United States Department of the Interior

FISH AND WILDLIFE SERVICE

Ecological Services
4000 Airport Parkway
Cheyenne, Wyoming 82001

In Reply Refer To:
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March 21, 2005

Memorandum

To: Don Simpson, Deputy State Director, Resources, Policy and Management, Bureau of Land Management, Wyoming State Office, Cheyenne, Wyoming

From: Brian T. Kelly, Field Supervisor, U.S. Fish and Wildlife Service, Wyoming Field Office, Cheyenne, Wyoming /s/ Jodi L. Bush *for*

Subject: Informal Conference for the Rocky Mountain Experimental Non-essential Population of the Gray Wolf and the Effects from Bureau of Land Management Activities as Prescribed Through the Cody, Kemmerer, Lander, Pinedale, Rock Springs, and Worland Resource Management Plans in Wyoming

This document transmits U.S. Fish and Wildlife Service (Service) concurrence based on our review of potential activities and conservation measures described under the U.S. Bureau of Land Management's (Bureau) Cody, Kemmerer, Lander, Pinedale, Rock Springs, and Worland Resource Management Plans (RMPs) and the Programmatic Gray Wolf Biological Assessment (BA) and their potential effects on the Rocky Mountain experimental non-essential population of the gray wolf in accordance with section 7 of the Endangered Species Act (Act) of 1973, as amended (50 CFR §402.10). For analysis of effects, the gray wolf in Wyoming is treated as a species "proposed for listing" since it is part of an experimental non-essential population. Accordingly, the appropriate determinations for this species are "likely to jeopardize the continued existence of the species" or "not likely to jeopardize the continued existence of the species".

Your September 14 request for coordination was received September 15, 2004. As indicated in that letter, those conservation measures presented in the BA but not yet included in the RMPs will be incorporated into the RMPs by either maintenance action or RMP amendment following the completion of this conference. A complete administrative record of all documents and correspondence concerning this conference are on file in the Wyoming Ecological Services Field office.

Conference History

The Service and the Bureau began informally conferencing on impacts of Bureau activities to the gray wolf on October 23, 2001. From October 2001 through September 2004, Service personnel

met informally with Bureau personnel to assist in the completion of the Programmatic Gray Wolf BA and reviewed drafts of the BA. The Service received the Bureau's Final Programmatic Gray Wolf BA and request for coordination on September 15, 2004. The Service provided to the Bureau a draft memorandum for this informal conference on November 3, 2004. On March 16, 2005, the Service received the Bureau's completed comments on that draft and then proceeded to finalize this memorandum.

Project Effects

In the BA, the Bureau addressed effects of Bureau-authorized programs of the Cody, Kemmerer, Lander, Pinedale, Rock Springs, and Worland RMPs and conservation measures on the experimental non-essential population of the gray wolf. A complete description of the programs and conservation measures from the BA are included in Attachments 1 & 2.

Programs which the Bureau has identified as having potential detrimental impacts to the gray wolf are: (1) Access Management, (2) Cultural Resources Management, (3) Fire Management, (4) Geology and Minerals Resource Management, (5) Forest Resources Management, (6) Lands and Realty Management, (7) Livestock Grazing Management, (8) OHV Use, (9) Recreation Management, and (10) Vegetation Resource Management. Possible detrimental impacts to the gray wolf from these programs as identified by the Bureau include: (1) the creation of sources of illegal snares, trapping, poisoning, and shooting, (2) the increase in human activity causing disturbance to denning or other important wolf habitat, (3) the increased potential for vehicle collision, and (4) the decrease in effectiveness of habitat to support wolf prey.

Programs which the Bureau has identified that will not detrimentally impact wolves or have beneficial effects include: (1) Air Quality Management, (2) Areas of Critical Environmental Concern Management, (3) Hazardous Materials Management, (4) Paleontological Resources Management, (5) Riparian Areas Management, (6) Soil Management, (7) Surface Disturbance Restriction, (8) Visual Resources Management, (9) Watershed and Water Resources Management, (10) Wild and Scenic Rivers Management, (11) Wilderness Resources Management, (12) Wild Horse Management, and (13) Wildlife Habitat Management. Beneficial effects identified by the Bureau include the improvement of habitat quality for gray wolves and their prey and the exclusion of activities potentially disturbing to the gray wolf.

The Service concurs with your determination that activities described in the Bureau's RMPs mentioned above will not jeopardize the continued existence of the gray wolf because (1) the gray wolf in Wyoming is part of an experimental non-essential population, and by definition, any effects to an experimental non-essential population of any species will not jeopardize the continued existence of the species, and (2) the Bureau has committed to conservation measures and adopted best management practices (see Attachment 2) that will aid in the recovery of this species.

This concludes conferencing pursuant to the regulations implementing the Endangered Species Act, 50 C.F.R. § 402.10. This action should be re-analyzed if new information reveals effects of the action that may affect listed or proposed species or designated or proposed critical habitat in a manner or to an extent not considered in this conference; if the action is subsequently modified in a manner that causes an effect to a listed or proposed species or designated or proposed critical habitat that was not considered in this conference; and/or, if a new species is listed or critical habitat is designated that may be affected by this action.

The Service appreciates your efforts in conserving and protecting the Rocky Mountain experimental non-essential population of the gray wolf. In future communications regarding this conference, please refer to correspondence number WY8797. If we may be of further assistance, please contact Alex Schubert of my staff at (307) 772-2374, extension 38.

cc: BLM, Endangered Species Coordinator, State Office, Cheyenne, WY (J. Carroll)
DOI Solicitor, Lakewood, CO (M. Zallen)
FWS, Endangered Species, Lakewood, CO (B. Fehey)
WGFD, Statewide Habitat Protection Coordinator, Cheyenne, WY (V. Stelter)
WGFD, Non-Game Coordinator, Lander, WY (B. Oakleaf)

ATTACHMENT 1 - PROGRAM ACTIVITY DESCRIPTIONS SUMMARIZED FROM THE PROGRAMMATIC GRAY WOLF BIOLOGICAL ASSESSMENT

These program descriptions are summarized from the Programmatic Gray Wolf Biological Assessment (2004). It is expected that the activities described here will be implemented in the Cody, Kemmerer, Lander, Pinedale, Rock Springs, and Worland RMP areas over the life of the RMPs (10-15 years).

Programs which the U.S. Bureau of Land Management (Bureau) has identified as having potential detrimental impacts to the gray wolf are: (1) Access Management, (2) Cultural Resources Management, (3) Fire Management, (4) Geology and Minerals Resource Management, (5) Forest Resources Management, (6) Lands and Realty Management, (7) Livestock Grazing Management, (8) OHV Use, (9) Recreation Management, and (10) Vegetation Resource Management. Possible detrimental impacts to the gray wolf from these programs as identified by the Bureau include: (1) the creation of sources of illegal snares, trapping, poisoning, and shooting, (2) the increase in human activity causing disturbance to denning or other important wolf habitat, (3) the increased potential for vehicle collision, and (4) the decrease in effectiveness of habitat to support wolf prey.

Programs which the Bureau has identified that will not detrimental impact wolves or have beneficial effects include: (1) Air Quality Management, (2) Areas of Critical Environmental Concern Management, (3) Hazardous Materials Management, (4) Paleontological Resources Management, (5) Riparian Areas Management, (6) Soil Management, (7) Surface Disturbance Restriction, (8) Visual Resources Management, (9) Watershed and Water Resources Management, (10) Wild and Scenic Rivers Management, (11) Wilderness Resources Management, (12) Wild Horse Management, and (13) Wildlife Habitat Management. Beneficial effects identified by the Bureau include the improvement of habitat quality for gray wolves and their prey and the exclusion of activities potentially disturbing to the gray wolf.

Access Management

The objective for access management is to provide suitable public access to U.S. Bureau of Land Management (Bureau) 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, cooperative agreements, 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.

A detailed evaluation of areas with a high density of roads may be completed to determine needs for specific road closures or rehabilitation. Specific mitigation 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

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 Bureau ensures that operators cover conveyors at mine sites, restrict flaring of natural gas, limit emissions, and restrict spacing on projects.

Bureau-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).

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 (ACEC) Management

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.

Under the Special Areas Management program, the Bureau closes areas where accelerated erosion is occurring; implements restrictions on logging and heavy equipment use; evaluates noxious weed and grasshopper control measures; applies restrictions on ground-disturbing activities; develops recreational trails; guides supervised tours; protects petroglyphs, artifacts, and cultural deposits from weathering and vandalism; and pursues land exchanges. Significant sites and segments along the Oregon/Mormon Pioneer Natural Historic Trails will be designated as ACECs.

Cultural Resources Management

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 Bureau-administered lands are proposed to be transferred out of federal ownership.

The Bureau performs inventory activities as well as land management activities. During inventory activities, the Bureau 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 mitigation plans before other resource program surface-disturbing activities. Inventory activities commonly entail the use of hand tools, power tools, or heavy machinery. Inventories are divided into Class I, Class II, and Class III inventories. The Bureau 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. Archeological collections are authorized through a permit system. The cultural resource program may authorize installation of protective fencing of trail segments, stabilize deteriorating buildings, acquire access to sites when necessary, perform certain surface-disturbing activities, pursue land withdrawals, explore and develop locatable minerals, designate avoidance areas, pursue cooperative agreements, 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 0.25 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

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 Bureau'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 prescribed fire program authorizes fire plans, firebreaks, prescribed burns, and coordination with necessary parties on a case-by-case basis. 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. 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 Bureau may use rehabilitation techniques to restore a burned or suppression area to its previous vegetative cover.

Activities authorized by this program include tree thinning, construction of roads and fire lines, 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.

The fire damage restoration program proposes the Bureau use 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.

Geology and Minerals Resource Management

The lands administered by the Wyoming Bureau 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 that 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. The Bureau's mineral 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.

The Bureau provides sand, gravel, and stone from federal mineral deposits as necessary to meet the need 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 Bureau 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 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.

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 reclamation proposals must conform to State agency requirements and must be approved by the Bureau.

Salable minerals are disposed of 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 Bureau, 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 stock piling 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, and reseeding and monitoring to assure the habitat is useable. 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 with 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 explosive, 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. Surface facilities include processing plants, equipment maintenance buildings and offices.

Leasable bentonite also occurs on acquired lands. Bentonite is surface-mined with shovels, haul trucks, etc. Drilling is used to locate the bentonite. Large areas of surface disturbance occur through removal of the overburden, overburden stockpiles, construction of surface facilities and roads. Surface facilities include processing plants, equipment maintenance buildings 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 Bureau through a competitive and non-competitive system. The Bureau receives nominations of lands to be put up for sale at the bimonthly competitive oil and gas sales. These nominations 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 state office and once verified are 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 into 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 the geophones, drill the shot holes for charges, or as "thumpers" to create the sound wave 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 the reservoir and its productive viability. During the exploration phase of drilling, surface disturbing activities include the construction of roads, well pads, reserve pits, and other facilities.

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. Other 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 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. Generally, there are an average of 3 acres for each drill site, 1 mile of road and 1 mile of pipeline for each drill site. This can vary widely with each project. Directional drilling requires a bigger pad than one well. Size is dependent on the number of wells drilled from each pad.

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. Roads may be two track unimproved roads to crown and ditched roads designed by an engineer. One day to over a month may be required to drill the well depending on the type of well (vertical or directional), depth and types of rocks encountered. Reclamation involves reseeding and the recontouring of unneeded roads and unneeded portions of the well pads.

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 Bureau administers geothermal leases through a competitive and non-competitive system. The Geothermal Steam Act of 1970 authorizes leasing.

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 withdrawn lands. 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.

Forest Resources Management

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. Multiple uses are found in forests and the Bureau manages forests for recreation, livestock grazing, wildlife habitat, and prescribed burning.

The program allows the cutting and removal of diseased trees, disease treatment by spraying, and herbicidal spraying of grasses and shrubs, and pre-commercial thinning, chaining, and shearing. Clearcuts, slash disposal, logging, helicopter logging, and skidder-type and cable yarding are allowed during timber harvest. Non-commercial timber harvest involves collection and cutting of firewood, Christmas trees, posts, poles, and wildlings. The Bureau ensures that site regeneration and stand replacement follow timber harvest. Forest management activities may include conducting surveys, obtaining easements, pursuing legal access, allowing road development, and installing drain culverts and water bars.

Timber harvesting occurs on commercial forestlands with slopes less than 45 percent. Forest products are sold by permit. 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. Private and state land may be accessed for forest management purposes through acquisition of easement.

Currently, cottonwood and willow trees are not harvested by the Bureau 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

The primary objective of hazardous materials management is to protect public and environmental health and safety on public lands administered by the Bureau. Hazardous materials management also seeks to comply with federal and state laws, prevent waste contamination due to any Bureau-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 Bureau programs. Public lands contaminated with hazardous wastes are reported, secured, and cleaned according to federal and state laws, regulations, and contingency plans. Warnings are issued to potentially affected communities and individuals if hazardous material is released on public land.

Lands and Realty Management

The objective of the lands and realty management program is to support multiple-use management goals of the Bureau resource programs; respond to public requests for land use authorizations, sales, and exchanges; and acquire and designate rights-of-way 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. Protective withdrawals 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 extend two years or longer. 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.

The program pursues cooperative agreements, develops recreation site facilities, considers offsite mitigation, minimizes access in wildlife habitat, fences revegetation sites, blocks linear rights-of-way to vehicle use, considers temporary use permits, considers new withdrawals, and leases acres for landfills.

Access management activities are generally in support of other resource management programs and are authorized under the Realty Management Program. The Bureau rehabilitates access roads that are no longer needed, proposes easement negotiations, pursues access across private lands, acquires rights-of-way or easements, and exchanges lands.

Cases are considered individually in mineral exchanges. 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 is allowed under the R&PP Act, and sanitary landfilling is a common method of solid waste disposal.

Livestock Grazing Management

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, developed recreation sites, or education areas. Range management activities include using

prescribed fire, vegetation manipulation projects, changing the composition of existing vegetation, using noxious weed control, using mechanical or biological vegetative treatments to improve forage production, using heavy equipment, and the herbicidal spraying of sagebrush.

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 providing access to these developments. Lease management activities include conducting monitoring studies, performing project work to enhance and improve riparian zones, designating stock trails, managing leases, developing management plans and agreements, and canceling or adjusting livestock driveways.

Permanent increases in available forage are considered for wildlife and watershed protection before additional livestock use is authorized. Livestock management includes converting to new types of livestock, authorizing livestock grazing, and adjusting season of use, distribution, kind, class, and number of livestock. Salt or mineral supplements may be provided.

Off-Highway Vehicle (OHV) Management

The objective of OHV management is to offer outdoor recreational opportunities on Bureau-administered public land while providing for resource protection, visitor services, and the health and safety of public land visitors. Using motorized off-highway vehicles requires no fee and no permit, but their use is restricted depending on whether the area has been designated as closed, limited, or open.

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. Off-Highway Vehicle use (including over-the-snow vehicles) on Bureau-administered lands is limited to existing roads and trails. Some areas are closed to OHV use.

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

Paleontological Resources Management

The objective of paleontological resources management is to manage paleontological resources that are part of the Bureau-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 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 Bureau-administered public lands.

Potential effects on paleontological resources on Bureau-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. The closing of Bureau-administered public lands or restricting uses to protect paleontological resources are evaluated case-by-case.

Recreation Resources Management

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

Categories of activities of the Bureau 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 Bureau monitors recreational use, develops management plans, and evaluates and updates recreational potential.

Recreational activities allowed by the Bureau include hiking, hunting, mountain biking, boating, and fishing, off-highway vehicle (OHV) use (including snowmobiles), horseback riding, and camping. Casual use of Bureau-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 Bureau develops recreational and camping sites. Recreational site development 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.

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.

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

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 Colorado River cutthroat trout habitat.

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. 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.

Soil Management

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 the Bureau.

Timber harvest activities will be limited to slopes of 45 percent or less to protect the water quality and to keep soil from eroding. OHV travel will be prohibited on wet soils and on slopes greater than 25 percent 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 of severe erosion between March 1 and June 15.

Surface Disturbance Restriction

The 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 Wyoming Bureau Standard Mitigation Guidelines for Surface-Disturbing Activities (SDA Guidelines). The SDA 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 SDA 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 SDA 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 SDA 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 mitigations 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 SDA Guidelines would apply are timber harvesting within 500 feet of streams or riparian areas and on slopes greater than 25 percent. 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 percent 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 percent slope.

The mitigations prescribed for federal mineral development on split estate lands (federal minerals beneath a nonfederal surface) apply only to the development of the federal minerals. These mitigations do not dictate the surface owner's management of their lands. The mitigations 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 Bureau.

When the Bureau 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 Bureau to regulate surface disturbance and reclamation on all leases.

Vegetation Resource Management

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 Bureau-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 Bureau on public lands are

chemical, biological, and mechanical. Biological control can involve the use of weevils, beetles, or goats. This method may be used in cooperation with mechanical control (e.g., dozing, cutting, chopping). Sagebrush control measures are also implemented by the Bureau. These control methods may be chemical or mechanical. 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 should 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 postponed or 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 Bureau. All PUPs and BUPs are reviewed by the state Noxious Weed Coordinator and approved by the Bureau Assistant State Director.

Visual Resources Management

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 Bureau Field Office. Visual resource classification inventories have been developed for some, but not all, of the areas in Wyoming. To improve visual resources, the Bureau 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. Any facilities or structures proposed in or near wilderness study areas will be designed so as not to impair wilderness suitability.

Watershed and Water Resources Management

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 Bureau-administered public land. Passing of the Water Resources Research Act, Water Resources Planning Act, and the Water Quality Act of 1965 allowed the Bureau 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.

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

The objectives of wild and scenic rivers management for public lands administered by the Bureau that meet the wild and scenic rivers suitability factors is 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 Bureau 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.

Wilderness Resources Management

Wilderness Study Areas (WSAs) on public lands are single-use resources managed in accordance with decisions issued by the U.S. Congress. The Bureau 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 Bureau 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 or Environmental Impact Statements 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.

Wild Horse Management

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 populations have more than tripled since passage of the Wild and Free Roaming Horse and Burro Act in 1971, and horse numbers on Bureau lands in the West were estimated at more than 60,000 as compared to 17,000 in the late 1960's.

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.

Land Use Plans are used to plan wild horse management. The Bureau decides how many horses to allow on a certain area. This is termed the Approximate Management Level and the Bureau can adjust horse numbers as needed. Issues taken into consideration include carrying capacity, trends in utilization, and public input. The Bureau'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.

Wildlife Habitat Management

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 Bureau 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 and approved recovery plans.

Approximately 90 percent 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 Bureau-administered public land surface in compliance with the Endangered Species Act and approved recovery plans.

Big game and fisheries management levels identified in the WGFD 1990-1995 strategic plan are supported by the Bureau. The Bureau 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 Bureau works with the U.S. Fish and Wildlife Service and the WGFD in evaluating and designating critical habitat for threatened and endangered species on Bureau-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 Bureau include developing stipulations and protective measures, acquiring land, conducting inventories, performing livestock or forestry-related activities, and wildlife and fisheries habitat improvement projects.

The Bureau 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 Bureau 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 waterbirds, 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 mitigations.

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.

ATTACHMENT 2 - CONSERVATION STRATEGY TAKEN FROM THE PROGRAMMATIC GRAY WOLF BIOLOGICAL ASSESSMENT

This conservation strategy was taken verbatim from the Programmatic Gray Wolf Biological Assessment (2004). Implementation of the following is intended to minimize potential adverse impacts that are likely to result from implementation of the management actions provided in the RMPs. The Bureau has committed to implement conservation measures 1 through 5. The Bureau will also consider implementing best management practices 1 through 6, at every opportunity to further protect the gray wolf. All conservation measures and best management practices apply to the known populations of the gray wolf. In the event that wolf packs are formed in new areas, these measures would apply to these areas as well.

Conservation Measures

1) No project actions to be located within 100 meters (330 feet) of den sites between April 1 and June 30. Areas within 0.8 kilometers (0.5 miles) of a den site are recommended for protection from disturbance.

2) Take action to help reduce human-caused mortality wherever possible. For example, provide educational material, as appropriate, to avoid the inadvertant killing of a wolf mistaken for a coyote; provide information on compatible grazing practices (see #3 below); avoid situations that lead to the adoption of human foods and garbage by wolves, which could lead to a bite and subsequent elimination of the wolf.

3) Disseminate information useful to livestock producers on wolf/livestock interactions, alternate livestock practices that minimize conflicts between wolves and livestock (e.g., dispersed grazing rather than concentrated grazing), and compatible lambing and calving methods that reduce or eliminate wolf depredation in occupied habitat.

4) Designate a state representative to attend the annual interagency coordination meeting.

5) Continue to attend the annual coordination meetings with Wyoming Game and Fish.

Best Management Practices

1) Avoid an increase in miles of road in elk crucial winter range.

2) Avoid situations that allow for wolves to habituate to humans, or become exposed to and use human refuse as a food source.

3) Foster public outreach/education programs to provide information on wolves in schools, campgrounds, and other places. Topics can include but are not limited to: How to be safe around wolves, wolf ecology, wolf mortality factors, and livestock grazing practices harmful to wolves.

4) Continue to support the research and documentation of wolf/livestock interactions and livestock grazing practices in order to improve these practices so that they are more compatible with wolves.

5) Continue to provide and improve wolf habitat by monitoring elk populations and improving habitat for elk.

6) Encourage reporting of wolf observations by Bureau staff and the public to Wyoming and Game and Fish.