 22).

(b) “No activities or surface use will be allowed on that portion of the authorization area identified within (legal description) for the purpose of protecting (e.g., sage/sharp-tailed grouse breeding grounds, and/or other species/activities) habitat” (BLM 1998, Appendix 3, p. 60).

(c) “Portions of the authorized use area legally described as (legal description), are known or suspected to be essential habitat for (name) which is a threatened or endangered species. Prior to conducting any onsite activities, the lessee/permittee will be required to conduct inventories or studies in accordance with BLM and U.S. Fish and Wildlife Service guidelines to verify the presence or absence of this species. In the event that (name) occurrence is identified, the lessee/permittee will be required to modify operational plans to include the protection requirements of this species and its habitat (e.g., seasonal use restrictions, occupancy limitations, facility design modifications)” (BLM 1998, Appendix 3, p. 60).

(d) “The following conditions would be evaluated during the review process. The degree to which any of these conditions apply to a proposed ownership adjustment may or may not make the lands suitable for sale, exchange, transfer, or acquisition - Tracts identified as potential recovery habitat for federally listed endangered, threatened, candidate, or emphasis species” (BLM 1998, Appendix 4, p. 75).

Map 6 Grizzly Bear Distribution 1990-2000 and Primary Conservation Area in the Worland Field Office. Adapted from Schwartz et al. (2002).



Analysis of Proposed Management Actions and Effects

The RMP includes descriptions of each management prescription applied within the FO. The following text briefly summarizes the activities and any specific mitigation measures associated with each management prescription. The Wyoming BLM Mitigation Guidelines for Surface Disturbing and Disruptive Activities will be applied to all surface-disturbing or disruptive activities. As described previously in this document, these guidelines include timing limitations and "no surface occupancy" restrictions that will minimize potential effects to grizzly bear and their habitats. Refer to the Grass Creek RMP for a complete explanation of each prescription.

Air Quality Management

Management Actions

No specific management actions are presented with this program. However, actions conducted under other resource programs, including fire or mining, will be conducted in a manner so as to avoid violation of the Wyoming and National ambient air quality standards.

Effects Analysis

Actions related to air quality management will result in no impacts to grizzly bear behavior, denning habitat, or foraging habitat. The actions associated with air quality management are extremely small in scope, of short duration, and unlikely to occur in grizzly bear habitat. Actions related to air quality management on other activities will not result in negative impacts to grizzly bears or their habitat. These management actions will likely result in maintaining or improving air quality conditions throughout the FO, which may have secondary benefits to grizzly bears.

Determination

Implementation of air quality management actions, as presented in the Grass Creek RMP (1998), will have **no effect** on the grizzly bear, due to the fact that this management activity is not anticipated to impact grizzly bear behavior, or foraging or denning habitat.

Cultural, Paleontological, and Natural History Resources Management

Management Action

Protect and preserve important cultural, paleontological, and natural history resources. Expand opportunities for scientific and educational uses of these resources. Protect and study rock art in the Meeteetse Draw and Coal Draw areas. Expand public education and interpretation in these areas, if appropriate, following additional consultation with Native Americans and the preparation of environmental analyses.

Site-specific inventories for cultural resources will be required before the start of surface-disturbing activities. Adverse effects on significant resources will be mitigated, or the resources themselves will be avoided by surface-disturbing activities.

Sites listed on the National Register of Historic Places will be appropriately protected. Any violations of the Archaeological Resources Protection Act will be investigated.

The BLM's consultation with the Advisory Council for Historic Preservation and the State Historic Preservation Office will be consistent with a cultural resources programmatic agreement signed in 1995.

Rock art, as well as other prehistoric and historic archaeological sites and districts associated with specific time periods or cultures, will be managed for scientific, public, and sociocultural use. General areas will be managed for research, with emphasis on interpreting former ecosystems. Specific sites or areas will be preserved for future study and use. Near rock art the use of heavy equipment to construct fire lines and the use of chemical and dye retardants will be restricted or prohibited.

The Legend Rock Petroglyph Site will be managed for public education in cooperation with the state of Wyoming.

A cooperative management agreement will be pursued with private landowners to enhance and conserve the Legend Rock Petroglyph Site.

In the Meeteetse Draw and Coal Draw areas, interpretive sites will be developed to highlight rock art, making use of scenic overlooks and interpretive signs and trails, if warranted, following additional consultation with Native Americans and the preparation of environmental analyses.

Additional public access will be pursued in the Meeteetse Draw area, if warranted, following consultation with Native Americans.

To protect Native American cultural values, the construction of rights-of-way will be avoided on public lands in the Meeteetse Draw area.

Portions of the town of Gebo and adjacent coal mining areas on public land will be managed for preservation and interpretation of cultural and historic values. Management could include actions like development of an interpretive road loop.

Other cultural resource interpretive sites will be developed, making use of scenic overlooks, signs, and walking trails. Sites could include historic trails such as the Thermopolis to Meeteetse Trail, the Fort Washakie to Red Lodge Trail, the Mexican Pass Trail, and the Jim Bridger Trail.

As appropriate, specific sites on public lands will be managed for their traditional Native American cultural values.

Historic resources in ten oil and gas fields will be managed for scientific and public use. The purpose will be to improve knowledge of the historic significance of the fields and facilitate the approval of future development and reclamation activities. The following fields will be included: Hamilton Dome, Grass Creek, Little Buffalo Basin, Walker Dome, Enos Creek, Golden Eagle, Gooseberry, Hidden Dome, Little Grass Creek, and Gebo.

Adverse effects will be avoided on public lands and resource values listed in National Park Service inventories of possible National Natural Landmarks. These lands and resources include paleontological and scenic values at Tatman Mountain and in the badlands north of Wyoming Highway 431.

Important paleontological resources will be managed for scientific and public use.

Potential effects on paleontological resources will be considered in site-specific environmental analyses before the authorization of surface-disturbing activities. As appropriate, site-specific inventories will be required where significant fossil resources are known or anticipated to occur.

Closing lands or restricting uses to protect paleontological resources will be evaluated case by case.

Surface-disturbing and disruptive activities associated with the construction and use of interpretive sites and facilities will be subject to appropriate mitigation developed through use of mitigation guidelines.

Effects Analysis

Actions associated with cultural resource and paleontological management are sparsely distributed across the landscape, are very small in physical extent, and involve very little disturbance to the area. Frequently, the goal is to leave the area intact with no disturbance. These activities are unlikely to occur in grizzly bear habitat.

Determination

Implementation of cultural resource management actions, as presented in the Grass Creek RMP (1998), is **not likely to adversely affect** the grizzly bear, due to **discountable effects**. This determination is based on the premise that cultural surveys implemented for other projects could lead to people working in occupied grizzly bear habitat, creating some possibility for conflict, although these activities are very unlikely to occur in or near grizzly bear habitat. Behavior guidelines for humans in occupied bear country and application of the grizzly bear conservation measures should minimize the potential for such conflicts.

Fire Management

Management Action

The objectives of fire management are to cost-effectively protect life, property, and resource values from undesired wildland fire, and use prescribed and wildland fire to achieve multiple-use management goals. The Worland District Fire Management Plan will be maintained and revised, as necessary, and implemented. The plan will address fire management on a watershed or landscape scale, in order to meet desired plant community and other resource management objectives identified in this RMP and in future activity plans. The use of minimal impact suppression techniques will restrict fire vehicles to existing roads and trails on public lands near the Legend Rock Petroglyph Site and within 0.25 mile of the high-water mark at Wardel Reservoir, to protect riparian habitat and a great blue heron rookery. Other travel restrictions will be considered in future activity planning. The construction of fire lines will be avoided if natural fire breaks can be used.

The use of bulldozers generally is prohibited in riparian and wetland areas, in areas of significant cultural resources or historic trails, and in important wildlife birthing areas. Fire retardant drops by air tankers are prohibited within 200 feet of water. The use of heavy equipment to construct fire lines and the use of chemical and dye retardants will be restricted or prohibited near rock art. Prescribed and wildland fire will be used to accomplish resource management objectives. When prescribed fires are planned, and when wildland fires are managed, the potential for habitat fragmentation will be evaluated. Actions that would

disrupt or divide habitat blocks, other than temporarily will be avoided. When fire and mechanical or biological treatments can be used effectively to manage vegetation, they will be preferred over chemical treatments. Surface-disturbing and disruptive activities associated with all types of fire management will be subject to appropriate mitigation developed through use of the mitigation guidelines.

Effects Analysis

Fire management actions, particularly actions associated with wildfire suppression and prescribed fire, whether planned or unplanned, have the potential to occur in habitats occupied by grizzly bears. Fire exclusion alters the natural mosaic of successional stages that promote a mixture of forest openings and structural diversity on the landscape level. This limits the function of fire in perpetuating certain vegetation conditions, such as the development of early successional shrubs that can provide berry food resources for bears. Burns resulting from wildfires in this century are important producers of fruiting shrubs which provide food energy for the bears (IGBC 1986). Control of such natural fires would reduce these potential future foods for grizzly bears. Roads constructed in association with fire suppression, if not revegetated, can lead to increased access into higher altitude sites by humans, the main cause of mortality for grizzly bears (Schwartz et al. 2002).

Prescribed burning can lead to an increase in early seral stages that promote shrub development. This can provide food resources for bears. Some grizzlies appear to derive much of their energy from the fruits of shrubs, including huckleberry and buffaloberry.

Prescribed burning, construction of firelines, use of off-road vehicles, and use of hand tools and heavy equipment all have the potential for disturbing grizzly bears by causing them to abandon or avoid particular habitats temporarily. However, these disturbances are anticipated to be temporary and of relatively short duration. They could pose a problem if they were located at a concentrated food resource, especially as bears are eating large quantities of food to put on fat for hibernation (hyperphagia).

Conservation measures in place that will reduce adverse impacts include providing educational packets, specifications for food and garbage handling on operation plans and special use permits, and planning of authorized activities with grizzly bears in mind. Prescribed fires are conducted in the Worland FO area in aspen stands that may occur in grizzly habitat. Those prescribed fires are intended to improve grizzly bear habitat by rejuvenating aspen and to provide additional forage for ungulate species that might be utilized as a food resource for grizzly bears.

Determination

Implementation of fire management actions, as presented in grass Creek RMP (1998), is **not likely to adversely affect** the grizzly bear, due to **insignificant effects**. This determination is based on the low potential for activities associated with wildfire suppression and the limited prescribed burning to substantively reduce the potential for grizzly bears to utilize the landscape and find food and denning sites and the conservation measures in place to protect grizzly bears and their habitat. Fire suppression affecting the development of berry producing shrubs and the creation of temporary roads during fire suppression activities are anticipated to be infrequent. Other disturbances are minor and temporary in nature. In the event of a wildfire and immediate suppression is required in grizzly bear habitat, as many conservation measures as possible will be applied that do not hinder safety or property protection. The USFWS will be contacted and emergency consultation will take place at the earliest possible time if grizzly bear habitat is affected or impacted.

Forestland Management

Management Action

The objective of forestland management is to maintain and enhance the health, productivity, and biological diversity of forest and woodland ecosystems. Road construction for harvesting timber or for conducting forest management practices is prohibited on slopes greater than 25 %, unless site-specific environmental analyses demonstrate that adverse effects can be mitigated or avoided. Skidder-type yarding is prohibited on slopes greater than 45 %. Other logging operations on slopes steeper than 45 % are limited to technically, environmentally, and economically acceptable methods such as cable yarding. Emphasis for silvicultural practices and timber harvesting will be placed on areas where forest health is the primary concern (including forests that are infested by mistletoe or mountain pine beetles). A variety of forest silvicultural and cutting methods will be used such as clearcutting, shelterwood, individual tree selection, and various regeneration treatments.

In important seasonal wildlife habitat areas, clearcuts generally will not exceed 300 yards (approximately 15 acres) in any direction. Wildlife escape cover will be maintained by keeping a corridor of trees around, or on one or more sides of, roads, clearcuts, parks, wetlands, and wallows. Trees and snags will not be cut if they provide important habitat for cavity or snag-nesting wildlife. When harvests are planned, the potential for habitat fragmentation will be evaluated. Actions that would disrupt or divide habitat blocks, other than temporarily will be avoided. Slash disposal will be tailored to promote reforestation, minimize erosion, and allow ease of movement for wildlife. Forest products will be sold from limber pine and juniper woodland areas to meet public demand for posts, poles, firewood, and specialty wood consistent with wildlife habitat requirements. Harvesting firewood on public lands along desert waterways and the Bighorn and Greybull Rivers is prohibited. Prescribed and wildland fire will be used to improve aspen stands, regenerate old age forest stands, manage for desired successional stages and forest species composition, and rehabilitate harvest areas. Surface-disturbing and disruptive activities associated with all types of forest management will be subject to appropriate mitigation developed through use of the mitigation guidelines.

Effects Analysis

Forestland management actions occur in coniferous habitats, which are the same areas that can be used by grizzly bears. Although there is the potential for these activities to be conducted during winter when bears are hibernating, this is often impractical due to the complications of snow cover and severe weather conditions.

Timber harvest, especially selection and group selection cuts and small clearcuts with no dozer piling of slash and no mechanical soil scarification, leads to openings in which successional processes produce important amounts of herbs and shrubs bearing fruits eaten by grizzlies. Production of grizzly food sources in these cuts is often greater than in uncut sites in the same habitat types. This indicates that certain timber harvest practices can be used in some forest stands to provide habitat diversity, and that habitat quality can probably be increased or enhanced by creating openings producing grizzly food (IGBC 1986). Thinning and seedcuts would open up the canopy and produce more diverse and productive vegetation types, and would increase early spring foraging opportunities.

New roads created for timber harvest activities, and not immediately revegetated, can lead to an increase in the number of people using an area and to potential interactions with grizzlies, depending on the access to the created roads. Controlling access via locked gates could avoid this problem. Bear-human interactions are one of the highest sources of mortality for bears (Schwartz et al. 2003). Grizzly bears are sensitive to disturbance associated with roads, and may avoid areas within 2.5 miles of roads (Mattson et

al. 1986). Such displacement from quality habitats may prevent dispersal, force bears to use poorer quality sites, and cause social disruption (Kasworm and Manley 1989, McLellen 1989). Road avoidance may result in higher mortality and lower fecundity of displaced individuals (Mattson et al. 1986). However, forested habitat on BLM lands mainly provided cover for grizzly bears and do not provide the significant resources known from the areas inside the PCA.

In summary, forestry management can lead to more human intrusion and some loss of cover but those are the only potential adverse affects likely on BLM land. A number of conservation measures apply to forestland management, including planning of authorized activities with grizzly bears in mind, providing educational packets, food and garbage safeguards, no whitebark pine cutting,. These protective measures will substantially reduce impacts to grizzly bears from forest management activities.

Determination

Implementation of forest management actions, as presented in the Grass Creek RMP (1998), is **not likely to adversely affect** the grizzly bear, due to **insignificant effects**. This determination is based on the limited amount of forest management activities that occur and conservation measures that can be incorporated into proposed forest management projects to avoid the potential for adverse affects to grizzly bears.

Hazardous Materials and Wastes Management

Management Action

Protect public health and safety and the environment on public lands, emphasize waste reduction and pollution prevention for BLM-authorized and initiated actions, comply with applicable federal and state laws, prevent waste contamination from any BLM-authorized actions, minimize federal exposure to the liabilities associated with waste management on public lands, and integrate hazardous materials and waste management policies and controls into all BLM programs.

For BLM-authorized activities that involve hazardous materials or their use, precautions will be taken to guard against releases into the environment. In the event of a release of hazardous materials on the public land, appropriate warnings will be provided to potentially affected communities and individuals, and precautions will be taken against public exposure to contaminated areas.

Sale, exchange, or other transfer of public lands on which storage or disposal of hazardous substances has been known to occur will require public notification of the type and quantity of the substances.

Public lands contaminated with hazardous wastes will be reported, secured, and cleaned up according to federal and state laws, regulations, and contingency plans, including the federal Comprehensive Environmental Response, Compensation, and Liability Act. Parties responsible for contamination will be liable for cleanup and resource damage costs, as prescribed by law.

Surface-disturbing and disruptive activities associated with all types of hazardous materials and waste management will be subject to appropriate mitigation developed through use of the mitigation guidelines described in the Grass Creek RMP (1998).

Effects Analysis

Emergency responses to hazardous materials, hazardous waste, and other hazards occur very infrequently, are limited in scale, and typically restricted to roadways or other areas of human activity, that grizzly bears will likely avoid.

Determination

Implementation of hazardous materials management actions, as presented in the Grass Creek RMP (1998), is **not likely to adversely affect** the grizzly bear, due to **discountable effects**. This determination is based on the extremely low likelihood that releases of hazardous materials and subsequent response actions will occur in or destroy suitable grizzly bear habitat. In the event a hazardous materials cleanup is required in grizzly bear habitat, as many conservation measures as possible will be applied that do not hinder safety or property protection. The USFWS will be contacted and emergency consultation will take place at the earliest possible time if grizzly bear habitat is affected or impacted.

Lands and Realty Management

Management Action

The BLM will pursue public access on important roads and trails identified in the BLM transportation plan. The transportation plan will be updated as necessary and implemented to provide access to large blocks of public land or to smaller parcels of land having high public values. The BLM will maintain or improve existing opportunities for public access in the upper Grass Creek area. Emphasis will be placed on acquisition of access to public lands on the Bighorn and Greybull rivers to enhance recreational opportunities and wildlife management. The BLM will pursue a combination of motorized and nonmotorized vehicle access in the Enos Creek, the upper Cottonwood Creek, and the upper South Fork of Owl Creek areas of the Absaroka Mountain foothills. Goals are to provide vehicle access to the South Fork of Owl Creek to improve fishing and other recreational opportunities and to acquire foot and horseback access to the Shoshone National Forest. All access will be limited seasonally and to specific routes as appropriate. The BLM will pursue limited motorized vehicle access on roads in the Red Canyon Creek area consistent with an overall objective to emphasize primitive recreation.

Access to specific areas may be closed or restricted to protect public health and safety. Before access is upgraded in the vicinity of important cultural, paleontological, natural history, wildlife habitat, or other sensitive resources, the security and protection of these resources will be carefully considered.

Before any public lands are exchanged or sold, or before the BLM would attempt to acquire any other lands in the planning area, the BLM will consult with county commissioners and other representatives of local government in the affected areas. Other affected and interested citizens will also be given opportunities to comment. Leases might be used to develop the lands as wildlife food and cover areas. Proposals for sale, exchange, or transfer of public land will be subject to appropriate criteria. Priority will be given to landownership adjustments that meet community needs. The preferred method of adjusting landownership is exchange. Approximately 33,700 acres of public lands that are difficult or uneconomic to manage will have priority consideration for public sale, Recreation and Public Purposes Act lease or patent, exchange, or transfer of jurisdiction to another agency. Proposals for the sale, exchange, or transfer of other public lands in the planning area will be considered on a case-by-case basis. Exchanges will be pursued to improve management of important seasonal wildlife habitat areas in the upper portions of Owl, Cottonwood, Gooseberry, and Grass creeks. Exchanges will be pursued along Gooseberry Creek, the upper portions of Cottonwood and Grass creeks, the Bighorn and Greybull rivers, and on lands where

other riparian areas occur. The purposes for these exchanges will be to consolidate public land, enhance public access, and improve public land manageability. A cooperative management agreement will be pursued with private landowners to enhance and conserve the Legend Rock Petroglyph Site. Cooperative agreements or land exchanges to improve wild horse management will be pursued on about 12,000 acres of privately-owned land.

A locatable mineral withdrawal will be pursued in the Upper Owl Creek ACEC on about 16,300 acres of public land to protect scenic values, wildlife habitat, soil, and water.

Effects Analysis

Management of existing access or acquisition of new access to lands administered by BLM is not expected to alter grizzly bear behavior. Lands under new administration may result in positive effects to grizzly bear habitats by securing these lands and managing them under BLM provisions.

Lands and realty management actions associated with exchanges are not expected to negatively impact grizzly bear behavior or habitats. Current BLM land holdings would be evaluated for unique characteristics prior to disposal, including suitability and use by grizzly bears. Lands identified as important for grizzly bears would not likely be available for disposal. Lands not under BLM jurisdiction that are suitable or occupied grizzly bear habitats may be targeted for acquisition and subsequent management by BLM. Such acquisitions would provide benefits to grizzly bear habitats that may not be afforded under non-federal ownership.

Corridors are designated and managed to accommodate power lines, communication towers, pipelines, and roads. Roads can be a source of fragmentation of grizzly bear habitat resulting in reduced mobility and reduced ability to utilize otherwise secure habitat. Roads can be a source of increased mortality of grizzly bears because they can facilitate the opportunity for human access and result in an increase in human-bear interactions, a major source of mortality for bears (Schwartz et al. 2003). However, in the past 15 years in the Grass Creek Planning Area, there has been great success at closing roads to motor vehicles and/or reclaiming roads on BLM lands. The trend has been towards a decrease in roads, with notable declines in the past 20-50 years (Stephens 2004).

Disposal or transfer of public lands with potential grizzly bear habitat through Desert Land Entry, public sale, exchange, Wyoming indemnity selection, or Recreation and Public Purposes (R&PP) leases or patents may affect the bear's ability to utilize suitable habitat and travel corridors linking desirable habitats. The overall goal of field office staff is to maintain lands that contain potential habitat for the grizzly bear and any transfer of acreage would be closely scrutinized for its potential as habitat. It is very unlikely that grizzly bear habitat would be sold or transferred out of BLM jurisdiction.

The acquisition of access easements as well as Rights-of-way/leases include powerlines, communication sites, pipelines, ditches and canals, roads (includes stream crossings), well pads, reservoirs, buried telephone and fiber optic lines, wind power generation farms and facilities, compressor stations and other facilities, temporary use permits, and fence re-vegetation sites and designate, cancel, or change stock trail driveways activities may cause short-term behavioral avoidance of these areas during construction or maintenance operations and would have an insignificant effect on the grizzly bear. The establishment of withdrawals, acquisition of conservation easements, and road closures/rehabilitation would close areas from certain activities that could have a negative effect on the grizzly bear; closing areas creates undisturbed habitat for grizzly bear.

Actions associated with classifications and multiple use are not expected to impact grizzly bear behavior or habitats.

Conservation measures in place that will reduce adverse impacts include providing educational packets, planning of authorized activities with grizzly bears in mind, and implementation of strategies to reduce human-bear conflicts proactively.

Determination

Implementation of land resource management actions, as provided in the Grass Creek RMP (1998) is **not likely to adversely affect** the grizzly bear due to **discountable effects**. This determination is based on the low potential for an increase in roads given that the trend in the past 20-50 years has been towards a decrease in roads or for disposal or transfer of public land because grizzly bear habitat is carefully safeguarded in the Worland FO; and the premise that land resource management activities occur in areas outside of habitat typically used by grizzly bears; the conservation measures in place to protect grizzly bears; the limited potential for an increase in roads with added human-bear interactions; issuance of right-of-way and leases for utility transportation corridors, ditches and canals, and roads; temporary use permits; and fencing of re-vegetation sites to disturb grizzly bear behavior, affect their ability to use suitable habitat and travel corridors between habitats; and increases in direct mortality as a consequence of interactions with humans. The potential for increased human access and development within grizzly bear habitat at the higher elevations favored by the bears and need for a right-of-way for access, etc., is considered to be of very low likelihood, as land resource management activities typically occur outside of grizzly bear habitat in the Grass Creek RMP (1998) planning area.

Access Management

Management Actions

The BLM will pursue public access on important roads and trails identified in the BLM transportation plan. The transportation plan will be updated as necessary and implemented to provide access to large blocks of public land or to smaller parcels of land having high public values. The BLM will maintain or improve existing opportunities for public access in the upper Grass Creek area. Emphasis will be placed on acquisition of access to public lands on the Bighorn and Greybull rivers to enhance recreational opportunities and wildlife management. The BLM will pursue a combination of motorized and non-motorized vehicle access in the Enos Creek, the upper Cottonwood Creek, and the upper South Fork of Owl Creek areas of the Absaroka Mountain foothills. Goals are to provide vehicle access to the South Fork of Owl Creek to improve fishing and other recreational opportunities and to acquire foot and horseback access to the Shoshone National Forest. All access will be limited seasonally and to specific routes as appropriate. The BLM will pursue limited motorized vehicle access on roads in the Red Canyon Creek area consistent with an overall objective to emphasize primitive recreation.

Access to specific areas may be closed or restricted to protect public health and safety. Before access is upgraded in the vicinity of important cultural, paleontological, natural history, wildlife habitat, or other sensitive resources, the security and protection of these resources will be carefully considered.

Effects Analysis

Management of existing access or acquisition of new access to lands administered by BLM is not expected to alter grizzly bear behavior. Lands under new administration may result in positive effects to grizzly bear habitats by securing these lands and managing them under BLM provisions.

Corridors are designated and managed to accommodate power lines, communication towers, pipelines, and roads. Roads can be a source of fragmentation of grizzly bear habitat resulting in reduced mobility and reduced ability to utilize otherwise secure habitat. Roads and other linear access are significant factors in habitat deterioration and increased mortality of grizzly bears (Schwartz et al. 2003). Roads increase the opportunity for human access and result in an increase in human-bear interactions, a major source of mortality for bears.

The issuance of ROWs and leases (utility transportation corridors), specifically ROWs for ditches, canals, and roads may affect the grizzly bear if the associated construction is within the vicinity of travel corridors or areas between different seasonal foraging sites. This may cause short-term behavioral avoidance of these areas by the grizzly bear due to the presence of human activity. The issuance of temporary use permits, and construction activities associated with fencing of revegetation sites require an analysis to determine if they are present in potential habitat areas and travel corridors and would have similar short-term avoidance impacts.

The acquisition of access easements as well as Rights-of-way/leases include powerlines, communication sites, pipelines, ditches and canals, roads (includes stream crossings), well pads, reservoirs, buried telephone and fiber optic lines, wind power generation farms and facilities, compressor stations and other facilities, temporary use permits, and fence re-vegetation sites and designate, cancel, or change stock trail driveways activities may cause short-term behavioral avoidance of these areas during construction/ maintenance operations and would have an insignificant affect on the grizzly bear. The establishment of withdrawals, acquisition of conservation easements, and road closures/rehabilitation would close areas from certain activities that could have a negative affect on the grizzly bear; closing areas creates undisturbed habitat for grizzly bear.

Conservation measures in place that will reduce adverse impacts include providing educational packets, planning of authorized activities with grizzly bears in mind, and implementation of strategies to reduce human-bear conflicts proactively.

Determination

Implementation of access management actions, as presented in the Grass Creek RMP (1998), is **not likely to adversely affect** the grizzly bear, due to **insignificant effects**. This determination is based on the extremely low likelihood that access actions will occur in or destroy suitable grizzly bear habitat, disturb grizzly bear behavior, or affect their ability to use suitable habitat and travel corridors between habitats, due to the application of grizzly bear conservation measures.

Livestock Grazing Management

Management Action

Important riparian habitat areas on public lands will be fenced to control the duration and timing of livestock use, if the condition of these areas is declining and other types of grazing management do not produce a favorable response. Access to water for use by livestock and wildlife will be provided. Surface-disturbing and disruptive activities associated with all types of range project construction and maintenance will be subject to appropriate mitigation developed through use of the mitigation guidelines. Table B-2 lists the livestock grazing allotments within the Worland FO (Grass Creek RMP (1998)) with overlapping grizzly bear habitat.

Effects Analysis

The Guidelines for Livestock Grazing Management on BLM land in Wyoming apply (see Standards for healthy rangelands and guidelines for livestock grazing management for public lands administered by the Bureau of Land Management in the state of Wyoming). Grazing permit stipulations require that livestock carcasses be transported ½ mile from areas of human activity, that human and prepared livestock and pet food, beverages, and garbage be handled and disposed in a manner so as to make it unavailable to bears, and garbage and uneaten horse feed may not be left or buried.

Grizzly bear issues related to livestock grazing have generally involved depredations of livestock by grizzly bears, disposal of livestock carcasses, storage of human food and stock feed, and grizzly bear habituation, food conditioning and mortality risk associated with these activities. Interaction between livestock and grizzly bears has typically led to relocation or removal of grizzly bears. This is particularly true on domestic sheep allotments. In the case of sheep allotments, conflicts have been much more prevalent and more difficult to resolve without eventually phasing out sheep grazing in the PCA (ICST 2003). Grazing leases for BLM contain stipulations that sheep must be removed in the event of problems with grizzly bears.

Potential adverse effects of livestock grazing on individual bears would result from management control actions associated with livestock conflicts; and illegal, accidental, or defensive taking by grazing permittees/employees and other members of the public resulting from depredation conflicts.

The Grizzly Bear Management Guidelines recommend control actions in response to livestock depredations (outside of Management Situation 1) that involve a two-strike policy for males and a three-strike policy for females before consideration for removal. However, the proposed Response Protocol for Nuisance Grizzly Bear Actions Outside the Recovery Zone in Wyoming gives the Wyoming Game and Fish Department greater latitude to remove a bear from the population. Thus, livestock grazing will likely result in more bears being taken out of the population outside the PCA when livestock depredations occur.

Illegal, accidental, or defensive taking by grazing permittees and/or their employees may occur because of trying to protect their livestock or in self-defense in some situations (for example, a herder shooting a bear attacking livestock). Risk also exists for the taking of bears by public agency personnel, permittee personnel, or members of the public as a result of accidentally encountering bears feeding on livestock carcasses.

As grizzly bear populations expand outside the PCA, the proportion of livestock depredations occurring outside the PCA will likely increase, especially since there are more livestock grazing operations outside the PCA than inside. Grazing allotments within grizzly bear habitat will very likely have livestock depredation.

Conservation measures in place will reduce the potential for adverse impacts from grazing, but will not eliminate them; they include educational material packets to be distributed to permittees, the phasing out of sheep grazing as the opportunity arises, and the proper disposition of livestock carcasses.

Determination

Implementation of livestock grazing management actions, as presented in the Grass Creek RMP (1998), is

likely to adversely affect the grizzly bear. This determination is based on the likelihood or inevitability that livestock grazing within grizzly bear habitat will result in depredation on livestock and removal or death of a grizzly bear.

Minerals Management

Management Action

The coal screening process (as identified in 43 CFR 3420.1-4) has not been conducted in the planning area. Interest in the exploration for, or the leasing of, Federal coal will be handled case by case.

The entire planning area (about 1,171,000 acres of BLM-administered mineral estate) is open to oil and gas leasing consideration. About 20,200 acres of BLM-administered mineral estate are open to leasing consideration with a "no surface occupancy" stipulation.

All coal and phosphate withdrawals and classifications will be terminated and the lands involved will be returned to operation of the 1872 Mining Law. Except for specific areas identified as closed, the planning area is open to the staking of mining claims and operation of the mining laws for locatable minerals. A locatable mineral withdrawal will be pursued on about 1,200 acres of public land to protect recreation and wildlife values on tracts of public land along the Bighorn River. A locatable mineral withdrawal will be pursued on public lands within 0.5 mile of the Legend Rock Petroglyph Site and on public lands in the immediate vicinity of the rock art in the Meeteetse Draw area near Thermopolis. A locatable mineral withdrawal will be pursued in the Upper Owl Creek ACEC on about 16,300 acres of public land to protect scenic values, wildlife habitat, soil, and water.

Except for specific areas identified as closed, the planning area is open to consideration for sale of mineral materials (for example, sand and gravel) and related exploration and development activities. No topsoil will be sold. The Legend Rock Petroglyph Site and public lands within 0.5 mile are closed to the sale of sand and gravel and other mineral materials. Public lands in the Meeteetse Draw Rock Art Area are closed to the sale of sand and gravel and other mineral materials. The sale of sand and gravel will be avoided on public lands adjoining the Greybull and Bighorn rivers.

All parts of the planning area that are open to consideration for oil and gas leasing, exploration, and development are open to consideration for geophysical exploration subject to appropriate mitigation. On lands where surface-disturbing activities are prohibited or on lands closed to off-road vehicle (ORV) use, casual use geophysical exploration will be allowed.

Effects Analysis

The increase in human activity associated with oil and gas and mineral development may negatively impact grizzly bear behavior by causing bears to avoid or abandon these areas. Construction of roads, pads, or access by s, and other facilities associated with development of mineral resources may alter or destroy existing terrestrial habitats that may be suitable grizzly bear foraging habitats or linkages between suitable habitats. Increased vehicle traffic associated with mineral and geology exploration, development, and operation may lead to increases in human-bear interactions, which are the largest source of bear mortality, and vehicle collisions. Additional impacts to grizzly bears are increased access into habitat by humans, increased fragmentation, associated noise and human activity, and associated hazards (such as chemical toxins).

Grizzly bears have been documented abandoning a den that was driven over by seismic vehicle, and as a consequence of nearby gravel mining (Harding and Nagy 1977). Grizzly bears have denned successfully at distances of 1.6 to 6.4 km from mining camps. Human activity, at or within 100 m of den sites, caused

abandonment by grizzly bears in 12 of 18 dens (Swenson et al. 1997).

Very little, if any, minerals management activity in the Grass Creek RMP planning area will occur in areas containing occupied grizzly bear habitat. A limited amount of habitat occurs along the Shoshone National Forest/BLM boundary of the Worland FO. A few grizzly bears make their way onto public lands in the FO and most are young males seeking food or trying to establish a home range..

Conservation measures in place that will reduce adverse impacts include providing educational packets, planning of authorized activities with grizzly bears in mind, and implementation of strategies to reduce human-bear conflicts proactively.

Determination

Implementation of mineral management actions, as presented in the Grass Creek RMP (1998), is **not likely to adversely affect** the grizzly bear due to **discountable effects**. This determination is based on the fact that minerals management activities occur outside of potential grizzly bear habitat in areas not typically frequented by grizzly bears and those conservation measures in place to protect grizzly bears. The potential for increased human access and development within grizzly bear habitat at the higher elevations favored by the bears due to implementation of minerals management actions is considered to be of low likelihood.

Off-Road Vehicle Management

Management Action

The objective for ORV management within the Grass Creek RMP (1998) is to maintain or enhance opportunities for ORV use while avoiding adverse effects of vehicle travel on other resource values. Unless otherwise specified, ORV use on BLM-administered public land is limited to existing roads and trails. Motorized vehicle use is prohibited on wet soils and on slopes greater than 25 %, when and where unnecessary damage to vegetation, soils, or water quality would result. Over-the-snow vehicles are subject to the same requirements and limitations as all other ORVs until activity planning specifically addresses their use. An open area for ORV "play" will be established west of Worland on about 900 acres. On areas designated as closed or limited to designated roads and trails, the off-road use of a motorized vehicle on public lands will be prohibited unless the use is otherwise authorized by a permit or license. Signs will be posted and maps or brochures will be published to explain this requirement.

Effects Analysis

Much of the Grass Creek planning area is closed to motorized traffic year long. ORV use in the Worland FO area is best characterized as limited in frequency and intensity. OHV use on BLM lands is almost entirely on rough, 4-wheel drive roads receiving limited maintenance, so the possibility of a grizzly bear mortality by an OHV, would be extremely remote. Two-track roads occur throughout the mountainous areas where grizzly bears also roam, although not many actually occur in grizzly bear habitat in the Lander FO. Most OHV incidents involving grizzly bears would occur when drivers leave improperly stored food in a vehicle and a bear would break into the vehicle to extract it.

ORV use is one of the main methods of access by humans into grizzly bear habitat, and can lead to disturbance to the bears by encouraging greater access in undeveloped habitat, causing some potential for the bears to avoid areas and reducing habitat availability. In the spring, as bears are coming out of

hibernation, people may drive out on these roads to search for and collect antlers. This may lead to human-bear encounters. Such encounters lead to human-caused mortality, which accounts for as much as 90% of recorded mortalities (Schwartz et al. 2003). Collection of antlers in the Grass Creek RMP (1998) planning area is very limited. ORV management and use in the Grass Creek planning area is not expected to result in detrimental effects to grizzly bear behavior or denning, travel, or foraging habitats.

Determination

Implementation of OHV management actions, as presented in the Grass Creek RMP (1998), is **not likely to adversely affect** the grizzly bear due to **insignificant effects.** This determination is based on the very limited potential for OHV use to occur in grizzly bear habitat and disrupt foraging and movement, fragmenting habitat, and leading to human-bear encounters which may result in death for grizzly bears and grizzly bear conservation measures in place that will protect grizzly bears and their habitat from ORV users.

Recreation Management

Management Action

The objective of recreation management is to enhance opportunities for primitive recreation in some areas while increasing visitor services in other areas to meet needs for more developed forms of recreation. Special Recreation Management areas are designated on BLM-administered public lands in the Absaroka Mountain foothills, Badlands, and Bighorn River areas. Only the Absaroka Mountain foothills contains grizzly bear habitat. All other public lands will be managed as an Extensive Recreation Management Area. Recreational uses of public lands along the Bighorn River for fishing, hunting, and float boating are managed under the Bighorn River Habitat and Recreation Area Management Plan, this area does not contain grizzly bear habitat. Emphasis will be placed on acquisition of access to public lands on the Bighorn and Greybull Rivers to enhance recreational opportunities and wildlife management. Some grizzly bear habitat occurs along the Greybull River. Surface-disturbing and disruptive activities associated with the construction, maintenance, and use of roads, campgrounds, interpretive sites, and other recreational facilities will be subject to appropriate mitigation developed through use of the mitigation guidelines.

Effects Analysis

People enjoy recreational activities, such as fishing, hiking, and hunting in montane areas inhabited by grizzly bears. This type of activity is on the increase throughout the western United States. Antler-hunting is also a popular recreational activity. Antler hunting, on foot and on horseback, typically occurs in the spring, after the antlers are shed and when grizzly bears are emerging from hibernation and in particular need of food resources vulnerable to disturbance. Very limited antler collecting occurs within the Grass Creek RMP planning area. Hunters occasionally encounter grizzly bears while hunting and grizzly bears may approach a hunter harvested animal to consume the carcass or entrails. Human intrusions can displace or disturb grizzly bears. Anticipated impacts to grizzly bears may possibly be reduced somewhat, but the general increase in recreational use of BLM lands is likely to cause increases in the potential for bear-human conflicts, especially as bear populations also expand. The public lands are generally open (with limited exceptions) to use by the public for many uses, with recreational activities one of the primary uses. These recreational activities are allowed, by generally not regulated by the BLM (hunting, fishing and antler-gathering are regulated by the WGFD).

Conservation measures in place that will reduce adverse impacts include providing educational packets,

installation of bear-resistant refuse containers in developed campgrounds, specifications for food and garbage handling in operation plans and special use permits, planning of authorized activities with grizzly bears in mind, and implementation of strategies to reduce human-bear conflicts proactively. No new recreational projects (campground or trail-head construction, signs, etc.) or activities are planned to take place in grizzly bear habitat.

Determination

Implementation of recreation management actions, as presented in the Grass Creek RMP (1998), is **not likely to adversely affect** the grizzly bear due to **insignificant effects.** This determination is based on the premise that increases in human recreational use of BLM lands have occurred in recent years and will inevitably continue to increase, resulting in the increased potential for human-bear conflicts resulting in the potential harm to grizzly bears, but that the grizzly bear conservation measures will protect grizzly bears and their habitat from recreation uses, projects, or activities and human-bear interactions by recreationists on BLM lands are extremely infrequent to non-existent.

Vegetation Management

Management Action

As appropriate, buffer zones for treatment of weeds will be provided along streams, rivers, lakes, and riparian areas, including riparian areas along ephemeral and intermittent streams. Treatments will avoid raptor and upland game bird nesting seasons and other times when loss of cover or disturbance by equipment could be detrimental. Projects that may affect threatened or endangered plants or animals will be postponed or modified to protect the presence of these species. In such cases, the BLM will consult with the USFWS as required by the Endangered Species Act. Certified noxious weed-seed free vegetative products will be used on all BLM-administered public lands in the Grass Creek planning area.

The following objectives for desired plant communities (DPC) will be applied on an individual basis in consultation with land-use proponents and other affected or interested citizens. Actions required to achieve these objectives will normally be implemented through allotment management and other site-specific activity plans, and through reclamation plans for activities like pipeline construction, oil and gas exploration, and bentonite mining.

Desired plant communities are described according to the percentages of trees, shrubs, grasses, and forbs within each community. Descriptions are by weight estimate unless canopy cover percent is specified. Barren, alpine, and high gradient/rocky riparian communities are not discussed.

On at least 600,000 acres of public lands in the planning area (not containing important wildlife habitat) the following DPC objectives will emphasize watershed protection, forestland health, and livestock grazing.

Salt Desert Shrub Communities: shrubs 30 to 60 percent, grasses 30 to 60 percent, forbs 5 to 15 percent, with shrubs increasing on high saline sites.

Salt Bottom Communities: shrubs 20 to 40 percent, grasses 50 to 70 percent, forbs 5 to 15 percent.

Basin Grassland/Shrub Communities: shrubs 10 to 20 percent, grasses 60 to 80 percent, forbs 10 to 20 percent.

Foothills-Mountain Grassland/Shrub Communities: shrubs 10 to 30 percent, grasses 60 to 80 percent, forbs 10 to 20 percent.

Low Gradient/Alluvial Riparian Communities, Canopy Composition: shrubs 0 to 15 percent, grasses and grasslikes 70 to 90 percent, forbs 5 to 15 percent.

Intermediate Riparian Communities, Canopy Composition: trees and shrubs 10 to 30 percent, grasses and grasslikes 50 to 70 percent, forbs 10 to 30 percent.

Desert Cottonwood Riparian Communities, Canopy Composition: trees and shrubs 10 to 30 percent, grasses and grasslikes 50 to 70 percent, forbs 10 to 30 percent.

Woodland Communities: Same as Foothills-Mountain Grassland/Shrub Communities on areas where establishment of limber pine and juniper has occurred on deeper soils. There is no specific objective where woodlands occur on very shallow soils.

Mixed Conifer/Deciduous Forest Communities: Promote overall species and structural diversity. Promote aspen growth in some areas, consistent with site-specific objectives for resource management, including commercial forest production. Manage 80 % of forestlands for hiding and thermal cover (50 % of these stands will have thermal cover characteristics). Ten percent of the forestlands will be managed for old growth.

Effects Analysis

Actions associated with vegetation management, including increased human presence and use of machinery or fire to implement management actions, may occasionally have a detrimental influence on grizzly bear behavior. The potential for these effects is low. Riparian habitats are most likely to experience vegetation management actions. These habitats are diverse and widespread throughout the FO and therefore, isolated disturbances resulting from vegetation management practices are not expected to limit the availability or quality of riparian habitats. The use of prescribed fire as vegetation manipulation to convert stands of brush to mixed brush and grasslands are very unlikely to cause disturbance to grizzly bears because this is not their primary habitat. This conversion of stands of brush to intermixed grassland/shrub steplands, and the promotion of aspen stands and/or shrub species regeneration, will benefit grizzly bears by increasing the amount of sedges and berry food resources. The management of forestlands for thermal cover characteristics and old growth will also benefit the bears by protecting and enhancing cover and den sites.

Determination

Implementation of the vegetation management actions, as presented in the Grass Creek River RMP (1998), is n**ot likely to adversely affect** the grizzly bear, due to **discountable effects**. This determination is based on the unlikely potential for these actions to harass or displace grizzly bears or occur in core grizzly bear habitat, and the strong likelihood that vegetation management actions will benefit grizzly bears in the long run by enhancing their food resources and cover and hibernation sites.

Visual Resource Management

Management Action

Maintain or improve scenic values throughout the planning area. Visual resources will be managed in accordance with objectives for VRM classes that have been assigned to the planning area. Visual resources will be considered before authorizing land uses that may affect them. VRM requirements are applied on public lands or to BLM-approved mineral development on split-estate lands.

Facilities or structures such as power lines, oil wells, and storage tanks will be screened, painted, and otherwise designed to blend with the surrounding landscape.

Facilities or structures proposed in or near wilderness study areas will be designed so as not to impair wilderness suitability.

The construction or modification of rights-of-way along Wyoming highways 120 and 431 will be evaluated individually to assure that adverse effects on scenic values are not increased.

Effects Analysis

Actions associated with visual resource management will not directly impact grizzly bear behavior or habitats. The exclusion of some activities and structures from designated view sheds may have a secondary positive effect of limiting disturbance of habitats used by grizzly bears.

Determination

Implementation of VRM actions, as presented in the Grass Creek RMP (1998), is **not likely to adversely affect** the grizzly bear, due to possible **beneficial effects**. This determination is based on the fact that implementation of the visual resources management involves no actual ground disturbing activities and therefore no anticipated disturbance to grizzly bear habitat, no increased human presence, and likely will provide beneficial affects due to limiting activities in particular viewsheds that grizzly bears inhabit.

Watershed Management

Management Action

Maintain or improve water quality in the Grass Creek planning area to support state of Wyoming designated uses, and comply with state water quality standards. Reduce erosion by increasing ground cover, including vegetative litter, and maintain standing vegetation after grazing. Improve watershed condition on about 274,000 acres of public land in the Fifteenmile Creek watershed, and reduce the overall level of sediment delivery to the Bighorn River from this area. Stabilize upland vegetation and increase vegetative ground cover on about 15,000 acres to reduce overland water flow, erosion, and sedimentation. Improve watershed condition elsewhere in the planning area, especially on uplands in poor or fair ecological condition.

Effects Analysis

Activities authorized under water resources management may include implementation of watershed plans, identification of heavy sediment loads, monitoring and treating soil erosion, evaluating and restricting surface development activities, and monitoring water quality.

Monitoring of streams and rivers for water quality would be very small and short term in nature (a few hours or less). Monitoring would be done with small, hand held kits on site, or water samples would be

collected and analyzed in a laboratory off site. Other activities would be to measure stream channelization and evaluate streambank and riparian conditions. Access for these activities would be primarily by vehicle (pickup truck, etc.) and monitoring would be done by personnel walking into and along streams and rivers. Permanent in-stream flow monitoring and continuous water quality analysis gauging stations would be small structures that would require some construction to build (backhoe, concrete truck or a lift to place a pre-built structure) and some disturbance to streams or rivers during construction and occasional maintenance activities.

Other smaller scale water resource activities would include plugging abandoned wells to prevent contamination or cross contamination of water aquifers and reclaiming (recontouring and revegetating) the associated drill pad. This activity would consist of pouring concrete into the well casing to plug the well, requiring: vehicles, concrete trucks, concrete pumper trucks, personnel, etc. Reclamation of the drill pad after plugging would require the use of loaders, backhoes, graders or bulldozers, seeding equipment, and trucks and trailers to haul the equipment. Instream flow control structures such as drop structures (made of logs, rock baskets, or concrete); weirs; revetments (streambank erosion control structures (trees, logs, etc.)); rip-rap (rocks, boulders, logs, etc.); placing gravel or concrete in streams for crossings and fish spawning; culverts, all requiring equipment and personnel to construct. Equipment might include: vehicles, backhoes, bulldozers, skid loaders, concrete trucks, etc. Planting of riparian plant species to reduce erosion and sediment movement along watercourses would be done either using hand held tools (shovels, augers, or just jamming stems into the ground (willows, cottonwoods, etc.)) or with smaller equipment like motorized augers, backhoes, tree spades, etc.).

The above types of actions associated with watershed management would take place very rarely, if at all within any grizzly bear denning or foraging habitat and would likely have minimal or no negative impacts on grizzly bear behavior or their denning or foraging habitats. The activities associated with this management action are infrequent, small in scale, and not likely to occur in grizzly bear habitat. Actions associated with watershed management are likely to improve riparian vegetation and habitat for grizzly bears and their food resources.

Determination

Implementation of soil resource management actions, as presented in the Grass Creek RMP (1998), is **not likely to adversely affect** the grizzly bear, due to **discountable effects**. This determination is based on the conservation measures in place that will preclude adverse effects to the grizzly bear or its habitat and will minimize or remove impacts to grizzly bears or their habitat. Management of water resources is not expected to detrimentally impact grizzly bear behavior or suitable denning or foraging areas. The activities associated with this management action are infrequent, localized or small in scale, and generally not likely to occur in grizzly bear habitat. Implementation of water resource management actions may maintain or improve the condition of some grizzly bear habitats and therefore may result in secondary beneficial effects to foraging habitats and are likely to improve riparian vegetation and habitat for grizzly bears and their food resources.

Wild and Scenic Rivers Management

Management Actions

Interim management practices for public land WSR parcels will focus on maintaining or enhancing the outstandingly remarkable scenic, recreational, and historic values and the relatively unmodified character of the area in a near-natural setting. Any activities that would conflict with this objective are prohibited. Some intrusions on the public lands involved may be allowed if they are not readily evident or are short-

lived, and do not adversely affect maintaining the scenic classification.

Effects Analysis

The designation of WSR status is simply a designation, and tempers or stipulates from a WSR resource viewpoint, specific protections or management of other BLM authorized actions. WSR classifications, in and of themselves, do not place on-the-ground projects or ground disturbing activities. Because of their isolation, rugged character, and naturalness, designation as a Wild and Scenic River will not be likely to have negative impacts on wildlife. At the time of designation, further consideration of details will be given to potential impacts to grizzly bears.

Generally, WSR status is a beneficial impact on wildlife and plant species. Grizzly bear habitat that falls within a WSR segment would generally be beneficially impacted by the more restrictive criteria applied to those stream/river segments, including protecting spawning fish habitat or berry producing plants that provide a food source for grizzly bears and security habitat. Actions associated with wild and scenic river management are not expected to detrimentally influence grizzly bear behavior or impact suitable denning, travel, and foraging habitats. These actions will likely result in positive, beneficial effects by maintaining or enhancing habitats suitable for grizzly bears.

Although stream or river segments meeting the Wild and Scenic River (WSR) eligibility and suitability factors are found within the Grass Creek RMP planning area, none are within or near potential grizzly habitat.

Determination

Implementation of wild and scenic rivers management actions, as presented in the Grass Creek RMP (1998), will have **no effect** on the grizzly bear. This determination is based on the lack of WSR stream or river segments within or near any potential grizzly bear habitat.

Wild Horse Management

Management Action

The objective of wild horse management is to maintain free-roaming wild horses in an ecological balance within the Fifteen Mile Wild Horse Herd Management Area (WHHMA). The herd area will be managed for an initial herd size of at least 70 and no greater than 160 mature animals. To the extent possible, horses will be managed at the lower end of this range during periods of drought. Long-term wild horse numbers will be established through monitoring, multiple-use allocations, and revision of the herd area activity plan. The Fifteen Mile Wild Horse Herd Gathering Plan will be kept up-to-date and implemented for roundups. Emphasis will be placed on gathering horses that wander outside the herd area or onto privately owned lands. Cooperative agreements or land exchanges to improve wild horse management will be pursued on about 12,000 acres of privately owned land. Livestock grazing in the herd area is limited to domestic sheep use during November through March, unless an environmental analysis indicates that another kind or time of use is appropriate. The watershed protection, forestland management, and livestock grazing DPC objective will be used in the herd management area. In the herd management area, grazing strategies will be designed to allow a combined forage utilization of 30 % of the current year's growth in other plant communities that are grazed during the growing season. In the herd management area, combined forage utilization up to 40 % of the current year's growth will be allowed in all plant communities that are grazed when plants are dormant. Wild horses will be allocated 2,300 AUMs of forage annually. The maximum allowable forage use by domestic livestock in the herd

area will be 3,370 AUMs per year. Development of additional water sources in the herd area will be considered to improve horse distribution and manage forage utilization. Surface-disturbing and disruptive activities associated with wild horse management will be subject to appropriate mitigation developed through use of the mitigation guidelines.

Effects Analysis

Actions associated with wild horse management are expected to be limited to occasional herding, corralling, and transporting of horses. These actions are not expected in any way to detrimentally impact the behavior or habitat of grizzly bears, because they occur away from grizzly bear habitat.

Determination

Implementation of wild horse management, as presented in the Grass Creek RMP (1998), will have **no effect** on the grizzly bear. This determination is based on the fact that grizzly bears would be unlikely to travel through the open terrain to where the wild horse areas occur and be adversely affected by actions associated with management of wild horses.

Wilderness Management

Management Actions

Proposed wilderness areas will be managed for wilderness values in accordance with the decision of Congress. One wilderness study area (WSA) in the planning area, the Owl Creek WSA (710 acres), was evaluated in two previous wilderness environmental impact statements (BLM 1981 and BLM 1983). As a result of these analyses, the BLM recommended the Owl Creek WSA for designation as wilderness. The recommendation is pending further processing and Congressional decision. This WSA is within potential grizzly bear habitat.

Until Congress acts, this WSA will be managed under the "Interim Management Policy and Guidelines for Lands Under Wilderness Review" (BLM 1987b). Congressional decisions on the Owl Creek WSA will be incorporated into the approved Grass Creek RMP (1998). Should Congress designate this WSA (partially or entirely) as wilderness, the management of the designated area will be for wilderness values, as described in the appropriate wilderness EIS. Should Congress not designate this area (partially or entirely) as wilderness, the management of the nondesignated areas will be in accordance with the approved Grass Creek RMP (1998). The undesignated areas will lose their identity as WSAs and will be managed along with the adjoining area as prescribed in the approved Grass Creek RMP (1998).

Effects Analysis

Management actions associated with wilderness management will not result in detrimental impacts to grizzly bear behavior or habitat. These actions will likely result in positive effects to grizzly bears by limiting harassment and disturbance in denning, travel, and foraging areas.

Determination

Implementation of the wilderness management actions, as presented in the Grass Creek RMP (1998), is **not likely to adversely affect** the grizzly bear, due to **beneficial effects**. This determination is based on the potential that these actions will limit the harassment and displacement of grizzly bears and maintain or protect suitable habitat.

Wildlife and Fish Habitat Management

Management Action

The objective of wildlife and fish habitat management is to maintain or enhance riparian and upland habitat, promote species diversity, and allow the expansion of wildlife and fish, where appropriate. The BLM will continue to work with the USFS, USFWS, WGFD, and the Wind River Indian Reservation in developing a healthy bighorn sheep herd in the Absaroka and Owl Creek mountains. Nest sites, roosts, cottonwood trees, and other potential critical habitats related to hunting and concentration areas for bald eagles will be protected, especially along the Bighorn and Greybull rivers. As one measure to protect these habitats, firewood harvesting is prohibited on public lands in these areas.

The BLM will cooperate with the WGFD and local irrigators in negotiations directed at establishing minimum pool elevations for reservoirs with fisheries potential. Reservoirs and riparian areas will be maintained to improve or enhance potential fisheries. The BLM will encourage the design of reservoirs to enhance fisheries where potential exists. Consistent with the overall management objective to maintain or enhance fisheries habitat, existing game and nongame fish habitat will be protected and the BLM will consider the introduction of fish where habitat potential exists. Approximately 28 miles of stream habitat will be managed for game fish; 60 additional miles will be managed for nongame fish.

Accelerated conifer encroachment and reduction in aspen has occurred in and around the Absaroka Range as a consequence of 100 years or so of grazing and fire suppression. Management practices to improve wildlife habitat in these areas involve a combination of prescribed fire and mechanical treatment. Burning in riparian areas reduces the encroachment of limber pine, juniper, and sagebrush, and increases growth of willows, aspen, and forbs, which are preferred by snowshoe hares. As aspen clones are resprouting, fencing is used to protect them from browsing by elk and moose until they reach a height of 10 ft.

Effects Analysis

The implementation of management actions associated with wildlife habitat management will likely have positive effects by maintaining or improving existing habitat conditions that will benefit grizzly bears and their prey. Many of the actions are, in fact, directed at such habitat improvement. There is the possibility that in some cases, grizzly bears would avoid areas where activities would create a temporary disturbance to the animals.

Determination

Implementation of wildlife habitat management actions, as presented in the Grass Creek RMP (1998), is **not likely to adversely affect** the grizzly bear due to **insignificant effects.** Wildlife and fish management actions will be designed to enhance grizzly bear habitat, grizzly bear conservation measures will protect grizzly bears and their habitat during project construction, and many of the projects are designed to benefit grizzly bears by maintaining and improving habitat for the bears and/or their food resources.

Area of Critical Environmental Concern Management

Management Action

The objective of managing the Upper Owl Creek Area as an ACEC is to protect overlapping and important big game habitats and migration corridors, fisheries habitat, shallow soils, alpine vegetation and rare plants, diverse cultural resources and Native American traditional values, primitive recreational opportunities, and high scenic quality. Management will include limiting or prohibiting surface-disturbing activities and closing the area to, and pursuing withdrawal from, the staking and development of mining claims to protect fragile soils, alpine tundra, important wildlife habitat, and scenic values. A detailed activity plan will be prepared for the Upper Owl Creek ACEC before the BLM approves any proposal for major surface-disturbing activity in the area. This activity plan will include assistance from the development proponent and other affected and interested citizens to determine whether some surface occupancy could be allowed in the area. Mitigation measures considered in the analysis will include access corridors and cluster development. For any mining claims with prior existing rights, a plan of operations will be required for all mining claim-related activities, other than casual use, in the Upper Owl Creek ACEC.

Effects Analysis

This program analysis is for the designation and management of ACECs. Management actions associated with ACECs that could result in detrimental impacts to grizzly bear behavior or habitat, such as allowed minerals development, will be analyzed under that management action. There are no impacts to the grizzly bear in the establishment of an ACEC. There is the possibility that some management action could occur, specific to an ACEC that is not addressed by the existing program management plans. Implementation of ACEC management involves no actual ground disturbing activities and primarily involves a narrow, focused outlook on management of the ACEC providing limited uses and restricting most activities from either occurring or tempering them so that they are less disruptive in nature. The Upper Owl Creek ACEC is within potential grizzly bear habitat.

Determination

Implementation of ACEC management actions, as presented in the Grass Creek RMP (1998), is **not likely to adversely affect** the grizzly bear, due to possible **beneficial effects**. This determination is based on the premise that implementation of ACEC management involves no actual ground disturbing activities and therefore no anticipated disturbance to grizzly bear habitat; the low likelihood that a management action, specific to an ACEC, would occur that did not fit within the existing program management plans; no increased human presence; and likely will provide beneficial affects due to limiting activities in particular ACECs that grizzly bears might inhabit.

Summary of Determinations

The following is a summary of the effects determinations developed for each of the Grass Creek RMP (1998) management actions.

TABLE 7 SUMMARY OF THE DETERMINATIONS FOR THE GRASS CREEK RMP	
Resource	***Determination***
Air Quality	No effect
Cultural, Paleontological, and Natural History Resources	Not likely to adversely affect, due to discountable effects
Fire	Not likely to adversely affect, due to insignificant effects
Forestland	Not likely to adversely affect, due to insignificant effects
Hazardous Materials and Wastes	Not likely to adversely affect, due to discountable effects
Lands and Realty	Not likely to adversely affect, due to discountable effects
Access	Not likely to adversely affect, due to insignificant effects
Livestock Grazing	Likely to adversely affect
Minerals	Not likely to adversely affect, due to discountable effects
Off-road Vehicles	Not likely to adversely affect, due to insignificant effects
Recreation	Not likely to adversely affect, due to insignificant effects
Vegetation	Not likely to adversely affect, due to discountable effects
Visual Resources	Not likely to adversely affect, due to beneficial effects
Watershed	Not likely to adversely affect, due to discountable effects
Wild and Scenic Rivers	No effect
Wild Horse	No effect
Wilderness	Not likely to adversely affect, due to beneficial effects
Wildlife and Fish Habitat	Not likely to adversely affect, due to insignificant effects
ACECs	Not likely to adversely affect, due to beneficial effects

Cumulative Effects

Cumulative effects include future State, tribal, local, or private actions that are reasonably certain to occur in the Grass Creek planning area. Existing and proposed activities on non-federal lands in the Worland planning area that could affect grizzly bear or their habitats include:

- Oil and gas development on private lands

Implementation of the Grass Creek RMP would not change any potential effects to the grizzly bear that may result from current non-federal actions.

4.0 CONSERVATION STRATEGIES

The following BLM-committed conservation measures are to be implemented in grizzly bear habitat, and are intended to~~The~~ minimize or eliminate adverse impacts likely to result from implementation of the management actions provided in the RMPs. The BLM is committed to the implementation of Conservation Measures (1 through 12), and the BLM will also consider implementing any appropriate best management practices (BMPs), items 13 through 20, at every opportunity to further protect the grizzly bear. In the future, it is expected that grizzly bears will reoccupy historic ranges, and move into new areas. BLM will ensure the implementation of these conservation strategies for the protection and management of newly-established populations.

The most important factors affecting grizzly bears on the landscape are the levels of human activities including food storage, livestock allotments, motorized access, and site development (ICST 2003). One of the key habitat factors in the maintenance of grizzly bear populations is the protection of secure habitat, defined as all areas more than 500 m from an open or gated motorized access route or high use non-motorized trail, and larger than 10 acres, and providing all the key elements needed for the survival and life functions of these animals (such as food sources, cover, denning areas, and security from human disturbance and disruptive activities). Human behavior and habitat are both addressed in the following Conservation Measures and Best Management Practices.

Conservation Measures

1. The BLM shall ensure that authorized activities planned to occur in currently occupied grizzly bear habitat shall be analyzed and planned with active grizzly bear protection measures. Restrictions on timing of activity and spatial considerations for grizzly bears, or other parameters, will be implemented to avoid or prevent significant disruptions of normal or expected bear behavior and activity in the area.

2. The BLM shall provide a packet of educational materials to authorized permittees in grizzly habitat, including, but not limited to, special recreation permittees, livestock permittees, and timber operators.

3. In occupied grizzly bear habitat, and in areas of bear conflicts, the BLM shall install bear-resistant refuse containers in those developed campgrounds and picnic areas where refuse containers are provided and maintained. In areas receiving dispersed recreational use, BLM shall inform the public of proper storage techniques for food and refuse.

4. The BLM shall ensure that operation plans and special use permits in occupied grizzly bear habitat will specify food storage and handling and garbage disposal standards. All temporary living facilities under temporary use permits in occupied grizzly bear habitat will be required to practice proper food storage and keep all potential attractants stored so they are unavailable to bears. Edibles and/or garbage will be secured from access by grizzly bears. Bear proof refuse containers, and timely refuse collection to prevent overflow, shall be required.

5. Important grizzly bear food resources that may occur on BLM land, particularly whitebark pine, army cutworm moths, ungulates (primarily elk calving grounds), and spawning cutthroat trout, shall be noted and monitored. Other important foods may be added to those listed above as our understanding of grizzly bear food resources on BLM land grows. Monitoring protocols for these

food resources can be adapted from Appendix E of the Conservation Strategy (ICST 2003) (http://www.fs.fed.us/r1/wildlife/igbc/ConservationStrategy/CSappendices.pdf).

6. The BLM shall continue to attend, and be a member of, the Yellowstone Ecosystem Subcommittee of the IGBC. After delisting, BLM shall continue to attend the appropriate coordination group(s).

7. The BLM shall not approve commercial cutting or other removal of whitebark pine in the six FOs analyzed in this document in occupied or potential grizzly bear habitat.

8. The BLM shall implement strategies to reduce human-bear and domestic livestock-bear conflicts by conducting an evaluation of the causes of such conflicts when they do occur and determining what can be done to avoid or reduce such conflicts in the future. Currently these conflicts are discussed at the NW Wyoming Level One Streamlining Team meetings held approximately every 45-60 days.

9. All permit holders that conduct activities on public lands in occupied grizzly bear habitat that could result in livestock carcasses being left in locations where bears might be attracted to them shall be informed that all livestock carcasses or parts of carcasses shall be either packed, dragged, or otherwise transported to a location a minimum of 1/2 mile from any inhabited dwelling, sleeping area, tent road, trail, or recreation site in as timely a manner as possible, unless otherwise directed by a BLM range/wildlife specialist or ranger. Carcasses shall be moved at least 100 yards from live water. Other options for carcass disposal may include using explosives or burning the carcass at the discretion of a BLM range/wildlife specialist or ranger. In cases of uncertainty on carcass disposition the permit holder (or lessee) shall contact the appropriate BLM FO.

10. The BLM shall require that the Proper Functioning Condition (PFC) of existing aquatic systems and riparian zones in occupied grizzly bear habitat will be maintained for all BLM administered Public Lands. If these areas are polluted and/or damaged from activities, lessee/permittee/grantee or BLM will be required to assume full responsibility for rehabilitation and restoration of such areas (from IGBC 1986).

11. The BLM shall require that existing roads, drilling pads, and other areas with vegetation removed due to authorized activities in occupied grizzly bear habitat will be revegetated and reclaimed by lessee/permittee/grantee in a fashion that considers all grizzly bear needs or requirements.

12. Wild horse roundups and other intensive wild horse management activities will avoid areas in or immediately adjacent to occupied grizzly bear habitat.

Best Management Practices

13. With the intent of reducing potential conflicts between grizzly bears and livestock and the BLM should phase out sheep allotments in occupied grizzly bear habitat as the opportunity arises. Existing sheep allotments in occupied grizzly bear habitat should be monitored and evaluated for conflicts between grizzly bears and sheep. BLM should offer no new permitted sheep Animal Unit Months (AUMs) in grizzly bear habitat where conflicts have occurred in the past, or are likely to occur in the future.

14. The BLM should adjust management of domestic livestock on public land allotments or leases to minimize grizzly bear-livestock conflicts (such as season of use, class of livestock, etc.).

15. The BLM should include a clause on all use authorizations that allows for permanent cancellation, temporary cancellation, or temporary cessation of activities if such are needed to resolve a grizzly-human conflict situation.

16. Wherever possible, the BLM should reduce motorized access routes in occupied grizzly bear habitat and will try to avoid authorizing any new motorized access in occupied grizzly bear areas (i.e., big game ranges).

17. Wherever possible, the BLM will implement appropriate closures or seasonal restriction areas to cross-country motorized travel to provide more security in occupied grizzly bear habitat.

18. Where possible, maintain road densities of less than one mile per square mile in occupied grizzly bear habitat. Where existing road densities are currently below 1 mile per square mile, avoid increases in road density to maintain management options and secure habitat. Consider all big game winter range areas as areas where road density objectives are less than 1 mile of road per square mile.

19. The BLM should initiate a habitat mapping and monitoring effort for the grizzly bear. Habitat mapped on BLM lands will be done using Geographic Information System (GIS) technology. Secure habitat, open motorized access route density (OMARD, refers to roads that are actively used) greater than one mile/square mile, and total motorized access route density (TMARD, includes all roads, even gated roads) greater than two miles/square mile will be monitored utilizing the Yellowstone Grizzly Bear Cumulative Effects Model (CEM) GIS databases and will be reported annually, as is described in ICST (2003) and conducted in the PCA.

20. In areas of vital importance to grizzly bears (known denning areas, army cutworm moth aggregations, cutthroat trout spawning sites, spring ungulate concentration sites, etc.) activities which adversely affect grizzly bear populations and/or their habitat should be avoided. Adverse habitat effects could result from land surface disturbances; water table alterations; reservoirs, rights-of-way, roads, pipelines, canals, transmission lines, or other structures; increased human foods; and reduced availability of natural foods. Areas of vital importance to grizzlies are identified through the evaluation process described in the Grizzly Bear Management Guidelines (IGBC 1986).

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APPENDIX A
SUMMARY OF GRIZZLY BEAR EFFECTS DETERMINATIONS & LIST OF BLM MANAGEMENT ACTIONS AND ACTIVITIES

This appendix contains a summary of the grizzly bear effects determinations (**Table A-1**) and a list of BLM management actions with detailed activities that occur in the field offices (**Table A-2**). These detailed activities can serve as a checklist to review and consider during consultations for individual projects. The evaluation of the impact of a given management action and its associated activities will vary depending on the intensity and duration of the activity, its location within the field office, and the particulars of that activity in that field office.

TABLE A-1. SUMMARY OF GRIZZLY BEAR EFFECTS DETERMINATIONS

Resource Management Plan (RMP) / Management Action	Cody RMP	Kemmerer RMP	Lander RMP	Pinedale RMP	Green River RMP (Rock Springs FO)	Grass Creek RMP (Worland FO)
Access*	NLAA-i	NLAA-d	NLAA-i	NLAA-i	NLAA-d	NLAA-i
Air Quality	NE	NE	(NE)	NE	NE	NE
Cultural/paleo./historical	NLAA-d	NLAA-d	NLAA-d	NLAA-d	NLAA-d	NLAA-d
Fire Management	NLAA-i	NLAA-i	NLAA-i	NLAA-i	NLAA-i	NLAA-i
Forest Management	NLAA-i	NLAA-i	NLAA-i	NLAA-i	NLAA-i	NLAA-i
Hazardous Materials	NLAA-d	-------	-------	-------	NLAA-d	NLAA-d
Lands and Realty	NLAA-d	NLAA-d	NLAA-d	NLAA-d	NLAA-d	NLAA-d
Livestock Grazing*	LAA	NLAA-d	LAA	LAA	NLAA-d	LAA
Minerals and Geology	NLAA-d	NLAA-d	NLAA-d	NLAA-d	NLAA-d	NLAA-d
Geothermal	NE	-------	-------	-------	-------	-------
ORV/OHV use*	NLAA-i	NLAA-d	NLAA-i	NLAA-i	NLAA-d	NLAA-i
Paleontology/Natural History	-------	-------	-------	NLAA-d	-------	-------
Recreation*	NLAA-i	NLAA-d	NLAA-i	NLAA-i	NLAA-d	NLAA-i
Riparian	-------	NLAA-b	-------	NLAA-b	NLAA-b	-------
Soils Management	-------	NLAA-d	(NLAA-d)	-------	-------	-------
Soil/Water/(Air)	-------	-------	See specific categories	-------	-------	-------
Special Areas/ACECs*	NLAA-b	-------	NLAA-b	NLAA-b	NE	NLAA-b
Special Status Plant Species	-------	-------	-------	-------	NE	-------
Surface Disturb. Restrictions	-------	-------	-------	NLAA-b	-------	-------
Vegetation	-------	NLAA-d	-------	-------	NLAA-d	NLAA-d
Visual	NLAA-b	-------	-------	NLAA-b	NLAA-b	NLAA-b
Wildlife and Fish	NLAA-i	NLAA-i	NLAA-i	NLAA-i	NLAA-i	NLAA-i
Watershed/Water	NLAA-d	NLAA-d	(NLAA-d)	-------	-------	NLAA-d
Water/Soils	-------	-------	-------	NLAA-d	NLAA-d	-------
Wild and Scenic Rivers*	NE	NLAA-b	NLAA-b	NLAA-b	NLAA-b	NE
Wild Horses	NE	-------	NE	NE	NE	NE
Wilderness*	NE	NLAA-b	NLAA-b	NLAA-b	NE	NLAA-b

* - These management actions have varying effects determinations due to the differences & variability found within the respective Field Offices, the level of activity of these management actions and grizzly bear occupancy within each FO.

------- Management actions were either not analyzed or analyzed in another management action for these RMPs.

TABLE A-2. LIST OF BLM MANAGEMENT ACTIONS AND ASSOCIATED ACTIVITIES

Air Quality

1) Apply dust control measures
2) Collect meteorological and/or air quality data
3) Cover conveyors at mine sites

Cultural/Paleontological/Historical

1) Identify and record cultural resources (including excavation and photography)
2) Photography
3) Inventory cultural resources
4) Develop interpretive sites
5) Use hand tools, power tools, heavy machinery
6) Field activities
7) Allow collection of invertebrate fossils
8) Stabilize deteriorating buildings
9) Surface disturbing activities
10) Map and collect surface material
11) Excavation
12) Stabilize erosion
13) Develop campgrounds
14) Cultural resource investigation
15) Fence cultural resources

Fire Management

1) Fire suppression
2) Damage rehabilitation
3) Prescribed burning
4) Construct firelines
5) Use off-road vehicles
6) Use heavy equipment
7) Use of hand tools and heavy machinery
8) Use bulldozers
9) Use chemical fire suppression agents (ground based)
10) Bulldozers in riparian and wetland areas
11) Fire retardant drops containing chemical dyes (aircraft dispersal)

Forest Management

1) Rehabilitation surveys
2) Assess effects of grazing
3) Allow firewood collection
4) Timber harvesting
5) Planting harvested areas
6) Fencing regenerated areas
7) Clearcuts
8) Selective cutting
9) Slash disposal
10 Allow harvest

TABLE A-2. LIST OF BLM MANAGEMENT ACTIONS AND ASSOCIATED ACTIVITIES

11) Site regeneration
12) Stand replacement
13) Precommercial thinning
14) Firewood, posts, poles, Christmas trees, wildlings
15) Pursue legal access
16) Commercial thinning
17) Skidder-type yarding
18) Logging operations
19) Cable yarding
20) Roads and landings
21) Logging activity
22) Prescribed burning
23) Establish new seedlings
24) Chaining
25) Shearing
26) Road development
27) Install drain culverts, water bars, or ditches
28) Cut and remove diseased trees
29) Artificial regeneration
30) Slash will be lopped and scattered, roller chopped, or burned
31) Helicopter logging
32) Disease treatment by spraying
33) Spraying of Grasses and shrubs

Geothermal

1) Vehicle traffic
2) Road construction
3) Pod and facility construction
4) Powerline construction

Hazardous Material

1) Provide warnings
2) Establish precautions
3) Use precautionary measures
4) Secure and dispose of hazardous waste discharged on public lands
5) Report, secure, and clean up public lands contaminated with hazardous wastes

Lands and Realty

1) Stock driveway withdrawals
2) Locatable mineral entry withdrawals
3) Lease acres for landfills
4) Establish protective withdrawals
5) Acquire access easements
6) Acquire conservation easements
7) Disposal or transfer of public lands through desert land entry, public sale, exchange, State of Wyoming indemnity selection, or Recreation and Public Purposes (R&PP) leases or patents

TABLE A-2. LIST OF BLM MANAGEMENT ACTIONS AND ASSOCIATED ACTIVITIES

8) Designate existing routes as right-of-way corridors
9) Pursue public access
10) Pursue cooperative agreements
11) Leases and disposals
12) Develop stipulations
13) Issue rights-of-way and leases (utility transportation corridors, communication sites)
14) Temporary use permits
15) New withdrawals
16) Seek legal access to timber management areas
17) Fence revegetation sites
18) Block linear rights-of-way to vehicle use
19) Road construction
20) Construction of powerlines, communication towers, pipelines, irrigation ditches, and roads
21) Develop recreation site facilities
22) Designate corridors
23) Adjust corridors
24) ROW: powerlines, pipelines, ditches and canals, roads, well pads, reservoirs, buried telephone and fiber optic lines, wind power generation farms and facilities, compressor stations and other facilities
25) Road closures/rehabilitation
26) Designate, cancel, or change stock trail driveways

Livestock Grazing

1) Designate stock trails
2) Livestock conversions
3) Livestock grazing
4) Construct exclosures
5) Provide access to water, develop stock ponds
6) Design and implement grazing systems (AMPs)
7) Provide salt or mineral supplements
8) Use safe and effective prairie dog control measures
9) Modify kinds of livestock and season of livestock use
10) Perform project work to enhance and improve riparian zones
11) Improve resource conditions
12) Noxious weed control
13) Control predators
14) Vegetation manipulation projects
15) Change composition of existing vegetation
16) Manage leases
17) Develop management plans and agreements
18) Range improvement projects
19) Abolish or change stock trails/driveways
20) Fence
21) Develop water facilities (catchments, reservoirs, springs, pipelines, and wells)
22) Sagebrush spraying
23) Prescribed fire treatment

TABLE A-2. LIST OF BLM MANAGEMENT ACTIONS AND ASSOCIATED ACTIVITIES

24) Livestock grazing authorization (adjust season of use, distribution, kind, class, and number of livestock)
25) Implement new grazing systems
26) Establish salt stations
27) Supplement feeding authorization
28) Prescribed fire
29) Mechanical or biological vegetative treatments
30) Use heavy equipment
31) Construct, maintain and modify fences

Minerals

1) Apply dust control measures
2) Restrict flaring of natural gas
3) Lease with a “no surface occupancy” restriction
4) Lease with seasonal restrictions
5) Lease with other standard surface protection restrictions
6) Control/limit emissions
7) Reservoirs associated with water disposal
8) Compressor stations, product enhancement and disposal facilities
9) Pipelines associated with leases or units
10) Construction of new above-ground powerlines
11) Leasable minerals – authorization of competitive lease list for oil, gas, coal, oil shale, and geothermal steam
12) Leasable minerals – development and construction of coal pits, oil wells, gas, oil shale, and geothermal steam
13) Leasable minerals - construction and initial reclamation of coal pits, well pads, access roads, and reserve pits
14) Leasable minerals –surface reclamation for oil, gas, and coal
15) Locatable mineral - exploration and development (gold, silver, cobalt, etc.)
16) Power lines associated with leases or units
17) Wind power associated with leases or units
18) Saleable minerals – mineral material sales (sand and gravel, decorative stone, aggregate)
19) Geophysical exploration

ORV Use

1) Designate and implement closed areas for ORV Use
2) Designate and implement limited areas for ORV Use
3) Designate and implement open areas for ORV Use
4) Post signs
3) Monitor off-road vehicle use
4) Permit ORV events
5) Allow use of motorized over-the-snow vehicles
6) Perform necessary tasks requiring off-road vehicle use

Recreation

1) Allow casual recreational use (hiking, cross-country skiing, snowshoeing, etc.)

TABLE A-2. LIST OF BLM MANAGEMENT ACTIONS AND ASSOCIATED ACTIVITIES

2) Restrict recreational use
3) Allow fishing and floatboating opportunities
4) Permit competitive recreational events
5) Maintain developed and undeveloped recreation sites
6) Allow camping
7) Develop public water sources for recreation facilities
8) Designate road use
9) Designate recreation areas
10) Allow hunting
11) Develop management plans
12) Designate ORV use
13) Identify hazards on the river
14) Maintain developed and undeveloped recreation sites
15) Provide public facilities and continued access
16) Allow use of motorized over-the-snow vehicles
17) With some exceptions, limit motorized vehicles to existing trails
18) Maintain public access
19) Pursue rights-of-way
20) Maintain or develop recreation sites and facilities
21) Monitor recreational use
22) Enforce recreation-oriented regulations
23) Patrol high-use areas and update recreational potential
24) Monitor, evaluate, and update recreational potential
25) Conduct field inventories
26) Place boundary signs and interpretive markers
27) Camping, hunting, fishing, off-road vehicle use
28) Construct and use roads
29) Add developments as opportunities arise
30) Develop campgrounds
31) Develop recreational trails
32) Cut trees and firewood
33) Construct and use roads
34) Commercial recreation uses

Special Areas

1) Protect petroglyphs, artifacts, and cultural deposits from weathering and vandalism
2) Land exchange
3) Close areas where accelerated erosion is occurring
4) Apply restrictions on ground-disturbing activities
5) Guide supervised tours
6) Evaluate noxious weed and grasshopper control measures
7) Logging and heavy equipment use restrictions
8) Develop recreational trails

T&E Species

1) Provide habitat

TABLE A-2. LIST OF BLM MANAGEMENT ACTIONS AND ASSOCIATED ACTIVITIES

2) Protect known populations
3) Close known locations to surface disturbing activities, mineral material sales, off-road vehicle use, and the use of explosives and blasting
4) Conduct surveys

Vegetation

1) Pursue the acquisition of additional riparian areas
2) Plant species surveys
3) Conduct prescribed burns
4) Implement weed control programs
5) Plant trees
6) Improve riparian habitat
7) Use biological controls including species-specific insects and livestock grazing
8) Use mechanical control, including cutting and thinning with hand tools
9) Use heavy mechanical control, including brush beating, cutting, and thinning with machinery
10) Use chemical control (including aerial spraying)
11) Use of fire
12) Implement planting and seeding

Visual

1) Require facilities to blend with the natural environment
2) Reclaim watershed projects and water wells

Water Quality, Watershed and Soils Management

1) Prohibit surface discharge of produced water
2) Allow for surface discharges of produced water approved by the Wyoming DEQ
3) Restrict surface disturbance and prohibit new permanent structures
4) Limit surface disturbance and prohibit new permanent structures
5) Close areas, including roads, where accelerated erosion is occurring
6) Improve, maintain and restore riparian/wetland areas by restoring hydrologic function
7) Stream improvement practices such as increasing sinuosity in channels by using hand tools to construct natural structures which include rock or other natural materials
8) Design and install stream crossings that allow for appropriate sediment and flow passage
9) Develop riparian/wetland exclosures
10) Construction of artificial instream structures such as impoundments using heavy equipment, and steel, geo-textile fabrics, and other materials
11) Cutting, planting, and seeding to restore function in riparian/wetland areas
12) Implement pitting and maintain water-spreader dikes

Wild Horse

1) Construction of short-term temporary facilities (traps and holding facilities)
2) Construction of long-term permanent facilities (corrals, boundary fences, water development)
3) Gatherings using helicopters and riders
4) Herding, corralling, transporting

Wild Rivers

TABLE A-2. LIST OF BLM MANAGEMENT ACTIONS AND ASSOCIATED ACTIVITIES

1) Studies on segments of river

Riparian

1) Livestock conversions
2) Herding, livestock driving
3) Fence

Access

1) Pursue access across private lands
2) Purchase rights-of-way or easements, land exchange, reciprocal rights-of-way
3) Rehabilitate access roads no longer needed

Surface Disturbance Restrictions

1) Restrict surface disturbance

TABLE B-1 GRIZZLY BEAR HABITAT/GRAZING ALLOTMENTS – CODY RMP (CODY FO)								
[info from the Cody RMP, November 1990]								
Allotment Number	Allotment Name	Sum of the Acres of Griz Habitat w/in each Allotment	Total Fed Acres in Allotment	Taylor Grazing Act Section	Season of Use	Kind of Livestock		
						Cattle	Sheep	Horses
						by AUM		
00515*	Upper Gooseberry*	87.84	3,317	Sect 15	S	C		
00632	Dick Creek	183.84	175	Sect 3	S,F	25		
02502	Armstrong	1,463.58	361	Sect 15	S	42		
02504	Carter Mountain	8,373.48	5,859	Sect 15	S		804	
02511	(Wild Horse Range)	1335	566	Sect 15	F,W	127		
02519	Newell Springs	3,374.54	1,320	Sect 3	S,F	156		
02523	(Wild Horse Range)	187.83	1,191	Sect 15	W		144	
02524	Jack Creek	1,017.07	409	Sect 15	S	35		5
02528	Mountain Meadows	1,478.14	696	Sect 15	S	140		
02532	Pitchfork	55,213.01	6,056	Sect 15	F,W	1,245		
02544	Tonopah Ridge	4,526.47	3,026	Sect 15	S,F,W	408		
02545	91 Rand	29,221.90	8,758	Sect 15	YL			
02553	Winniger	4,868.58	1,749	Sect 15	Sp,S,F	317		
02561	Little Dry Creek	2,253.12	7,754	Sect 15	Sp,S,F	1,059		
02564	Hone/Avent	2,231.31	6,600	Sect 15	Sp,S,F	702		
03002	Stonewall Creek	1,270.18	40	Sect 15	S	8		
03003	Lower Slope	4,561.27	3,316	Sect 15	Sp,F	296		18
03004	Stonebridge Res.	7,217.27	4,436	Sect 15	Sp,S,F	579		
03005	Natural Corral	636.8	193	Sect 15	S,F	39		
03006	Coal Creek	2,797.67	2,192	Sect 15	Sp,S,F	185		
03011	Heart Mountain	1,411.31	8,131	Sect 15	Sp,S,F	1,040		
03014	Buchanan	256.73	278	Sect 15	S	13		
03015	Dunn Creek	151.15	25	Sect 15	F			3
03017	Eagle Valley	309.33	40	Sect 15	S			4
03018	Ishawooa Station	48.09	44	Sect 15	S	5		
03019	TE Ranch	5305	148	Sect 15	S,F	21		
03020	Post Creek	746.22	453	Sect 15	Sp,S			33
03023	Diamond Creek	443.68	457	Sect 15	S	42		
03024	Four Bear	573.48	609	Sect 15	S,F	56		
03025	Jim Creek	1,006.49	833	Sect 15	Sp,S			60

03026	Cedar Mountain	5,302.16	886	Sect 15	Sp,S	37		
03029	Oregon Basin	130.68	9,483	Sect 15	S,F	2,290	199	
03030	Diamond Basin	639.52	641	Sect 15	Sp,S,F	70		
03031	Meeteetsee Creek	276.72	25	Sect 15	various	3 total (C/S/H)		
03032	River Pasture	273.46	274	Sect 15	W	15		
03034	Devil's Tooth	2,923.14	143	Sect 15	S,F			14
03036	Lakeshore	1,623.61	648	Sect 15	Sp,S,F			27
03039	Palette	10,590.28	1,377	Sect 15	S,F	344		
03040	Lakeview	169.32	178	Sect 15	S	28		
03041	Twin Creek	929.68	154	Sect 15	Sp,S,F			13
03042	River Pastures	2,051.98	169	Sect 15	Sp	35		
03043	Diamond Bar Ranch	7,843.06	1,563	Sect 15	Y	198		
03044	Sheep Mountain	2,427.24	1,464	Sect 15	S	150		
03045	Greenwald	899.06	427	Sect 15	Sp	38		
03046	Wall Creek	886.77	193	Sect 15	S	20		
03047	Timber Creek	2,012.25	730	Sect 15	S	72		
03048	Hoodoo	79,655.99	7,007	Sect 15	YL	591		
03049	Haffey Place	835	440	Sect 15	S,F	67		
03050	Bull Creek	1,094.63	74	Sect 15	S	14		
03051	Cottonwood Creek	1,447.13	1,301	Sect 15	Sp	236		
03053	Trail Creek	16,461.33	5,099	Sect 15	YL	831		
03054	Dorrance	1,614.64	110	Sect 15	S,F	20		
03055	Red Pole	1,709.21	1,249	Sect 15	F,W			44
03056	Upton	1,018.11	80	Sect 15	Sp	8		
03057	Ishawooa	17.85	23	Sect 15	S			2
03058	Rand Creek	423.61	159	Sect 15	S	20		
03059	Indian Pass	3,594.31	2,252	Sect 15	Sp,S	206		
03060	Hidden Valley	2,875.09	1,743	Sect 15	S,F	10		140
03061	Little Dry Creek	10,997.99	7,195	Sect 15	Sp,S,F	870		
03062	Upper Sage Creek	1,332.64	333	Sect 15	F,W	20		
03064	Lower Sage Creek	3,091.30	3,755	Sect 15	F,W,Sp	365		
03070	Rivers Rest	293.46	287	Sect 15	S,F			43
03072	Red Creek	142.39	298	Sect 15	Sp	20		
03073	Rimrock	1,536.45	2,916	Sect 15	Sp,S	605		
03075	Hardpan Creek	2,239.94	197	Sect 15	S			30
03076	LL Bar	2,092.51	1,034	Sect 15	S	68		
03080	Sleeper	1,064.52	73	Sect 15	YL	95		

03082	Castle Rock	900.16	674	Sect 15	S,F			40
03084	Big Dipper	1,970.69	1,709	Sect 15	Sp,S	65		44
03085	Sulpher Creek	119.41	48	Sect 15	Sp			8
03086	Two Dot	2,936.39	25,430	Sect 15	Sp	2,696		
03089	Newmeyer Creek	1,951.95	1,219	Sect 15	S,F,W			74
03093	Mountain Slope	3,562.84	1,730	Sect 15	S,F	215		
03095	Marlow Basin	4,675.80	732	Sect 15	Sp,S,F	177		
03096	Meeteetse Rim	2,761.68	500	Sect 15	Sp,S,F	83		
03097	Isolated 40	715.84	40	Sect 15	W			3
03098	Headquarters Pasture	1,277.69	22	Sect 15	W	3		
03100	Big Bend Pasture	57.24	462	Sect 15	S	65		
03101	Meadow	1,440.39	56	Sect 15	F	8		
03103	Simpson	34,940.36	8,601	Sect 15	Rest Rotation	1,172		
03106	Trout Creek	5,564.10	2,141	Sect 15	S,F,W	120		14
03107	Highway Trans	30,45.92	843	Sect 15	Sp,S,F	77		
03108	Rattlesnake	7,691.71	2,506	Sect 15	Sp,S	209		
03109	Southfork	34.03	16	Sect 15	S			1
03111	Canyon Pasture	52.64	3,508	Sect 15	W	85		
03114	Horse Center	7,123.89	5,493	Sect 15	Sp	572		
03115	Norquist	2,005.57	288	Sect 15	Sp	31		
03118	Rattlesnake Mountain	10,576.64	9,016	Sect 15	S,F	1,703		
03119	Rush Creek	5,301.25	1,845	Sect 15	various	214		
03121	Close Pasture	1.06	1,592	Sect 15	Sp,S,F	185		
OUT	Additional acres w/in							
	allotments above, but							
	outside griz habitat =	5,705.05						
USFS								

Season of Use: Sp = Spring / S = Summer / F = Fall / YL = Yearlong
* Upper Gooseberry (00515) – see also Table B-2 (Grass Creek RMP)

235.64

Table B-2 Grizzly Bear Habitat/Grazing Allotments – GRASS CREEK RMP (WORLAND FO)					
[info from the Grass Creek RMP, Sept 1998]					
Allotment Number	**Allotment Name**	**Sum of the Acres of Griz Habitat w/in each Allotment**	**Kind of Livestock**	**Season of Use**	**Grazing Preference AUMs/Actual Use 1987-1991**
00515	Upper Gooseberry	16,788.63	C	6/16-9/30	868 / 781
00516	Blue Creek	1,112.04	C	7/15-9/15	320 / 11
00519	Middle Creek	2121	C	6/1-6/30	126 / 84
			C	10/1-10/16	
00520	Red Creek	786.61	C	Various	21 / 17
00599	Gooseberry	4,313.97	C	3/1-6/15	599 / 559
			C	11/16-2/28	
00600	Wall Rock	3,116.06	C	6/16-11/15	581 / 535
00601	Mormon Creek	2,549.52	C	6/16-11/15	107 / 107
00604	Dickie	15,793.96	C	3/1-2/28 (YL)	23,191 / 10,032
			H	3/1-2/28 (YL)	
			S	11/1-12/31	
00627	Rooster Creek	5,466.80	C	5/3-10/25	956 / 613
			H	5/1-10/20	
00672	Mountain	2,435.83	C	6/26-10/4	427 / 300
02563	Larson Sect. 15	120.91	C	Various	78 / 77

Kind of Livestock: C = Cattle / H = Horses / S = Sheep

Table B-3 Grizzly Bear Habitat/Grazing Allotments – LANDER RMP (LANDER FO)					
[info from the Lander RMP, June 1987]					
Allotment Number	**Allotment Name**	**Sum_Acres of Griz Habitat w/in each Allotment**	**Kind of Livestock**	**Season of Use**	**Licensed AUMs**
02104	Warm Springs Canyon	666.8207	C	5/16-9/30	27
02106	WM 10	462.5747	H	5/1-11/30	8
02108	Wagon Box	2,192.62	C, H	6/1-6/30	128
			C, H	9/1-9/30	
02109	Cross 14	2,635.33	C	6/1-9/30	134
02110	Holmes 15	1,210.27	H	4/1-5/30	51
			H	9/1-12/25	
02111	E. A. Mountain	7,198.15	C	3/1-2/28 (yl)	341
02112	Bear Creek	705.2594	C	5/1-6/30	542
			C	10/15-11/30	
02113	Parker 20	5,009.46	C	5/1-6/30	670
			C	10/30-11/30	
02114	Spence 23	2,092.34	C	5/1-12/1	290
02115	Johnson 25	4,541.53	C	6/1-6/30	154
			C	9/1-10/31	
02116	Elk Ridge Southeast	419.2862	H	6/1-8/31	21
02119	White Pass 31	10,150.49	C	5/1-6/30	116
			C	10/1-11/30	
02120	Parker 32	780.4216	C	4/1-6/30	87
			C	10/1-10/31	
02121	Miller R. W.	10,117.99	C	6/1-10/31	1,220
02122	Williams 34	2,063.57	C	5/15-11/15	197
02123	Winchester 42	8,127.19	C	6/1-10/15	369
02125	Albright	529.8873	H	4/1-6/30	28
			H	10/1-10/31	
02127	Wagon Gulch	2,816.08	C, H	6/1-12/10	95
02128	Bitterroot 60	774.6061	H	3/1-11/15	68
02130	Cross	4,102.78	C	4/1-9/30	91
02132	Stoney Point 73	1,691.45	C	6/1-7/30	12
02134	East Fork	16,265.94	Not Leased	n/a	n/a
OUT	Additional acres w/in				
	allotments above, but				
	outside griz habitat =	21,001.95			

Kind of Livestock: C = Cattle / H = Horses / S = Sheep

Table B-4 Grizzly Bear Habitat/Grazing Allotments – PINEDALE RMP (PINEDALE FO)
[info from the Pinedale RMP, December 1988]

Allotment Number	Allotment Name	Sum of the Acres of Griz Habitat w/in each Allotment	Kind of Livestock	Season of Use	AUMs BLM/Private
02055	Lauzer Marsh Creek Individual	218.0034	C	6/16-7/15	166/130
02089	Hansen Tract	640.7898	H	5/1-11/30	14/32
02165	Rosene Individual	3,643.82	C	7/1-9/30	42/120
02175	No. Beaver Tracts Individual	3,143.13	C	6/1-10/16	190/0
12221	Cora Stock Driveway	5.1886	C C	7/1-7/3 10/15-10/17	754/23
OUT	Additional acres w/in above 5 allotments, but **outside** of Griz Habitat	21,251.27			

Kind of Livestock: C = Cattle / H = Horses / S = Sheep