Gene Terland, State Director Bureau of Land Management Montana State Office 5001 Southgate Drive Billings, Montana 59101-4669 (406) 896-5000 Fax: (406) 896-5292

Mr. Terland,

On the evening of Saturday, July 14, I faxed in a protest of the July 31 oil and gas lease sale on behalf of the Theodore Roosevelt Conservation Partnership, followed by an Overnight FedEx delivery of the original copy. After I faxed and mailed the copies, I found an error on page 4, so I re-printed the document in full to re-fax and re-mail. Please disregard the earlier fax transmission with the erroneous page 4 and use this July 15 transmission instead.

Thank you.

William H. Geer
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BY FACSIMILE ON JULY 15, 2007

Gene Terland, State Director Bureau of Land Management Montana State Office 5001 Southgate Drive Billings, Montana 59101-4669 (406) 896-5000 Fax: (406) 896-5292

RE: PROTEST OF MONTANA BLM JULY 31, 2007, LEASE SALE OF 127 PARCELS (MT-07-07-05 THROUGH MT-07-07-151) IN GARFIELD AND McCONE COUNTIES, COMPRISING APPROXIMATELY 307,000 ACRES OF PUBLIC LAND THAT COULD SIGNIFICANTLY AND ADVERSELY IMPACT ELK, PRONGHORN AND MULE DEER HABITAT AND POPULATIONS AND BIG GAME HUNTING OPPORTUNITIES; AND ACTIVE GREATER SAGE GROUSE LEKS AND GREATER SAGE GROUSE POPULATIONS.

INTRODUCTION

On behalf of the Theodore Roosevelt Conservation Partnership (hereinafter referred to as "TRCP" or "Protester"), I respectfully protest the inclusion of 127 proposed lease sale parcels listed below within the state of Montana and in Garfield and McCone counties and request that these parcels be withdrawn from the July 31, 2007, lease sale. This protest is filed pursuant to 43 C.F.R. §§ 4.450-2 and 3120.1-3.

Complete List of Protested Lease Sale Parcels MT-07-07-05; MT-07-07-06; MT-07-07-07; MT-07-07-08; MT-07-09-09; MT-07-07-10; MT-07-07-11; MT-07-07-12; MT-07-07-13; MT-07-07-14; MT-07-07-15; MT-07-07-17; MT-07-07-18; MT-07-07-21; MT-07-07-22; MT-07-07-23; MT-07-07-24; MT-07-07-25; MT-07-07-26; MT-07-07-27; MT-07-07-28; MT-07-07-29; MT-07-07-31; MT-07-07-32; MT-07-07-33; MT-07-07-34; MT-07-07-40; MT-07-07-41; MT-07-07-42; MT-07-07-43; MT-07-07-44; MT-07-07-45; MT-07-07-46; MT-07-07-47; MT-07-07-48; $MT-07-07-50;\ MT-07-07-51;\ MT-07-07-52;\ MT-07-07-53;\ MT-07-07-54;\ MT-07-09-55;\ MT-07-07-56;\ MT-07-07-56;\$ MT-07-07-57; MT-07-07-58; MT-07-07-59; MT-07-07-60; MT-07-07-61; MT-07-07-62; MT-07-07-63; MT-07-07-65; MT-07-07-66; MT-07-07-69; MT-07-07-70; MT-07-07-71; MT-07-07-72; MT-07-07-73; MT-07-07-75; MT-07-07-76; MT-07-07-77; MT-07-07-78; MT-07-07-80; MT-07-07-81; MT-07-07-82; MT-07-07-83; MT-07-07-84; MT-07-07-85; MT-07-07-86; MT-07-07-90; MT-07-07-91; MT-07-07-92; MT-07-07-93; MT-07-07-94; MT-07-07-95; MT-07-07-96; MT-07-07-97; MT-07-07-98; MT-07-07-99; MT-07-07-100; MT-07-07-101; MT-07-07-102; MT-07-07-103; MT-07-07-104; MT-07-07-106; MT-07-07-106 07-106; MT-07-07-108; MT-07-07-109; MT-07-07-110; MT-07-07-111; MT-07-07-112; MT-07-07-113; MT-07-07-114; MT-07-07-116; MT-07-07-117; MT-07-07-118; MT-07-07-119; MT-07-07-120; MT-07-07-121; MT-07-07-122; MT-07-07-123; MT-07-07-124; MT-07-07-125; MT-07-07-126; MT-07-07-127; MT-07-07-128; MT-07-07-129; MT-07-07-130; MT-07-07-131; MT-07-07-132; MT-07-07-133; MT-07-07-134; MT-07-07-135; MT-07-07-136; MT-07-07-137; MT-07-07-138; MT-07-07-139; MT-07-07-140; MT-07-07-141: MT-07-07-142: MT-07-07-143: MT-07-07-144; MT-07-07-145; MT-07-07-146; MT-07-07-07-146; MT-07-07-07-146; MT-07-07-0 07-147; MT-07-07-148; MT-07-07-149; MT-07-07-150; MT-07-07-151.

The underlying basis for this protest is the need to provide greater protection of habitat required to maintain current populations of elk, mule deer, pronghorn and Greater sage grouse, and to sustain existing public hunting opportunities. TRCP believes BLM should consider the cumulative impacts of intense, full field development of oil and/or gas rather than simply the lesser impacts of a lower number of exploratory wells BLM predicted in the RMP. Experience in Wyoming and other developed deep and shallow gas and coalbed natural gas fields in the Rocky Mountain region has shown that BLM's own predictions of full field development are grossly understated and that actual full-field development is much more likely to occur at dates years several earlier than predicted in the RMP if lessees encounter productive formations. Further, BLM has been reluctant to enforce its own stipulations on developed fields once drilling and production commence.

TRCP supports the statewide coalition of sportsmen called *Montana Sportsmen Concerned about Oil & Gas Development*. At his time, 64 organizations and businesses throughout the state have joined the coalition for the purpose of convincing BLM to slow down the pace of oil and gas leasing until advanced conservation planning for fish and wildlife protection has been completed in cooperation with Montana Department of Fish, Wildlife & Parks (FWP). The coalition is deeply concerned that the current pace of leasing coupled with inadequate measures, timing and stipulations will lead to severe losses in public hunting and fishing opportunities for periods of development that will render public lands unsuitable for maintenance of populations of elk, mule deer, pronghorn, Greater sage grouse and regionally important sport fisheries for the remainder of our own, our grandchildren's lives and perhaps our great-grandchildren's lives.

TRCP specifies the following points:

- BLM does not address how it is going to coordinate with FWP in providing enough quality habitat (both vegetative and spatially) to meet population objectives or future goals.
- BLM does not address the impacts to hunting and other recreational use (and commercial outfitting) from development of leasing.
- BLM cannot predict the extent of displacement or other indirect impacts to mule deer from development.
- BLM has not adequately monitored impacts to mule deer and recreation from development nor
 properly mitigated impacts.
- BLM has no plans to ensure sustainable, recreational use of public lands (at the quality and levels they are currently at or higher) within developed leases
- BLM needs to develop a comprehensive strategy which includes habitat planning for mule deer to sustain their populations, maintain recreational use, and coordinate with State DFG before leasing.
- BLM must develop thresholds and other acceptable impacts for mule deer and recreational use before allowing development to begin (calculated, agreed-upon losses with mitigation).
- BLM should have a mitigation plan approved by FWP before development begins which includes specific monitoring and measurements, funding sources and schedule, goals, objectives, and a structured adaptive management process based on science.

Consequently, many Montana sportsman organizations that joined the coalition, Montana Sportsmen Concerned about Oil & Gas Development, have presented a list of fourteen questions (Appendix A) to BLM State Director Gene Terland, asking if, how and when BLM will incorporate recommendations for protection of fish and wildlife habitat and populations and hunting and fishing opportunities on public lands to offered for lease for oil and gas development. As of July 13, the BLM responses received by several coalition partners have been judged to be inadequate and the sending organizations remained convinced BLM is doing little if anything that will be effective in preventing or mitigating losses in elk, mule deer, pronghorn or sport fisheries. Accordingly, TRCP believes this protest is warranted because BLM failed to answer the fourteen questions in enough detail to show the agency's intent to protect fish and wildlife and hunting and fishing as important parts of multiple use management prescribed for public lands. Instead, BLM appears to be focused on nearly single use management of public lands for oil and gas development.

Protested Parcels Important to Elk, Mule Deer and Pronghorn Populations

MT-07-07-05; MT-07-07-06; MT-07-07-07; MT-07-07-08; MT-07-09-09; MT-07-07-10; MT-07-07-11; MT-07-07-12; MT-07-07-13; MT-07-07-14; MT-07-07-15; MT-07-07-17; MT-07-07-18; MT-07-07-21; MT-07-07-22; MT-07-07-23; MT-07-07-24; MT-07-07-25; MT-07-07-26; MT-07-07-27; MT-07-07-28; MT-07-07-32; MT-07-07-33; MT-07-07-34; MT-07-07-40; MT-07-07-41; MT-07-07-42; MT-07-07-43; MT-07-07-46; MT-07-07-47; MT-07-07-48; MT-07-07-50; MT-07-07-51; MT-07-07-52; MT-07-07-53; MT-07-07-54; MT-07-07-55; MT-07-07-56; MT-07-07-57; MT-07-07-58; MT-07-07-59; MT-07-07-60; MT-07-07-61; MT-07-07-62; MT-07-07-63; MT-07-07-65; MT-07-07-66; MT-07-07-77; MT-07-07-78; MT-07-07-80; MT-07-07-82; MT-07-07-84; MT-07-07-85; MT-07-07-86; MT-07-07-90;

MT-07-07-91; MT-07-07-92; MT-07-07-93; MT-07-07-94; MT-07-07-95; MT-07-07-96; MT-07-07-97; MT-07-07-98; MT-07-07-99; MT-07-07-100; MT-07-07-101; MT-07-07-102; MT-07-07-103; MT-07-07-104; MT-07-07-105; MT-07-07-108; MT-07-07-109; MT-07-07-110; MT-07-07-111; MT-07-07-112; MT-07-07-113; MT-07-07-116; MT-07-07-119; MT-07-07-121; MT-07-07-126; MT-07-07-127; MT-07-07-131; MT-07-07-132; MT-07-07-133; MT-07-07-134; MT-07-07-135; MT-07-07-136; MT-07-07-137; MT-07-07-138; MT-07-07-139; MT-07-07-140; MT-07-07-141; MT-07-07-142; MT-07-07-143; MT-07-07-144; MT-07-07-145; MT-07-07-149; MT-07-07-150; MT-07-07-151.

These parcels have been recognized by BLM as seasonal critical or year-round habitat for elk, mule deer and pronghorn. BLM has specified stipulations aimed at protecting winter range for elk, moose, bighorn sheep, white-tailed deer, mule deer and pronghorn, as well as elk calving. Stipulations include seasonal No Surface Occupancy (NSO), except that prohibitions would not apply to operation and maintenance of production facilities, from December 1 through March 31 of allowable uses for drilling and production activities. However, timing stipulations do not address the loss and degradation of habitat caused by development – these are substantial and are supported by research. Additionally, the stipulations applied by BLM have been shown in Wyoming and other Rocky Mountain states to be largely ineffective in protecting mule deer targeted for protection. The everyday activities associated with operation and maintenance of production facilities would in themselves adversely impact mule deer and elk.

The high density of wide, high-speed dirt roads and round-the-clock vehicle traffic that accompanies full field development in both the Jonah Field and Pinedale Anticline in Wyoming have proven to be insurmountable hurdles to maintaining the mule deer population. The large industrial trucks that constantly drive well access roads have been responsible for instances of high pronghorn collision mortality. Consequently, roads and vehicle traffic have been significant factors leading to the loss of 46 percent of the mule deer population in the drilling area, and the remaining mule deer have forced to lower quality habitat out of the development area.

There is a substantial body of scientific literature that has addresses the impacts of roads and vehicle traffic on mule deer and elk populations in most of the Rocky Mountain states, including Montana. Appendix B lists 15 important studies conducted by state fish and wildlife agencies, the USDA Forest Service and universities in the western states in the last 30 years. The findings from these studies provide evidence that roads and vehicles in the density and intensity commonly occurring in oil and gas fields would likely lead to reduction or extirpation of mule deer and elk in development fields even in the first several years of drilling. Key findings are summarized below in Roads and Mule Deer and Elk Habitat, Vulnerability and Security.

The expansive and contiguous acreage of the lease area, including about 307,000 acres, should have signaled a need for BLM to address migration needs and historic corridors for mule, deer and pronghorn. It is likely that resident herds of both species spend their entire lives in the lease area, with corridor connecting seasonally critical habitats. There are no stipulations addressing migration needs in the list of applicable stipulations. It is possible that the loss of critical migratory corridors in the lease area will jeopardize the ability of mule deer and pronghorn to connect with critical seasonal habitat, leading to losses of both species populations over time.

More information is presented below in Crucial Winter Ranges and Migration Routes.

Protested Parcels Under or Adjacent to Greater Sage Grouse Leks MT-07-07-12; MT-07-07-13; MT-07-07-14; MT-07-07-15; MT-07-07-17; MT-07-07-18; MT-07-07-21; MT-07-07-22; MT-07-07-23; MT-07-07-24; MT-07-07-25; MT-07-07-26; MT-07-07-27; MT-07-07-28; MT-07-07-29; MT-07-07-31; MT-07-07-32; MT-07-07-33; MT-07-07-34; MT-07-07-40; MT-07-07-41; MT-07-07-42; MT-07-07-43; MT-07-07-44; MT-07-07-45; MT-07-07-46; MT-07-07-47; MT-07-07-56; MT-07-07-50; MT-07-07-51; MT-07-07-52; MT-07-07-53; MT-07-07-54; MT-07-07-62; MT-07-07-56; MT-07-07-55; MT-07-07-66; MT-07-07-69; MT-07-07-71; MT-07-07-72; MT-07-07-73; MT-07-07-75;

MT-07-07-76; MT-07-07-77; MT-07-07-78; MT-07-07-80; MT-07-07-81; MT-07-07-82; MT-07-07-83; MT-07-07-85; MT-07-07-86; MT-07-07-90; MT-07-07-91; MT-07-07-92; MT-07-07-93; MT-07-07-94; MT-07-07-95; MT-07-07-96; MT-07-07-97; MT-07-07-98; MT-07-07-100; MT-07-07-101; MT-07-07-103; MT-07-07-104; MT-07-07-106; MT-07-07-108; MT-07-07-109; MT-07-07-110; MT-07-07-111; MT-07-07-112; MT-07-07-113; MT-07-07-114; MT-07-07-116; MT-07-07-117; MT-07-07-124; MT-07-07-125; MT-07-07-126; MT-07-07-127; MT-07-07-128; MT-07-07-129; MT-07-07-130; MT-07-07-131; MT-07-07-132; MT-07-07-133; MT-07-07-134; MT-07-07-135; MT-07-07-136; MT-07-07-137; MT-07-07-138; MT-07-07-139; MT-07-07-140; MT-07-07-141; MT-07-07-142; MT-07-07-144; MT-07-07-151.

These parcels have been recognized by BLM as seasonal or year-round critical habitat for Greater sage grouse as evidenced by the list of stipulations for buffers and timing aimed at protecting Greater sage grouse leks and nesting in the lease sale announcement. Stipulations include No Surface Occupancy (NSO) with buffers of ¼ or 2 miles or timing (March 1-June 15 or April 1-June 15) of allowable uses for drilling and production activities. However, the stipulations applied by BLM have been shown in Wyoming and other Rocky Mountain states to be largely ineffective in protecting the Greater sage grouse leks and nesting success.

Further, BLM's ¼ and 2 mile buffers for Greater sage grouse leks and nesting are not supported by peer-reviewed scientific studies and have not led to sustained use of leks or nesting areas by Greater sage grouse in many parcels undergoing several years of continuous gas production activities. New peer-reviewed scientific information on Greater sage grouse use and avoidance of parcels has been presented by Dr. David Naugle, BLM's own science consultant on Greater sage grouse biology and needs. Dr. Naugle's research found gas development within 1/2 mile of leks resulted in adverse impacts to Greater sage grouse, and current lease stipulations that prohibit development within ¼ mile of sage-grouse leks on federal lands are inadequate to ensure lek persistence. Naugle concluded that Seasonal restrictions on drilling and construction do not address impacts caused by loss of sagebrush and incursion of infrastructure that can affect populations over long periods of time.

New peer-reviewed scientific information on Greater sage grouse that does not appear to have been used by BLM in design of stipulations or NSO restrictions includes the following: Greater sage-grouse winter habitat selection and energy development; Greater sage-grouse population response to energy development and habitat loss; and West Nile virus and greater sage-grouse; estimating infection rate in a wild bird population. The new information is peer-reviewed scientific research scheduled for publication in reputable journals likely to be available to and read by BLM wildlife biologists. TRCP supports Montana Fish, Wildlife & Parks recommendation of year-round NSO within 1 mile of an active lek and no drilling or production activity within 4 miles of occupied nests in the period March 1 to June 30.

In 2005, the State Director of the BLM signed the Management Plan and Conservation Strategies for Greater sage grouse in Montana. The overall goal of this document is for cooperators to implement strategies that "Provide for the long-term conservation and enhancement of the sagebrush steppe/mixed-grass prairie complex within Montana in a manner that supports Greater sage grouse and a healthy diversity and abundance of wildlife species and human uses". Specifically, the document cites Policy Act BLM 6840, "[BLM] State directors, usually in cooperation with state wildlife agencies, may designate sensitive species. BLM shall carry out management, consistent with the principles of multiple use, for the conservation of sensitive species and their habitats and shall ensure that actions authorized, funded, or carried out do not contribute to the need to list any of these species as T&E".

Leasing of these 115 parcels would irretrievably and unlawfully commit these public lands to oil and/or gas development with a high likelihood that the public lands affected would become unsuitable for use by elk, mule deer, pronghorn and Greater sage grouse and consequently most or all public hunting opportunities values would be lost in both Garfield and McCone counties for a period of possibly 75 years or more as new and developing technology enables extended periods of oil and/or gas extraction:

- Because BLM has failed to state how the comprehensive management of public lands with drilling will support FWP objectives for Greater sage grouse populations in Garfield and McCone counties, it is highly likely leasing and subsequent surface development and road construction will render these waters unsuitable for management of Greater sage grouse.
- BLM has not conducted new on-the-ground inventories or environmental analysis required by the National Environmental Policy Act, 42 U.S.C. §§4321 et seq. (NEPA) and the Federal Lands Policy and Management Act, 43 U.S.C. §§1701 et seq. (FLPMA).
- Accordingly, including the disputed parcels in the upcoming lease sale violates federal law.

Therefore, Protesters request that the BLM withdraw these parcels from leasing until the agency has fully complied with applicable law.

PROTESTER

A. Theodore Roosevelt Conservation Partnership

The Theodore Roosevelt Conservation Partnership is a national non-profit conservation organization (501-3c) that is dedicated to guaranteeing every American places to hunt or fish. TRCP accomplishes its goal through three areas of concern, access to public lands, funding for natural resource agencies, and conservation of fish and wildlife habitat. TRCP has formed, with various partners, a Fish, Wildlife, and Energy Working Group, which is comprised of some of the country's oldest and most respected hunting, fishing, and conservation organizations.

TRCP is working hard to ensure that the development of oil and gas resources on public lands in the Rocky Mountains is balanced with the needs of fish and wildlife resources. It is of great concern that the rapid pace of energy development has precluded the BLM from managing wildlife and fish resources for the future. We are especially concerned with the fate of mule deer, elk, Greater sage grouse, and trout and other desirable fish species and the recreational opportunities they provide tens of thousands of sportsmen each fall in Montana. Without comprehensive habitat management planning that is coordinated with the FWP, leasing and development of crucial big game winter ranges and migration routes and valuable fish habitat in lakes, reservoirs and streams will have a devastating effect on the fishing and hunting opportunities in Montana and jeopardize more than \$1 billion in sustainable economic benefits that come from fishing- and hunting-based recreation.

LEGAL REQUIREMENTS

I. National Environmental Policy Act ("NEPA")

A. The BLM violated NEPA by failing to take the required "hard look" at significant new information that questions the validity of its current RMPs.

NEPA requires federal agencies to take a hard look at new information or circumstances concerning the environmental effects of a federal action, even after an initial environmental analysis has been prepared. Agencies must supplement the existing environmental analyses if the new circumstances "raise [] significant new information relevant to environmental concerns." Portland Audubon Soc'y v. Babbitt, 998 F.2d 705, 708-709 (9th Cir. 2000). Specifically, an "agency must be alert to new information that may alter the results of its original environmental analysis, and continue to take a 'hard look' at the environmental effects of [its] planned actions." Friends of the Clearwater v. Dombeck, 222 F.3d 552, 557 (9th Cir. 2000).

NEPA's implementing regulations further underscore an agency's duty to be alert to, and to fully analyze, potentially significant new information. An agency "shall prepare supplements to either draft or final environmental impact statements if...there are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts." 40 C.F.R. §1502.9(c)(1)(ii) (emphasis supplied).

An agency must prepare a Supplemental EIS "if the new information is sufficient to show that the remaining action will ... 'affect the environment' in a significant manner or to a significant extent not already considered." Marsh v. Oregon Natural Resources Council, 109 S.Ct. 1851, 1859 (1989) (internal citations omitted). The Council on Environmental Quality ("CEQ") regulations provide that, where either an EIS or Supplemental EIS is required, the agency "shall prepare a concise public record of decision" which "shall: (a) [s]tate what the decision was[], (b) [i]dentify all alternatives considered by the agency in reaching its decision, specifying the alternative or alternatives which were considered to be environmentally preferable," and (c) "[s]tate whether all practicable means to avoid or minimize environmental harm from the alternative selected have been adopted and, if not, why they were not." 40 C.F.R. § 1505.2.

CEQ NEPA guidance states that "if the proposal has not yet been implemented, EISs that are more than S years old should be carefully reexamined to determine if [new circumstances or information] compel preparation of an EIS supplement." See, 46 Fed. Reg. 18026 (1981)(Question 32).

This requirement is supported by BLM Instruction Memoranda ("IM"). According to a 2000 IM from the Washington Office: "We are concerned about the maturity of some of our NEPA documents. In completing your [Determination of NEPA Adequacy or DNA], keep in mind that the projected impacts in the NEPA document for given activities may be understated in terms of the interest shown today for any given use. You need to take a "hard look" at the adequacy of the NEPA documentation."

IM No. 2000-034 (expired September 30, 2001). In a subsequent IM, the Washington Office instructed field offices as follows: If you determine you can properly rely on existing NEPA documents, you must establish an administrative record that documents clearly that you took a "hard look" at whether new circumstances, new information, or environmental impacts not previously analyzed or anticipated warrant new analysis or supplementation of existing NEPA documents...The age of the documents reviewed may indicate that information or circumstances have changed significantly.

IM No. 2001-062 (emphasis supplied) (expired September 30, 2002). When considering whether BLM has taken a hard look at the environmental consequences that would result from a proposed action, the Interior Board of Land Appeals will be guided by the "rule of reason." Bales Ranch, Inc., 151 IBLA 353, 358 (2000). "The query is whether the [BLM's DNA] contains a 'reasonably thorough discussion of the significant aspects of the probable environmental consequences' of the proposed action. Southwest Center for Biological Diversity, 154 IBLA 231, 236 (2001) (quoting California v. Block, 690 F.2d 753, 761 (9th Cir. 1982)) (emphasis supplied). See also, Friends of the Bow v. Thompson, 124 F.3d 1210, 1213 (10th Cir. 1997) (to comply with NEPA's "hard look" requirement an agency must adequately identify and evaluate, environmental concerns) (emphasis supplied).

BLM failed to take a hard look at existing and new information and new circumstances that have come to light since the BLM's original boundaries for mule deer and elk crucial winter range. Additionally, FWP has new information on requirements of active Greater sage grouse leks and associated habitat that should have been by BLM in designing stipulations that would be more effective in protecting leks and nesting habitat. For this reason, BLM's approval of the disputed lease parcels is arbitrary, capricious, contrary to law, and an abuse of discretion.

1. Crncial Winter Ranges and Migration Routes

All or parts of parcels MT-03-07-20; MT-03-07-21; MT-03-07-22; MT-03-07-22; MT-03-07-23; MT-03-07-24; MT-03-07-25; and MT-03-07-48 in the USFS White Pine Ridge Area and provide critical habitat for mule deer, and are considered vital by the FWP for the survival and sustainability of mule deer populations. BLM found these habitats to be important enough to identify them in some existing RMPs in neighboring Wyoming and provided the use of timing stipulation to prevent unwanted impacts.

In a neighboring state, BLM through its Memorandum of Understanding with the Wyoming Department of Game & Fish (WGF), agreed to consider the information provided by WGF on a regular basis to update the boundaries and other special features and habitats for big game, including mule deer. This

information has not been analyzed in existing NEPA documents, particularly with the subsequent development that leasing causes. Therefore, this important mule deer documentation constitutes significant new information, triggering additional requirements before leasing can proceed.

Note, BLM has funded and served as advisors on specific research in Wyoming (Sublette Mule Deer Study) to evaluate impacts on mule deer from development in winter range. The most recent findings, including published literature, reported finding significant impacts to mule deer use of winter range, with 27% being attributed to energy development. This, too, proves that there is significant new information concerning impacts to crucial mule deer winter range and migration routes sufficient to trigger supplemental NEPA analysis.

It is also consistent with other actions taken by BLM field offices in other states. For example, the Glenwood Springs Field Office in Colorado on January 10, 2002, stated that BLM will "hold in abeyance any leasing decisions until we are able to do a complete and through job" evaluating a submission of significant new information for the Grand Hogback Citizens Wilderness Proposal because "[t]hese values are not adequately addressed in current plans or NEPA..."

The majority of current RMPs do not address the impacts of mineral leasing and development on crucial mule deer winter ranges and migration routes. The information provided by mule deer research in Sublette County, Wyoming, paints a "seriously different picture of the likely environmental consequences of the proposed action" that has never been discussed in an environmental assessment or impact statement. State of Wisconsin v. Weinberger, 745 F.2d 412 (7th Cir. 1984); accord, Essex county Preservation Ass'n v. Campbell, 536 F.2d 956 (1st Cir. 1976) (where the court held that a Governor's moratorium on the construction of new highways was significant new information that required preparation of a supplemental EIS). For this reason, the agency's decision to lease parcels that could significantly impact crucial mule deer winter range and migration routes in the absence of an environmental assessment that addresses the impacts of leasing for oil and gas development and demonstrably complies with the requirements of NEPA is arbitrary, capricious, contrary to law, and an abuse of discretion.

2. Roads and Mule Deer and Elk Habitat, Vulnerability and Security

The impacts of road construction and motor vehicle activity on mule deer and elk habitat, population distribution, and hunter success are well known from more than 30 years of field studies conducted in western states by state fish and wildlife agencies, the USDA Forest Service, and universities. The following bulleted statements are followed by numerical references to studies listed in Appendix B.

- 1. Results from the Montana Elk Logging Study, 1975-1985, show that roads reduce big game use of adjacent habitat from the road edge to over 0.5 mile away. I
- 2. Logging and road-building activity along major migration routes change the winter distribution of elk. 2
- 3. Elk in Montana avoid habitat adjacent to open forest roads, and road construction creates cumulative habitat loss that increases impacts to elk as road densities increase. 3
- 4. Roads are a major contributor to habitat fragmentation by dividing large landscapes into smaller patches and converting interior habitat into edge habitat. With increased habitat fragmentation across large areas, the populations of some species become isolated, increasing the risk of local extingations or extinctions.
- 5. When many elk herds were located in inaccessible areas and elk harvests were below their potential in most states, construction of new roads was viewed as a positive contribution to more intensive elk management. Now, however, timber harvest is greater on previously unroaded national forests, and the network of roads is a major wildlife management problem. 5

- 6. A west central Idaho study shows elk occur in greater densities in roadless area compared to roaded areas, and hunter success is higher in roadless areas compared to roaded areas. 6
- 7. In another study, an expanding network of logging roads made elk more vulnerable to hunters and harassment, and higher road densities caused a reduction in the length and quality of the hunting season, loss of habitat, over harvest, and population decline. 7
- 8. Logging roads make nearby elk herds more vulnerable to human interference year-round, not just during hunting season. 8
- One result of road construction is the decreased capacity of the habitat to support elk from
 decreased habitat effectiveness. In highly-roaded areas in Montana, only 5% of bull elk live to
 maturity. Road closures extend the number of mature bulls to 16% and extend their longevity to
 7.5 years.
- 10. Deer and elk in Colorado avoid roads, particularly areas within 200 meters of a road. 10
- 11. Travel restrictions on roads appear to increase the capability of the area to hold elk in Montana.

 11
- 12. Road closures allow elk to remain longer in preferred areas. 12
- 13. Road closures in the Tres Piedras area in New Mexico during big game season are generally accepted by the public and result in increased elk harvest. 13
- 14. Increased hunter success was found in unroaded areas (25%) and reduced open-road density areas (24%) than roaded areas (15%). 14
- 15. Elk run away when ATVs passed within 2,000 yards but tolerate hikers within 500 feet, and then only walk away when hikers get closer. 15
- 16. Road-related variables have been implicated as increasing elk vulnerability in virtually every study in which the influence of roads has been examined. Bull elk vulnerability is highest in areas with open roads, reduced in areas with closed roads, and lowest in roadless areas. 16

B. The BLM violated NEPA by failing to conduct site-specific pre-leasing analysis of mineraldevelopment impacts on the special public lands in the disputed parcels

The BLM must analyze the impacts of subsequent development prior to leasing. The BLM has not analyzed Protesters' documentation of special surface values that will be permanently compromised by future development. Therefore, the BLM cannot defer all site-specific analysis to later stages such as submission of Applications for Permit to Drill ("APDs") or proposals for full-field development. Just as it is futile to try and put Humpty-Dumpy back together again, law and common sense require the agencies to analyze the impacts to crucial mule deer winter range and migration routes areas before issuing leases. Because stipulations and other conditions affect the nature and value of development rights conveyed by the lease, it is only fair that potential bidders are informed of all applicable lease restrictions before the lease sale.

An oil and gas lease conveys "the right to use so much of the leased lands as is necessary to explore for, drill for; mine, extract, remove and dispose of all the leased resource in a leasehold." 43 C.F.R. §3101.1-2. This right is qualified only by "[s]tipulations attached to the lease; restrictions deriving from specific, nondiscretionary statutes; and such reasonable measures as may be required by the authorized officer to minimize adverse impacts to other resource values, land uses or users not addressed in the lease stipulations at the time operations are proposed." 43 C.F.R. § 3101.1-2.

Unless drilling would violate an existing lease stipulation or a specific nondiscretionary legal requirement, the BLM argues lease development must be permitted subject only to limited discretionary measures imposed by the surface-managing agency. However, moving a proposed wellpad or access road a few hundred feet generally will fall short of conserving mule deer habitat and other special habitats.

Accordingly, the appropriate time to analyze the need for protecting site-specific resource values is before a lease is granted. Sierra Club v. Peterson established the requirement that a land management agency undertake appropriate environmental analysis prior to the issuance of mineral leases, and not forgo its ability to give due consideration to the "no action alternative," 717 F.2d 1409 (D.C. Cir. 1983). This case challenged the decision of the Forest Service ("FS") and BLM to issue oil and gas leases on lands within the Targhee and Bridger-Teton National Forests of Idaho and Wyoming without preparing an EIS. The FS had conducted a programmatic NEPA analysis, then recommended granting the lease applications with various stipulations based upon broad characterizations as to whether the subject lands were considered environmentally sensitive. Because the FS determined that issuing leases subject to the recommended stipulations would not result in significant adverse impacts to the environment, it decided that no EIS was required at the leasing stage of the proposed development. Id. at 1410. The court held that the FS decision violated NEPA:

Even assuming, arguendo, that all lease stipulations are fully enforceable; once the land is leased the Department no longer has the authority to preclude surface disturbing activities even if the environmental impact of such activity is significant. The Department can only impose "mitigation" measures upon a lessee . . . Thus, with respect to the [leases allowing surface occupancy] the decision to allow surface disturbing activities has been made at the leasing stage and, under NEPA, this is the point at which the environmental impacts of such activities must be evaluated.

Id. at 1414 (emphasis added). The appropriate time for preparing an EIS is prior to a decision "when the decision-maker retains a maximum range of options" prior to an action which constitutes an "irreversible and irretrievable commitments of resources[.]" Id. (citing Mobil Oil Corp. v. F.T.C., 562 F.2d 170, 173 (2nd Cir. 1977)); see also Wyoming Outdoor Council, 156 IBLA 347, 357 (2002) rev'd on other grounds by Pennaco Energy, Inc. v. US Dep't of Interior, 266 F.Supp.2d 1323 (D. Wyo. 2003).

The court in <u>Sierra Club</u> specifically rejected the contention that leasing is a mere paper transaction not requiring NEPA compliance. Rather, it concluded that where the agency could not completely preclude all surface disturbances through the issuance of NSO leases, the "critical time" before which NEPA analysis must occur is "the point of leasing." 717 F.2d at 1414. This is precisely the situation for disputed crucial mule deer parcels.

In the present case, the BLM is attempting to defer environmental review without retaining the authority to preclude surface disturbances. None of the environmental documents previously prepared by BLM examine the site-specific or cumulative impacts of mineral leasing and development to the crucial mule deer, elk and pronghorn winter ranges and migration routes. The agency has not analyzed the new information, nor has it assessed what stipulations, other than timing restrictions, might protect special surface values. This violates federal law by approving leasing absent environmental analysis as to whether NSO stipulations should be attached to the crucial mule deer winter ranges and migration routes lands.

Federal law requires performing NEPA analysis before leasing, because leasing limits the range of alternatives and constitutes an irretrievable commitment of resources. Deferring site-specific NEPA to the APD stage is too late to preclude development or disallow surface disturbances of important mule deer habitat.

C. The BLM violated NEPA by failing to consider NSO and No-Leasing Alternatives

The requirement that agencies consider alternatives to a proposed action further reinforces the conclusion that an agency must not prejudge whether it will take a certain course of action prior to completing the NEPA process. 42 U.S.C. §4332(C). CEO regulations implementing NEPA and the courts make clear

that the discussion of alternatives is "the heart" of the NEPA process. 40 C.F.R. §1502.14. Environmental analysis must "[r]igorously explore and objectively evaluate all reasonable alternatives." 40 C.F.R. §1502.14(a). Objective evaluation is no longer possible after agency officials have bound themselves to a particular outcome (such as surface occupation within these sensitive areas) by failing to conduct adequate analysis before foreclosing alternatives that would protect the environment (i.e. no leasing or NSO stipulations).

When lands with special characteristics, such as wilderness, are proposed for leasing, the IBLA has held that, "[t]o comply with NEPA, the Department must either prepare an EIS prior to leasing or retain the authority to preclude surface disturbing activities until an appropriate environmental analysis is completed." Sierra Club, 79 IBLA at 246. Therefore, formal NEPA analysis is required unless the BLM imposes non-waivable NSO stipulations. TRCP believes crucial winter ranges and migration routes are as special as wilderness and therefore require NEPA analysis before leasing.

Here, the BLM has not analyzed alternatives to the full approval of the leasing nominations for the parcels that contain or are within ¼ mile of crucial mule deer winter range and migration routes, such as NSO and no-leasing alternatives. 42 U.S.C. § 4332(2)(C)(iii). Federal agencies must, to the fullest extent possible, use the NEPA process to identify and assess the reasonable alternatives to proposed actions that will avoid or minimize adverse effects of these actions upon the quality of the human environment. 40 C.F.R. § 1500.2(e). "For all alternatives which were eliminated from detailed study," the agencies must "briefly discuss the reasons for their having been eliminated." 40 C.F.R. § 1502.14(a).

Further, BLM has not analyzed alternatives to the full approval of the leasing nominations for the parcels that contain or are within ¼ mile of known mule deer, elk and pronghorn winter range and migration routes, such as NSO and no-leasing alternatives.

Wyoming Outdoor Council held that the challenged oil and gas leases were void because BLM did not consider reasonable alternatives prior to leasing, including whether specific parcels should be leased, appropriate lease stipulations, and NSO stipulations. The Board ruled that the leasing "document's failure to consider reasonable alternatives relevant to a pre-leasing environmental analysis fatally impairs its ability to serve as the requisite pre-leasing NEPA document for these parcels." 156 IBLA at 359 rev'd on other grounds by Pennaco, 266 F.Supp.2d 1323 (D.Wyo., 2003) (holding that when combined NEPA documents analyze the specific impacts of a project and provide alternatives, they satisfy NEPA). The reasonable alternatives requirement applies to the preparation of an EA even if an EIS is ultimately unnecessary. See Powder River Basin Resource Council, 120 IBLA 47, 55 (1991); Bob Marshall Alliance v. Hodel, 852 F.2d 1223, 1228-29 (9th Cir. 1988), cert. denied, 489 US 1066 (1989). Therefore, the BLM must analyze reasonable alternatives under NEPA prior to leasing.

Here, lease stipulations must be designed to protect the important mule deer, elk and pronghorn habitats and migration routes in Montana. The agency, at a minimum, must perform an alternatives analysis to determine whether or not leasing is appropriate for these parcels given the significant resources to be affected and/or analyze whether or not NSO restrictions are appropriate. In this case, Protestor believes that the proposed lease sale parcels cannot lawfully proceed unless NSO stipulations are added for all parcels within these sensitive areas. Thus, BLM's failure to perform an alternatives analysis to determine the appropriateness of such restrictions in advance of leasing is arbitrary, capricious, and an abuse of discretion.

II. Federal Lands Policy and Management Act ("FLPMA")

A. The leasing decision violated FLPMA's requirement to prevent undue or unnecessary degradation of mule deer crucial winter ranges, known elk winter ranges, mule deer and elk migration routes, wild trout habitat characteristics in both Clark Canyon Reservoir and the Beaverhead River, and active Greater sage grouse leks and associated habitat

"In managing the public lands the [Secretary of Interior] shall, by regulation or otherwise, take any action necessary to prevent unnecessary or undue degradation of the lands." 43 U.S.C. §1732(b). In the context of FLPMA, by using the imperative language "shall", "Congress [leaves] the Secretary no discretion" in how to administer the Act. NRDC v. Jamison, 815 F.Supp. 454, 468 (D.D.C. 1992).

The BLM's duty to prevent unnecessary or undue degradation ("UUD") under FLPMA is mandatory, and BLM must, at a minimum, demonstrate compliance with the UUD standard. See, Sierra Club v. Hodel. 848 F.2d 1068 (10th Cir. 1988) (the UUD standards provides the "law to apply" and "imposes a definite standard on the BLM."). In this case involving proposed leasing of the protested parcels, the agency is required to demonstrate compliance with the UUD standard by showing that future impacts from development will be mitigated and thus avoid undue or unnecessary degradation of mule deer, elk and pronghorn crucial winter ranges, and migration routes,, and active Greater sage grouse leks and associated habitat. See e.g., Kendall's Concerned Area Residents. 129 IBLA 130, 138 ("If unnecessary or undue degradation cannot be prevented by mitigation measures, BLM is required to deny approval of the plan.").

BLM's obligation prevents UUD of the mule deer, elk and pronghorn winter ranges and migration routes are not "discretionary." "[T]he court finds that in enacting FLPMA, Congress's intent was clear: Interior is to prevent, not only unnecessary degradation, but also degradation that, while necessary...is undue or excessive." Mineral Policy Center v. Norton, 292 F.Supp. 2d 30, 43 (D.D.C., 2003) (emphasis supplied). "FLPMA, by its plain terms, vests the Secretary of the Interior with the authority—and indeed the obligation—to disapprove of an otherwise permissible...operation because the operation though necessary...would unduly harm or degrade the public land." Id. at 40 (emphasis supplied). In the case at hand, BLM has a statutory obligation to demonstrate that leasing in or adjacent to crucial mule deer and known elk winter ranges, mule deer and elk migration routes, wild trout habitat characteristics in both Clark Canyon Reservoir and the Beaverhead River, and active Greater sage grouse leks and associated habitat will not result in UUD.

Specifically, BLM must demonstrate that leasing will not result in future mineral development that causes UUD by irreparably damaging the habitat function of crucial mule deer winter ranges and migration routes that could lead to population decline. Further, the agency is required to manage the public's resources "without permanent impairment of the productivity of the land and the quality of the environment..." 43 U.S.C. §1702(c). See also; Mineral Policy Center v. Norton, 292 F.Supp. 2d at 49.

Existing analysis has not satisfied the BLM's obligation to comply with the UUD standard and prevent permanent impairment of the function of crucial winter ranges and migration routes of these public lands. Proceeding with leasing would be arbitrary, capricious, and an abuse of discretion.

III. The Mineral Leasing Act gives the BLM discretion over whether to lease the disputed parcels BLM has broad discretion in leasing federal lands. The Mineral Leasing Act ("MLA") provides that "[a]ll lands subject to disposition under this chapter which are known or believed to contain oil or gas deposits may be leased by the Secretary." 30 U.S.C. § 226(a). In 1931 the Supreme Court found that the MLA "goes no further than to empower the Secretary to lease [lands with oil and gas potential] which, exercising a reasonable discretion, he may think would promote the public welfare." U.S. ex rel. McLennan v. Wilbur, 283 U.S. 414, 419 (1931). A later Supreme Court decision stated that the MLA "left the Secretary discretion to refuse to issue any lease at all on a given tract." Udall v. Tallman, 85 S.Ct. 792, 795 (1965) reh. den. 85 S.Ct. 1325. Thus, the BLM has discretionary authority to approve or disapprove mineral leasing of public lands.

When a leasing application is submitted and before the actual lease sale, no right has vested for the applicant or potential bidders and BLM retains the authority not to lease.

"The filing of an application which has been accepted does not give any right to lease, or generate a legal interest which reduces or restricts the discretion vested in the Secretary whether or not to issue leases for the lands involved." <u>Duesing v. Udall</u>, 350 F.2d 748, 750-51 (D.C. Cir. 1965), *cert. den.* 383 U.S. 912 (1966). See also <u>Bob Marshall Alliance v. Hodel</u>, 852 F.2d 1223, 1230 (9th Cir. 1988) ("[R]efusing to issue [certain petroleum] leases ... would constitute a legitimate exercise of the discretion granted to the

Secretary of the Interior"); McDonald v. Clark, 771 F.2d 460, 463 (10th Cir. 1985) ("While the [MLA] gives the Secretary the authority to lease government lands under oil and gas leases, this power is discretionary rather than mandatory"); Burglin v. Morton, 527 F.2d 486, 488 (9th Cir. 1975) ("[T]he Secretary has discretion to refuse to issue any lease at all on a given tract"); Pease v. Udall, 332 F.2d 62 (C.A. Alaska) (Secretary of Interior has discretion to refuse to make any oil and gas leases of land); Geosearch, Inc. v. Andrus, 508 F. Supp. 839 (D.C. Wyo. 1981) (leasing of land under MLA is left to discretion of the Secretary of Interior). Similarly, IBLA decisions consistently recognize that BLM has "plenary authority over oil and gas leasing" and broad discretion with respect to decisions to lease. See Penroc Oil Corp., et al., 84 IBLA 36, 39, GFS (O&G) 8 (1985), and cases cited therein.

Withdrawing the protested parcels from the lease sale until proper pre-leasing analysis has been performed is a proper exercise of BLM's discretion under the MLA. BLM has no legal obligation to lease the disputed parcels and is required to withdraw them until the agencies have complied with applicable law.

CONCLUSION

For the reasons stated above, the protested parcels in Garfield and McCone counties are inappropriate for mineral leasing and development. Existing pre-leasing analysis does not comply with NEPA, FLPMA or other applicable law. Existing information on the impacts of intensified roads and vehicle traffic on mule deer and elk habitat and security and new information on condition and use of active Greater sage grouse leks and associated habitat have not been incorporated into BLM's evaluation of the proposed lease sale parcels. As a result, BLM's current RMPs is inadequate for prescribing stipulations to protect existing mule deer, elk, pronghorn and Greater sage grouse habitat and populations and associated public hunting and fishing use of those parcels. The lack of use of new information and the inadequacy of present land management seriously jeopardizes the annual contribution exceeding \$1 billion hunting and fishing make to Montana's economy.

The leasing of parcels containing or near active Greater sage grouse leks should be deferred until the federal status of the Greater sage grouse is determined, until range-wide populations of Greater sage grouse have increased to the degree that the species is no longer considered sensitive, and the potential for federal listing is not in question. In addition, at any time in the future when leasing might occur, all areas within a 1-mile radius of an active Greater sage grouse lek should carry a no-surface-occupancy (NSO) stipulation in the period March 1 to June 30. Montana citizens have raised substantial concerns about surface impacts to fish and wildlife resources and hunting and fishing opportunities, and the need for exclusions of parcels from leasing and NSO restrictions for parcels that can accommodate drilling but not surface occupancy of structures, equipment, vehicles or workers. The Protester respectfully requests that the State Director withdraw these disputed parcels from the July 31, 2007, competitive lease sale. In the event that the BLM proceeds to offer these parcels, all prospective bidders should be informed of the pending protest.

While the presentation in this current protest document appears critical of BLM, TRCP's intent is solely to works towards conservation of important fish and wildlife values and associated public hunting and fishing recreation while minerals are being extracted for the public good. In our view, there needs to be a new strategy to conserve fish and wildlife habitat and associated hunting and fishing recreation while minerals are being extracted from public lands and National Forest System lands. The current strategy employed by BLM in Wyoming, Colorado and Utah has and is resulting in enormous losses in fish and wildlife resource values that hunters and anglers believe are often avoidable with a new approach to public lands management. TRCP stands ready to assist BLM in devising a new public lands conservation strategy that fits with a sound mineral extraction program, but we see the current fast pace of leasing as preventing a more reasoned and less destructive management approach.

Respectfully submitted,

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Appendix A

Fourteen Questions for BLM Prior to Oil & Gas Lease Sales

- 1. Given that individual leases are not identified to the public until the lease sale notice and given that the only mechanism for addressing concerns is with an administrative protest, what is the Bureau of Land Management (BLM) doing to ensure that the public can be engaged outside of protests once lease parcels have been identified?
- 2. How will BLM ensure that the public lands proposed for leasing be managed for a balance of traditional multiple uses, including fish and wildlife habitat and hunting and fishing activities, as oil and/or gas exploration and potential full field development occurs?
- 3. How and when will BLM develop a specific conservation strategy in concert with Montana Fish, Wildlife & Parks (FWP) that will provide specific recommendations and actions to minimize impacts and proactively address fish and wildlife management and needs for the parcels offered for leasing?
- 4. How and where has BLM incorporated recommendations from FWP on how to maintain current big game and upland game bird population objectives in the parcels offered for leasing?
- 5. How will BLM establish plans for mitigation, detailed monitoring and the use of adaptive management to prevent, minimize or mitigate impacts of oil and/or gas exploration and development for the parcels offered for leasing?
- 6. How will this project impact the uses our members make of our public lands during of oil and/or gas exploration and development on these same lands?
- 7. What will BLM do to ensure that areas that are developed get restored so that they can be hunted again during our lifetime?
- 8. Because development might keep our members from being able to hunt for the rest of our life on public lands that our families and ourselves have traditionally used, what will BLM do to provide our members with alternative locations where they can continue hunting?
- 9. Will BLM pay for additional FWP Block Management areas, purchase or lease other areas, or provide additional access to huntable public lands in our area?
- 10. How will BLM mitigate the loss of fish and wildlife and fishing and hunting opportunity in the lease parcels where our members hunt and fish and where the losses have occurred, and how will you measure when replacement of that loss has occurred?
- 11. How long will this development take to be implemented, recovered, and mitigated before our members will be able to hunt here again? Seventy five years is well beyond our lifetimes and our children's lifetimes
- 12. How does BLM plan on helping FWP address the increased poaching and law enforcement needs that have been proved to be associated with development?
- 13. How does the amount of money suggested for mitigation relate to the revenues that will come from the developed area, and how does it relate to the habitat base and to the biological needs of wildlife populations being affected?
- 14. How does BLM plan on compensating hunters for the loss of numbers of big game and upland game birds that might occur as a result of development?

Appendix B

- 1. Berry, C., and R. Overly. 1976. Impacts of roads on big game distribution in portions of the Blue Mountains of Washington. *In Proceedings of the Elk-Logging-Roads Symposium*, pp. 62-68.
- 2. Leege, T.A. 1976. Relationship of logging to decline of Pete King elk herd. *In* Proceedings of the Elk-Logging-Roads Symposium, pp. 6-10.
- 3. Lyon, L.J. 1979. Habitat effectiveness for elk as influenced by roads and cover. Journal of Forestry 77 10:658-660.
- 4. Noss, R.F., and A.Y. Cooperrider, 1994. Saving Nature's Legacy: Protecting and Restoring Biodiversity. Defenders of Wildlife and Island Press, Washington, D.C.
- 5. Lyon, L.J., and A.L. Ward. 1982. Elk and Land Management In Elk of North America, pp. 453-456.
- 6. Thiessen, J.L. 1976. Some relations of elk to logging, roading and hunting in Idaho's Game Management Unit 39. *In Proceedings of the Elk-Logging-Roads Symposium*, pp. 3-5.
- 7. Lyon, L.J., and J.V. Basile. 1980. Influences of timber harvesting and residue management on big game. *In* Environmental Consequences of Timber Harvesting in Rocky Mountain Coniferous Forests. Symposium Proceedings, pp. 441-453.
- 8. Leptich, D.J., and P. Zager. 1991. Road access management effects on elk mortality and population dynamics. *In Proceedings of a symposium on elk vulnerability*, pp. 126-130.
- 9. Rost, G.R., and J.A. Bailey. 1979. Distribution of mule deer and elk in relation to roads. Journal of Wildlife Management 43(3):634-641.
- 10. Basile, J.V., and T.N. Lonner. 1979. Vehicle restrictions influence elk and hunter distribution in Montana. Journal of Forestry 77(3):155-159.
- 11. Irwin, L.L., and J.M. Peek. 1979. Relationship between road closure and elk behavior in northern Idaho. *In* North American elk: ecology, behavior, and management, pp. 199-204.
- 12. Johnson, J. 1977. Status and management report by member states and provinces. New Mexico status report. *In* Western States Elk Workshop, p. 19.
- 13. Gratson, M.W., and C.L. Whitman. 2000. Road closures and density and success of elk hunters in Idaho. Wildlife Society Bulletin 28(2):302-310.
- 14. Wisdom, M.J., A.A. Ager, H.K. Preisler, N.J. Cimon, and B.K. Johnson. 2004. Effects of off-road recreation on mule deer and elk. Transactions of the North American Wildlife and Natural Resources Conference 69:531-550.
- Lyon, L.J., Weber, and Burcham. 1997. Reducing Elk Vulnerability with Road Closures and Landscape Management: A Model.