GRAND RESOURCE AREA PROPOSED MANAGEMENT PLAN

FINAL ENVIRONMENTAL IMPACT STATEMENT

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
Moab District
Grand Resource Area, Utah

IN REPLY REFER TO

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Moab District
P. O. Box 970
Moab, Utah 84532

December 6, 1983

Dear Public Land User:

Enclosed is the proposed Resource Management Plan (RMP) and final Environmental Impact Statement (EIS) for the Grand Resource Area, Moab District, Utah. The Bureau of Land Management has prepared this document in partial fulfillment of its responsibilities under the Federal Land Policy and Management Act of 1976 and the National Environmental Policy Act of 1969.

The proposed RMP and final EIS is published in an abbreviated format and is designed to be used in conjunction with the Draft RMP/EIS published in March of 1983. Additional copies of the Draft RMP/EIS are available upon request from Colin P. Christensen, Area Manager, Bureau of Land Management, Grand Resource Area, P. O. Box M, Moab, Utah 84532 (telephone 801-259-8193).

This proposed RMP and final EIS contains an updated version of the summary from the draft (which serves as a link between the two documents), the proposed plan, the environmental consequences of the proposed plan, revisions and errata pertaining to the Draft RMP/EIS, public comments received on the draft, and the BLM's response to these comments.

The State Director shall approve the proposed RMP no earlier than 30 days after the Environmental Protection Agency publishes notice of receipt of the final EIS in the Federal Register; approval of the plan will be subject to final action on any protest that may be filed. Protests must conform to the requirements of Title 43 of the Code of Federal Regulations, Subpart 1610.5-2 and be filed with the Director of the Bureau of Land Management. The approval of the plan will be documented in a record of decision, which will be available to the public.

Thank you for your interest in the management of the public lands.

Sincerely yours,

Gene Nodine
District Manager

Denver Public Library
Denver, CO 80203-0094

PROPOSED RESOURCE MANAGEMENT PLAN and FINAL ENVIRONMENTAL IMPACT STATEMENT

FOR THE GRAND RESOURCE AREA

MOAB DISTRICT

UTAH

Prepared by

THE BUREAU OF LAND MANAGEMENT

U. S. DEPARTMENT OF THE INTERIOR

Gene Nodine
Moab District Manager

Roland G. Robison
Utah State Director

PROPOSED RESOURCE MANAGEMENT PLAN and FINAL ENVIRONMENTAL IMPACT STATEMENT
FOR THE GRAND RESOURCE AREA, MOAB DISTRICT, UTAH

( ) Draft (X) Final

Lead Agency

U. S. Department of the Interior, Bureau of Land Management

Type of Action

Administrative (X) Legislative ( )

Abstract

This proposed resource management plan (RMP) and final environmental impact statement (EIS), when combined with the draft statement, describes and analyzes four alternatives for managing the public lands and resources in the Grand Resource Area. They are: Alternative A, No Action; Alternative B, Production; Alternative C, Limited Protection; and Alternative D, Protection. In response to public comment, two new subalternatives have been developed for the Livestock Requirements Issue in this proposed RMP and final EIS. They are Graze at Preference and Reduced Livestock Grazing. The proposed plan, with the exception of sections pertaining to livestock requirements, utility corridor avoidance areas, locatable minerals, humates and wilderness, is patterned after the preferred alternative identified in the Draft RMP/EIS.

For further information, contact:

Colin P. Christensen, Area Manager
Bureau of Land Management
Grand Resource Area
P. O. Box M
Moab, Utah 84532

Telephone: (801) 259-8193

Date final statement made available to the Environmental Protection Agency and the public: December 16, 1983

INTRODUCTION

The proposed Resource Management Plan (RMP) and final Environmental Impact Statement (EIS) is printed in an abbreviated format and is designed to be used in conjunction with the Draft RMP/EIS published in March of 1983. The summary is designed to function as a link between the two documents. The summary contained in the draft document has been updated to include the proposed plan and revisions to the draft shown in Chapter 3 of this proposed RMP and final EIS. Two new subalternatives are described.

PLANNING AREA AND ISSUES

The Grand Resource Area (GRA) is comprised of 1,852,885 acres of public land within Grand County and the northern third of San Juan County, Utah. The Vernal BLM District administers all resources on 33,331 acres at the top of the Book Cliffs, leaving a total of 1,819,554 public land acres within the GRA that are included in the proposed RMP. The Grand RMP, one of six pilot RMPs prepared by the Bureau of Land Management (BLM), has been developed to provide guidance for managing these public lands. The RMP focuses on the following ten planning issues, which represent problem areas where management effort needs to be concentrated:

Critical Watersheds	Utility Corridors
Livestock Requirements	Minerals
Wildlife Habitat Requirements	Recreation
Off-Road Vehicle Use and Management	Fire Management
Lands Actions	Wilderness

These topics, which encompass concerns identified by members of the public, other agencies, entities of State and local governments, and BLM managers, are summarized as follows:

The Critical Watersheds issue revolves around (1) sedimentation and salinity in the upper Colorado River basin from public lands in the GRA and (2) disturbance and degradation of critical watersheds and floodplains.

The Livestock Requirements issue is concerned with four basic conflicts: (1) mineral activities are causing a loss of forage for livestock in specific heavy use areas; (2) off-road vehicle (ORV) activity is causing a loss of forage for livestock in specific heavy use areas; (3) improper season of use on some allotments has resulted in grazing during periods critical to the growth of forage plants; and (4) land treatments are needed to improve forage and better disperse and manage livestock. The development and analysis of grazing alternatives for this issue must meet the requirements for the court-mandated grazing EIS.

The Wildlife Habitat Requirements issue results from three basic conflicts: (1) in some parts of the GRA, livestock and wildlife compete for forage, water, and space; (2) mineral activities are resulting in a loss of wildlife habitat; and (3) recrea-

tional uses such as ORV travel in portions of the GRA may be conflicting with wildlife.

The ORV Use and Management issue is concerned with evaluation and categorization of the public lands into three ORV use designations as required by Executive Order 11644. The categories include an open designation, where the use of ORVs would be allowed subject only to general restrictions; a limited designation, where ORV use would be subject to specific restrictions such as staying on designated or existing routes; and a closed designation where ORV use would be prohibited. Restrictions would not apply to authorized ORV use.

The Lands Actions issue is concerned with (1) the identification of lands suitable for disposal, (2) the need to guarantee continued public access to whitewater rafting, and (3) supporting the protection of scenic and other values along the Colorado and Dolores rivers.

The Utility Corridors issue focuses on (1) the need for designated utility corridors to alleviate congestion caused by existing and proposed rights-of-way and (2) identification of avoidance areas to protect critical resources from disturbance that would occur within such corridors.

The Minerals issue revolves around balancing the production of minerals with the protection of sensitive resource values. This will require identification of (1) areas and values in need of protection and (2) protective measures that can be taken.

The Recreation issue is concerned with providing recreational opportunities to meet the increasing demand while protecting the resource base.

The Fire Management issue is based on the use of fire as a management tool. Full suppression of all fires can be costly and does not always benefit rangeland resources; lands with potential for improvement through the use of induced or natural fires need to be identified.

The BLM wilderness review process consists of three distinct phases: inventory, study, and reporting. At the end of the inventory phase, ten wilderness study areas (WSAs) were identified within the GRA. This number includes four areas of public land within the GRA that were remanded to the Moab District for re-inventory by the Interior Board of Land Appeals, and a fifth area which was determined to qualify for WSA status.

The role of the RMP during the wilderness study phase is to define how the WSAs would be managed if not designated wilderness by Congress. The proposed RMP does not make a recommendation regarding the wilderness suitability or nonsuitability of the WSAs. The wilderness suitability of each WSA will be addressed in the Utah statewide wilderness EIS. These preliminary wilderness suitability recommendations will be available for public review during 1984. Further information about each of the WSAs is contained in the wilderness site-specific analyses. These documents, already published in draft form, were written to meet the requirements of the BLM's wilderness study policy.

Areas under wilderness review will continue to be managed following the guidance of BLM's Interim Management Policy for Lands Under Wilderness Review, until they are either designated wilderness by Congress or released from wilderness review. Areas designated wilderness will be managed under the guidelines of the BLM's Wilderness Management Policy.

THE RMP ALTERNATIVES

Four alternatives were developed and analyzed in the Draft RMP/EIS. Each alternative represented a different approach to resolving the planning issues identified in the previous section. The alternatives presented in the Draft RMP/EIS were Alternative A, No Action; Alternative B, Production; Alternative C, Limited Protection; and Alternative D, Protection. Alternative C was identified in the draft as the preferred alternative.

Subsequent to the conclusion of the comment period on the Draft RMP/EIS, two new subalternatives pertaining to the Livestock Requirements Issue were developed in response to concerns expressed by the public. A Graze at Preference subalternative has been incorporated into the Production alternative, and a Reduced Livestock Grazing subalternative has been incorporated into the Protection alternative. Using this approach, actions described in the subalternatives would be substituted for some of the actions presently analyzed in the Draft RMP/EIS. Portions of the Production and Protection alternatives not directly modified by the subalternatives would be unaffected.

The management goals developed for the four alternatives analyzed in the Draft RMP/EIS are summarized in Table S-1. Separate goal statements for the subalternatives have not been developed, as the subalternatives represent different approaches to resolving the Livestock Requirements Issue within two of the alternatives discussed in the Draft RMP/EIS. The overall goals of the alternatives are thus the same as displayed in the draft document.

With these overall goals in mind, management objectives were written for each issue. The interdisciplinary team then drafted specific management actions and worked together to resolve conflicts between these draft management actions before the final versions were adopted. The four alternative plans and the two subalternatives with their component management actions are summarized in Table S-2. It is important to note that where no change is given for the subalternative, the action would be as described in the alternative.

ALTERNATIVES CONSIDERED BUT NOT ANALYZED

A No Livestock Grazing alternative for the resource area as a whole was considered in the Draft RMP/EIS, but was not included in the document because livestock grazing is an established use of the public lands recognized by Congress in the Taylor Grazing Act, the Federal Land Policy and Management Act, and the Public Rangeland Improvement Act. The elimination of livestock grazing from parcels of public land was considered for each allotment in the RMP/EIS alternatives and subalternatives. This approach allows removal of livestock to be considered for the protection or management of specific resource values.

Table S-1

Management Goals for the Alternatives

Alternative A No Action	Alternative B Production	Alternative C Limited Protection	Alternative D Protection
Goal: To continue the present level of resource use.	Goal: To implement a resource management plan that obtains the highest degree of consumptive use and commodity production allowable, considering legal constraints (environmental protection requirements, multiple use mandates, etc.).	Goal: To implement a resource management plan that provides a variety of uses within the sustained yield capability of the resource. It represents a balancing of conflicts between renewable and nonrenewable resources for the optimum multiple use mix, incorporating the necessary constraints for protecting renewable resources from irreversible decline.	Goal: To implement a resource management plan that is oriented toward protection and enhancement of the natural values, while allowing use and production only at levels that do not risk diminishing such values as wildlife habitat, critical watersheds, primitive recreation opportunities, and wilderness qualities.
	Trade-offs would emphasize consumptive uses (emphasize energy related mineral production, grazing, and development of commercial recreation, including ORV use.	Trade-offs would safeguard wildlife habitat, critical watersheds, wilderness values and non-ORV recreation, while accommodating production of minerals, livestock grazing, ORV recreation, and other commodities.	Trade-offs would favor protection of the resource over use of the resource, and would emphasize protection of wildlife habitat, critical watersheds, primitive recreation opportunities, and wilderness qualities.

Planning Issue	Alternative A No Action	Alternative B Production	Alternative C Limited Protection	Alternative D Protection
Critical Watersheds	Install instream drop structures on eight streams (8 allotments affecting 3,500 acres).	Install instream drop structures as in Alternative A.	Install instream drop structures as in Alternative A.	Install instream drop structures as in Alterantive A.
			Implement salinity control treatments (gully plugs, contour furrows, retention dams) on 41,000 acres (10 allotments).	Implement salinity control treatments as in Alternative C.
			Divert and evaporate water from Stinking Spring.	Divert and evaporate water from Stinking Spring as in Alternative C.
			Manipulate vegetation and initiate land and watershed treatments on three critical watershed subbasins (313,800 acres).	Manipulate vegetation and initiate land and watershed treatments on three critical watershed subbasins (630,000 acres).
Livestock Requirements	Continue present management on 1,348,527 acres (61 allotments) as follows:	Continue present management on 986,898 acres (45 allotments) as follows:	Continue present management on 833,545 acres (37 allotments) as follows:	Continue present management on 827,850 acres (34 allotments) as follows:
	Continue 6 allotment management plans (AMPs)(403,655 acres); maintain existing land treatments on 51,989 acres; and continue present levels of grazing (72,236 animal unit months (AUMs)).	Maintain existing land treatments and continue present levels of grazing as in Alternative A.	Maintain existing land treatments and continue present levels of grazing as in Alternative A.	Maintain existing land treatments and continue present levels of grazing as in Alternative A.
		Additional management is proposed as follows:	Additional management is proposed as follows:	Additional management is proposed as follows:
		Implement livestock manipulation techniques (fences, water developments, rotation of grazing use areas) on 765,284 acres (22 allotments).	Implement livestock manipulation techniques as in Alternative B on 488,636 acres (15 allotments).	Implement livestock manipulation techniques as in Alternative B on 382,429 acres (11 allotments).

TABLE S-2
Summary of Management Actions for the Alternatives

TABLE S-2 (Continued)

Planning Issue	Alternative A No Action	Alternative B Production	Alternative C Limited Protection	Alternative D Protection
		Implement land treatments on 70,705 acres (13 allotments; Increase of 8,839 AUMs).	Implement land treatments on 68,105 acres (13 allotments; Increase of 8,514 AUMs).	Implement land treatments as in Alternative C.
			Change season of use on 358,775 acres (13 allotments).	Change season of use on 478,478 acres (17 allotments).
			Change class of livestock on 69,042 acres (1 allotment).	Change class of livestock on 154,215 acres (2 allotments).
			Manage 3 miles of perennial streams by fencing and rotation of grazing use on allotments.	Manage 2 miles of perennial streams by fencing and rotation of grazing use on 2 allotments.
			Restrict livestock grazing from 27,000 acres (portions of 10 allotments; 558 AUMs).	Restrict livestock grazing from 50,000 acres (portions of 19 allotments; 1,099 AUMs).
				Restrict livestock grazing from 3 riparian areas (3 allotments).
				Eliminate livestock grazing on 33,489 acres (4 allotments; 658 AUMs).
				Restrict livestock grazing on 700 acres (portion of one allotment; 32 AUMs).
		Estimated future livestock AUMs are 79,096.	Estimated future livestock AUMs are 77,296.	Estimated future livestock AUMs are 73,874.

Graze at Preference Subalternative

Authorize all grazing use at full preference levels (109,707 AUMs; 11,314 AUMs are presently available for wildlife) to maximize livestock production. Monitoring studies (see Appendix L in the draft) will show changes in condition that will determine whether stocking rates should be adjusted.

Estimated future AUMs for this subalternative are 116,567 for livestock and 14,418 for wildlife. See additions to Appendix K in Chapter 3 of this proposed RMP and final EIS for AUMs by allotment.

Reduced Livestock Grazing Subalternative

Continue present management on 722,281 acres (28 allotments) to maintain and improve present medium to high ecological condition and to protect other resource values.

Implement livestock manipulation techniques on 282,436 acres (6 allotments).

Authorize grazing at a reduced level (average of past 5 years' licensed use minus the AUMs lost because of livestock management actions in this subalternative equals 52,255 AUMs for livestock; 11,314 AUMs are presently available for wildlife) to maintain and improve present ecological condition. Monitoring studies (sbe Appendix L in the draft) will show changes in condition that will determine whether stocking rates should be adjusted.

Estimated future AUMs for this subalternative are 55,665 for livestock and 22,242 for wildlife. See additions to Appendix K in Chapter 3 of this proposed RMP and final EIS for AUMs by allotment.

continued

TABLE S-2 (Continued)

Planning Issue	Alternative A No Action	Alternative B Production	Alternative C Limited Protection	Alternative D Protection
				Reduced Livestock Grazing Subalternative
				Change season of use on 197,829 acres (9 allotments) to provide for growth requirements of perennial plants and to restrict use of spring forbs by livestock in critical wildlife areas.
				Eliminate grazing on 146,245 acres (6 allotments; 1,981 AUMs; to protect riparian vegetation and eliminate forage competition with wildlife.
				Restrict livestock grazing from 536,534 acres (portions of 15 allotments, 5,587 AUMs; and 8 entire allotments, 8,789 AUMs) to lessen impact on highly saline soils and reduce salinity in the Colorado River drainage.
				Eliminate grazing on 20,590 acres (3 allotments; 519 AUMs) to protect riparian vegetation and a municipal watershed.
				Eliminate livestock grazing on 1,385 acres (1 allotment; 39 AUMs) to reserve forage for deer and elk and to protect a cold water fishery.
				Eliminate livestock grazing on 103,487 acres (6 allotments; 3,066 AUMs) to reserve forage and space for bighorn sheep.

Wildlife Habitat Requirements	Maintain existing wildlife waters and habitat conditions in support of current big game populations (9,735 deer; 1,030 elk; 259 bighorn; and 180 antelope).	Same as Alternative A.	Maintain existing wildlife waters.	Maintain existing wildlife waters.
			Reserve all forage on the following areas for deer and elk winter use: Pear Park, 14,720 acres; Spring Creek, 924 acres; and Castle Valley, 6,400 acres.	Reserve all forage on the same areas as Alternative C for deer and elk.
			Manage wildlife habitat in support of current bighorn population (259) and long-term management goals for other big game (22,250 deer; 2,300 elk; and 887 antelope).	Manage wildlife habitat in support of long-term management goals for big game populations (22,250 deer, 2,300 elk; 1,314 bighorn; and 887 antelope).
Off-Road Vehicle Use and Management	Maintain the entire GRA (1.8 million acres) as open for ORVs.	Designate the entire GRA as open for ORVs.	Designate 596,234 acres as limited to existing roads and trails. This includes Mancos Shale areas; the Colorado, Green and Dolores river corridors; the Canyon Rims Recreation Area; and the viewshed for Dead Horse Point State Park.	Cover same area listed in Alternative C under the same designation. Also limit ORV use to existing roads and trails in the floodplains of 150 miles of streams (10 floodplains); and 250 miles of stream channel (10 major washes).
			Designate 24,454 acres as closed to ORVs. This would include Negro Bill Canyon; Behind the Rocks; Westwater Canyon; Windwhistle and Hatch Point campgrounds; Canyonlands, Needles and Anticline overlooks and Onion Creek sensitive plant site.	Cover same area listed in Alternative C under the same designation.

continued

TABLE S-2 (Continued)

Planning Issue	Alternative A No Action	Alternative B Production	Alternative C Limited Protection	Alternative D Protection
			Designate 15,206 acres (Mill Creek area) as limited to designated roads and trails.	Cover the same area listed in Alternative C under the same designation.
Lands Actions	Continue to process lands disposal requests individually.	Retain 1,790,389 acres of public land.	Retain 1,801,331 acres of public land.	Retain 1,806,318 acres of public land.
		Consider 22,571 acres of public land for disposal.	Consider 11,629 acres of public land for disposal.	Consider 6,642 acres of public land for disposal.
		Identify 6,594 acres of public land for further study to determine whether it should be retained or disposed of.	Identify 6,594 acres of public land for further study as in Alternative B.	Identify 6,594 acres of public land for further study as in Alternative B.
		Acquire an access easement involving 6 acres of private land at the Cisco boat launch area on the Colorado River.	Acquire an access easement as in Alternative B.	Acquire an access easement as in Alternative B.
				Acquire scenic easements on 9,990 acres of private land along 80 miles of the Dolores Colorado river corridors.
Utility Corridors	Continue to handle all major right-of-way requests individually. Consider situating new facilities within existing de facto corridors.	Consider designating approximately 140 miles of de facto corridors as official utility corridors.	Consider designating utility corridors as in Alternative B.	Consider designating utility corridors as in Alternative B.

		Avoid situating major rights-of-way within 48,245 acres of resource conflict acres.	Avoid situating major rights-of-way within 130,164 acres of resource conflict areas.	Avoid situating major rights-of-way within 282,350 acres of exclusion areas and 563,190 acres of avoidance areas.
Minerals	Leave the entire GRA (1.8 million acres) open to mining claims for locatable minerals under the 1872 Mining Law; with the exception of 1,850 acres of existing mineral withdrawals.	Leave the entire GRA open to mining claims as in Alternative A (with same exceptions).	Withdraw 32,000 acres along the Colorado River from mineral entry, in addition to 1,850 acres of existing withdrawals. Areas left open to mining claims would total 1.77 million acres.	Withdraw 47,000 acres along the Colorado River from mineral entry, in addition to 1,850 acres of existing withwithdrawals. Areas left open to mining claims would total 1.75 million acres.
	Maintain existing potash leases on approximately 4,600 acres. Allow potash prospecting on approximately 150,000 acres.	Maintain potash leases and allow prospecting as in Alternative A.	Maintain potash leases and allow prospecting as in Alternative A.	Maintain potash leases and allow prospecting as in Alternative A.
	Continue present application of the oil and gas category system: Category — Acres 1 — 1,682,762 2 — 58,221 3 — 70,401 4 — 8,170	Classify the entire GRA (1.8 million acres) as Category 1 for oil and gas leasing.	Modify application of the oil and gas category system: Category — Acres 1 — 1,156,560 2 — 563,808 3 — 70,274 4 — 28,912	Modify application of the oil and gas category system: Category — Acres 1 — 744,262 2 — 776,359 3 — 53,815 4 — 245,118
	Continue to allow sales of sand and gravel on 6,000 acres free of mining claims.	Continue to allow sales of sand and gravel as in Alternative A.	Continue to allow sales of sand and gravel as in Alternative A.	Continue to allow sales of sand and gravel as in Alternative A.
	Continue existing contract for sale of humates on 250 acres.	Continue existing humates contract as in Alternative A. Allow sales of humates on approximately 1,500 additional acres that are free of mining claims.	Continue existing humates contract as in Alternative A.	Continue existing humates contract as in Alternative A.

continued

TABLE S-2 (Concluded)

Planning Issue	Alternative A No Action	Alternative B Production	Alternative C Limited Protection	Alternative D Protection
Recreation	Maintain developed facilities including 2 campgrounds, 5 picnic sites, 3 scenic overlooks, 5 miles of hiking trails, 10 miles of motorcycle trails, and 27 miles of scenic roads.	Maintain developed facilities as in Alternative A.	Maintain developed facilities and in Alternative A.	Maintain developed facilities as in Alternative A.
		Construct rest rooms at seven heavily used recreation sites along the Colorado River.	Construct rest rooms as in Alternative B.	Construct rest rooms as in Alterantive B.
	Continue to issue recreation permits (four-wheel drive vehicle tours, horseback trips, etc.)	Continue to issue recreation use permits as in Alternative A.	Continue to issue recreation use permits as in Alternative A.	Continue to issue recreation use permits as in Alternative A.
	Continue to permit competitive and noncompetitive ORV events.	Continue to permit ORV events as in Alternative A.	Continue to permit ORV events as in Alternative A.	Continue to permit ORV events as in Alternative A.
	Continue the existing river management program on the Colorado and Dolores rivers (24,000 passenger days per year; 30 commercial outfitters).	Continue the existing river management program as in Alternative A.	Continue the existing river management program as in Alternative A.	Continue the existing river management program as in Alternative A.
	Continue to manage 65 miles of the Colorado and Dolores river study corridors as required under the Wild and Scenic Rivers Act.	Continue to manage the river study corridors as under Alternative A.	Continue to manage the river study corridors as under Alternative A. Designate 1,375 acres in Negro Bill Canyon as an Outstanding Natural Area (ONA).	Continue to manage the river study corridors as under Alternative A.
Fire Management	Continue to suppress all fires on public lands.	Implement a limited fire suppression policy on the entire GRA (1.8 million acres).	Implement a limited fire suppression policy as in Alternative B.	Implement a limited fire suppression policy as in Alternative B.
		Initiate prescribed fires and seeding on approximately 14,149 acres (11 allotments).	Initiate prescribed fires and seeding as in Alternative B.	

The No Livestock Grazing alternative would differ from the No Action alternative, as illustrated in the following quote from Council on Environmental Quality information published in the Federal Register (CEQ, 1981).

> There are two distinct interpretations of no action that must be considered, depending on the nature of the proposal being evaluated. The first situation might involve an action such as updating a land management plan where ongoing programs initiated under existing legislation and regulations will continue, even as new plans are developed. In these cases no action is no change from current management direction or level of management intensity. Therefore, the no action alternative may be thought of in terms of continuing with the present course of action until that action is changed.

IMPACT ANALYSIS

The changes (or impacts) that would be imposed upon land uses and components of the human environment by the management actions set forth in the alternatives and subalternatives are identified and analyzed. The impacts that would result from the proposed RMP, which is a combination of the alternatives, are discussed in detail in Chapter 2 of this proposed RMP and final EIS. The land uses and environmental components are:

Soils	Wildlife	Visual Resources
Water Quality	Mineral Resources	Special Designation Areas
Air Quality	Mineral Rights	Recreation
Vegetation	Transportation	Economic Conditions
Livestock Grazing	Cultural Resources	Social Conditions

The impacts upon these environmental components are summarized in Table S-3. It is important to note that where no change is given for the subalternative, the impacts would be as described in the alternative.

TABLE S-3
Comparative Summary of Management Actions and Impacts

Alternative A No Action	Alternative B Production	Alternative C Limited Protection	Alternative D Protection
Soils-There would be a short-term increase in erosion from land treatments and energy and mineral development and an increase in soil erosion and loss of site productivity in the long term as a result of ORV use.	Soils-There would be a short-term increase in erosion from land treatments and energy and mineral development and an increase in soil erosion and loss of site productivity in the long term as a result of ORV use. Subalternative: With livestock grazing at preference levels, soil erosion rates would also increase, resulting in additional losses in soil productivity.	Soils-There would be a short-term increase in erosion from land treatments and a minimal short-term increase in erosion from oil and gas activity. Improved water infiltration and minimal soil compaction would result in decreased soil loss and increased productivity due to ORV restrictions in the long term.	Soils-There would be a short-term increase in erosion from land treatments. Restrictions on oil and gas activity, livestock grazing, and ORV use would improve water infiltration, minimize soil compaction, retain onsite soil productivity, and result in an overall increase in productivity. Subalternative: With livestock grazing at reduced levels, soil erosion rates would also decrease because of an increase in vegetative cover and a decrease in soil disturbance.
Water Quality-There would be a short-term increase in sediment and salinity from maintenance of land treatments and energy and mineral development and a long-term decrease in water quality from increases in sediment and salinity from ORV use.	Water Quality-There would be a short-term increase in sediment and salinity from maintenance of land treatments and energy and mineral development and a long-term decrease in water quality from increases in sediment and salinity from ORV use. Subalternative: With livestock grazing at preference levels, water quality would decline; sediment and salinity would increase.	Water Quality-There would be a short-term increase in sediment and salinity from land treatments and energy and mineral development and a long-term net decrease of 19,408 tons of salt and 187,640 tons of sediment annually into the Colorado River through instream drop structures, salinity control projects, changing the season of livestock use, control of ORV use, and the application of the oil and gas categories.	Water Quality-There would be a short-term increase in sediment and salinity from land treatments and energy and mineral development and a long-term net decrease of 28,970 tons of salt and 261,360 tons of sediment annually into the Colorado River through instream drop structures, salinity control projects, changing the season of livestock use, control of ORV use and the application of the oil and gas categories. Subalternative: There would be a long-term net decrease of 39,360 tons of salt and 497,173 tons of sediment annually into the Colorado River.

Air Quality-No significant impact would occur to air quality.	Air Quality-Some significant short-term impacts on air quality could occur under a limited fire suppression policy or during prescribed fires.	Air Quality-Some significant short-term impacts on air quality could occur under a limited fire suppression policy or during prescribed fires.	Air Quality-Some significant short term impacts on air quality could occur under a limited fire suppression policy.
Vegetation-Vegetation would be affected as follows:	Vegetation-Vegetation would be affected as follows:	Vegetation-Vegetation would be affected as follows:	Vegetation-Vegetation would be affected as follows:
Present livestock management at the level of past 5 years' licensed use would maintain ecological conditions on 1,348,527 acres. Vegetation would increase around instream structures. Overall vigor of the vegetation would be maintained or improved on 403,655 acres under existing AMPs.	Present livestock management at the level of past 5 years' licensed use would maintain ecological conditions on 986,898 acres; these conditions would be maintained or improved by livestock manipulations on 765,284 acres. Subalternative: With livestock grazing at preference levels, ecological condition would decline on 986,898 acres.	Present livestock management at the level of past 5 years' licensed use would maintain ecological conditions on 833,545 acres; these conditions would be maintained or improved by livestock manipulations on 488,636 acres.	Present livestock management at level of past 5 years' licensed use would maintain ecological conditions on 827,850 acres; these conditions would be maintained or improved by livestock manipulations on 382,429 acres.
Maintenance of land treatments would change vegetative composition on 52,000 acres. Decreases in vegetation would occur on 350 to 500 acres per year because of oil and gas activities; on 250 acres in the humate sale area; on 30 acres per year because of mining claim development; on an undetermined number of acres due to activities under recreation use permits; on areas transferred in land dis-	Vegetation would increase around instream structures and on 14,149 acres treated with prescribed fire and seeding. Species composition would be changed on 52,000 acres where existing land treatments are maintained, and on 70,700 acres where new ones are implemented. Decreases in vegetation would occur	Ecological conditions would be improved through restriction of grazing on 27,000 acres of saline soils and on 3 miles of perennial streams, and would be maintained on 32,000 acres where mineral withdrawals would be implemented. Perennial forage plants would be protected through season of livestock use changes on 358,775 acres, and by the restrictions on ORV use. Change in class of livestock on	Ecological conditions would be improved through restriction of grazing on 50,000 acres of saline soils, 2 miles of perennial streams, and through elimination of grazing on 34,189 acres, and would be maintained on 47,000 acres under mineral withdrawals. Perennial forage plants would be protected through season of livestock use changes on 478,478 acres. Vigor of browse would be

continued

TABLE S-3 (Continued)

Alternative A No Action	Alternative B Production	Alternative C Limited Protection	Alternative D Protection
posal; and in areas where ORV use is continued. Maintenance of existing watershed improvements would prevent improvement of vegetation in those areas.	on 400 to 550 acres per year because of oil and gas activities; on the 1,750 acres where humates would be removed; on 30 acres per year because of mining claim development; on an undetermined number of acres due to activities under recreation use permits; and in areas where ORV use is continued. Maintenance of watershed improvements would prevent improvement of vegetation in those areas. There would be a long-term decrease in pinyon-juniper and saagebrush communities because of limited fire suppression and prescribed fire.	69,042 acres would increase vigor of browse species, while decreasing vigor of grass. Vegetation would increase around instream structures, salinity control structures, watershed treatment areas, and on 14,149 acres treated by prescribed fire. Species composition would be changed on 52,000 acres where existing land treatments are maintained and on 68,100 acres where new ones are implemented.	increased and vigor of grass decreased on 154,215 acres through change in class of livestock. Species composition would be changed on 52,000 acres where existing land treatments are maintained and on 68,100 acres where new ones are implemented. Subalternative: Ecological condition would be maintained on 722,281 acres; these conditions would be maintained or improved on 282,436 acres. Ecological conditions would be improved on 536,534 acres of saline soils and through elimination of grazing on 125,462 acres, and would be maintained on 47,000 acres under mineral withdrawals. Perennial forage plants would be protected through season of livestock use changes on 197,829 acres.
	Vegetation on up to 22,471 acres could be lost to BLM management through land disposal actions.	Decreases in vegetation would occur on 300 to 400 acres per year because of oil and gas activities; on the 250 acres in the humate sale; on 30 acres per year because of mining claim development; on an undetermined number of acres due to activities under recreation use permits; and in areas where ORV use is continued. Maintenance of watershed improvements would prevent improvement of vegetation in those areas. There would be a long-term decrease	Vegetation would increase around instream structures, salinity control structures, and watershed treatment areas. There would be a 5 percent increase in ground cover in areas of ORV closures. Decreases in vegetation would occur on 250 to 400 acres per year because of oil and gas activities; on 250 acres in the humate sale; on 30 acres per year because of mining claim development; on an

		In pinyon-juniper and sagebrush communities because of limited fire suppression and prescribed fire. Vegetation on up to 11,629 acres could be lost to BLM management through land disposal actions.	undetermined number of acres due to activities under recreation use permits; and in areas where ORV use is continued. Maintenance of watershed improvements would prevent improvement of vegetation in those areas. There would be a long-term decrease in pinyon-juniper and sagebrush communities because of limited fire suppression. Vegetation on up to 6,642 acres could be lost to BLM management through land disposal actions.
Livestock Grazing-There would be no gain in AUMs. Loss of AUMs could occue through land disposal.	Livestock Grazing-There would be a net gain of 6,860 AUMs, due to land treatments, prescribed fire, and land disposal.	Livestock Grazing-There would be a net gain of 5,060 AUMs, due to land treatments, construction of an evaporation pond, grazing restrictions, prescribed fire, and land disposal. A total of 1,497 sheep AUMs would be converted to cattle AUMs.	Livestock Grazing-There would be a net gain of 1,638 AUMs due to land treatments, construction of an evaporation pond, grazing restrictions, and land disposal. A total of 4,374 sheep AUMs would be converted to cattle AUMs. Subalternative: There would be a net loss of 16,571 AUMs for livestock due to restrictions and elimination of livestock grazing, construction of an evaporation pond, land treatments, and land disposals. A total of 4,374 sheep AUMs would be converted to cattle AUMs.
Wildlife-Wildlife habitat would be affected as follows: Continuing present livestock management would cause a loss of wildlife habitat productivity on 27 allotments, and big game species would continue to compete with live-	Wildlife-Wildlife habitat would be affected as follows: Continuing present livestock management would cause a loss of wildlife habitat productivity on 14 allotments, and big game species would continue to compete with live-	Wildlife-Wildlife habitat would be affected as follows: Continuing present livestock management would cause a loss of wildlife habitat productivity on 9 allotments, and big game species would continue to compete with live-	Wildlife-Wildlife habitat would be affected as follows: Continuing present livestock management would cause a loss of wildlife habitat productivity on 6 allotments, and big game species would continue to compete with

continued

Alternative A No Action	Alternative B Production	Alternative C Limited Protection	Alternative D Protection
stock for forage and space on 23 allotments. It would also cause a continued decrease in ecological condition for riparian and aquatic habitat on four allotments. Habitat productivity for deer, elk, and bighorn sheep would decrease under two AMPs. One riparian area would continue to decrease in ecological condition under one AMP. Impacts of any land disposal action would be analyzed during consideration of the disposal request. Under present oil and gas categories, 99 percent of the deer and elk winter range in Herd Unit 28-B is open to year-round exploration and development activities. Approximately 56 percent of the desert bighorn sheep habitat within the Mineral Bottom area, 100 percent of the Rattlesnake area, and 68 percent of the Potash area is open to year-round oil and gas exploration and development activities.	stock for forage and space on 10 allotments. It would also cause a continued decrease in ecological condition for riparian and aquatic habitat on four allotments. Livestock manipulation techniques would improve habitat and reduce spatial competition on 22 allotments. Land treatments (including prescribed fire) would add 2,617 AUMs for deer elk, and antelope. Potash development could result in the loss of 50 percent (13,507 acres) of desert bighorn sheep habitat. The disposal of two 80-acre tracts along the Colorado River could cause loss of habitat for game and nongame species (including bald eagle). Placing the entire GRA under Oil and Gas Leasing Category 1 would allow year-round oil and gas activities that could affect 200,769 acres of deer and elk winter range, including calving and fawning areas. It could cause the loss of 25,168 acres of antelope habitat. Oil and gas activities could cause impacts on approximately 44,816 acres of desert bighorn sheep habitat.	stock for forage and space on 8 allotments. It would also cause a continued decrease of riparian and aquatic habitat on one allotment. Livestock manipulation techniques would improve 3 miles of perennial stream and improve habitat on 15 allotments. Land treatments (including prescribed fire) would provide an additional 4,886 AUMs. Season of livestock use changes would reduce competition with livestock for bighorn elk and antelope on 13 allotments and improve riparian habitat on one allotment. Change in class of livestock would reduce competition with livestock for elk and deer on winter and spring forage areas in one allotment. Restricting livestock grazing from portions of 10 allotments (27,000 acres) would improve forage for nongame wildlife species and allow big game populations to remain stable. Limiting ORVs to existing roads and trails would reduce disturbance to wildlife. The exclusion and/or avoidance of establishing rights-of-way within 130,164 acres in resource conflict	livestock for forage and space on 6 allotments. Livestock manipulation techniques would improve 2 miles of perennial streams and improve the habitat on 2 allotments. Land treatments, elimination of livestock grazing (4 allotments), and restriction of livestock grazing (700 acres) would result in a net gain of 5,681 AUMs for wildlife ungulates, and protection of both aquatic and riparian habitats on one allotment. Season of use changes would reduce competition for bighorn, antelope and elk on 16 allotments and improve both aquatic and riparian habitats on one allotment. Change in class of livestock on 2 allotments would reduce deer, elk and antelope competition for winter/spring forage. Rotational grazing on 2 miles of perennial stream (2 allotments) would restore and improve riparian habitat. Reservation of all forage on 3 areas (22,044 acres) would assure winter/spring forage for deer and elk. Limiting ORV use to existing roads and trails would reduce disturbance to wild-

Subalternative: Until the grazing carrying capacities are determined, it is not known what additional impacts would result from grazing at full preference levels. Impacts would be at least as great as under Alternative B.

areas would protect 48,245 acres of bighorn sheep habitat. Oil and gas category stipulations would provide protection for 200,769 acres of deer and elk winter range; 25,431 acres of antelope habitat; 16,873 acres of bighorn habitat; and 3,840 acres of Golden eagle nest sites. Potash development could cause loss of 13,567 acres (50 percent) of bighorn sheep habitat.

life. Exclusion and avoidance of 533,496 acres of bighorn sheep habitat and deer and elk winter range in establishing rights-of-way would protect those areas. Oil and gas catecory stipulations would provide protection for 200,769 acres of deer and elk habitat, 16,873 acres of bighorn sheep habitat, 25,431 acres of antelope habitat, and 3,840 acres of golden eagle nest sites.

Subalternative: Continuing present livestock management would cause a loss of wildlife habitat productivity on five allotments, and big game species would continue to compete with livestock for forage and space on five allotments. Livestock management would improve 2 miles of perennial streams and improve habitat on two allotments.

continued

TABLE S-3 (Continued)

Alternative A No Action	Alternative B Production	Alternative C Limited Protection	Alternative D Protection
			Land treatments and elimination of livestock grazing on 16 allotments would result in a net gain of 10,928 AUMs for wildlife ungulates and protection of both aquatic and riparian habitats in seven allotments. Season of use changes would reduce competition for bighorn, antelope, and elk on six allotments and improve both aquatic and riparian habitats on one allotment. Change in class of livestock on two allotments would reduce deer, elk, and antelope competition for winter/spring forage. Reservation of all forage on three areas (22,044 acres) would assure winter/spring forage for deer and elk.
Mineral Resources-As a result of activities under the oil and gas category system now being applied, 150 oil and gas wells are being drilled annually, with annual production of approximately 10 million MCF (thousand cubic feet) of natural gas and 50,000 barrels of oil resulting.	Mineral Resources-As a result of activities under the oil and gas category system application for this alternative; approximately 155 oil and gas wells would be drilled annually, with annual production of approximately 10 million MCF of natural gas and 50,000 barrels of oil resulting.	Mineral Resources-As the result of activities under the oil and gas category system application for this alternative, approximately 145 oil and gas wells would be drilled annually, with annual production of approximately 9.5 to 9.9 million MCF of natural gas and 49,500 barrels of oil resulting.	Mineral Resources-As the result of oil and gas activities under the oil and gas category system application for this alternative, approximately 140 oil and gas wells would be drilled annually with annual production of approximately 9.4 to 9.8 million MCF of natural gas and 47,500 barrels of oil resulting.
Salable mineral management has resulted in the annual removal of as much as 2.5 million tons of gravel per year. Also, humate production is estimated to become 50,000 tons annually after the project begins.	Salable minerals management would result in the annual removal of as much as 2.5 million tons of gravel per year. Humate production is estimated to become as much as 150,000 tons a year depending on the production and market conditions after project begins.	Salable minerals management would result in the removal of the same amount of sand, gravel and humate material as that for Alternative A.	Salable minerals management would result in the removal of the same amount of sand, gravel and humate material as that for Alternatives A and C.

As a result of locatable minerals management, gold production could run as high as 600 ounces per year, and uranium production could run as high as 1 million pounds of yellowcake.	As a result of locatable minerals management, the same amount of gold and yellowcake would be produced as in Alternative A.	As a result of locatable minerals management, the same amount of gold and yellowcake would be produced as in Alternatives A and B.	As a result of locatable minerals management, the same amount of gold and yellowcake would be produced as in Alternatives A, B, and C.
Mineral Rights-Under the existing management action the entire GRA is open to mining claims, with the exception of 1,850 acres withdrawn from mineral entry for protection of widely scattered campgrounds and scenic sites. About 200,000 mining claims exist in the GRA; of these about 500 are for placer gold and the balance are for uranium.	Mineral Rights-The entire GRA would be open to mining claims with the exception of 1,850 acres withdrawn from mineral entry for widely scattered campgrounds and scenic sites. About 20,000 mining claims would continue to exist in the GRA (500 placer gold, the balance uranium). Lands on which mining claims are abandoned could be restaked at any location in the GRA.	Mineral Rights-The entire GRA would be open to mining claims with the following exceptions: 1,850 acres under existing withdrawal orders for protection of campgrounds and scenic sites; 32,000 acres under new withdrawal orders for protection of scenic lands along the Colorado River. Existing claims that are located within the 32,000-acre withdrawal area would still be recognized, but once abandoned, could not be restaked.	Mineral Rights-The entire GRA would be open to mining claims with the following exceptions: 1,850 acres under existing withdrawal orders for protection of campgrounds and scenic sites; 47,000 acres under new withdrawal orders for protection of scenic lands along the Colorado and Dolores rivers. Existing mining claims that are located within the 47,000-acre withdrawal area would still be recognized, but once abandoned, could not be restaked. There is no means of estimating any rate of abandonment under this alternative. A few uranium claims and virtually all of the 500 placer gold mining claims in the GRA would fall in the withdrawal area.

continued

TABLE S-3 (Continued)

Alternative A No Action	Alternative B Production	Alternative C Limited Protection	Alternative D Protection
Transportation-An additional 10 to 15 miles of roads would be build annualy from development of mining claims. Oil and gas exploration and development would add 75 to 100 miles of road per year. There would be a slight increase in roads developed through increasing ORV use.	Transportation-Development of locatable minerals would result in at lease 10 to 15 miles of new roads per year. Oil and gas exploration and development would lead to more than the current number of miles of road (75 to 100 miles). There would be a slight increase in roads developed through increasing ORV use.	Transportation-The impact on transportation from development of mining claims would be insignificant. Roads and trails would degenerate over 635,894 acres where ORV use would be limited or eliminated. New road construction from oil and gas exploration would fall below the current 75 to 100 miles per year.	Transportation-Reducing the amount of acreage open to mining claims may bring a slight decrease from the 75 to 100 miles of new roads now being developed each year. Roads and trails would degenerate over the 635,894 acres and within the ten floodplains and ten major washes where ORV use would be limited or eliminated. New road construction from oil and gas exploration would fall below the current 75 to 100 miles per year.
Cultural Resources-No significant impacts would occur to cultural resources.	Cultural Resources-No significant impacts would occur to cultural resources.	Cultural Resources-No significant impacts would occur to cultural resources.	Cultural Resources-No significant impacts would occur to cultural resources.
Visual Resources-Oil, gas, and potash activities could temporarily change visual characteristics; however, affected areas would return to the original visual quality over the long term.	Visual Resources-Chaining, oil and gas, and potash activities would have short-term effects on visual characteristics; however, affected areas would return to the original visual quality in the long term.	Visual Resources-Chaining, oil and gas, and potash activities would have short-term effects on visual characteristics; however, affected areas would return to the original visual quality in the long term.	Visual Resources-Chaining, oil and gas, and potash activities would have short-term effects on visual characteristics; however, affected areas would return to the original visual quality in the long term.
Special Designation Areas-ORVs would cause some loss of scenic values on 635,894 acres and 250 miles of floodplains.	Special Designation Areas-ORVs would cause some loss of scenic values on 635,894 acres and 250 miles of floodplains.	Special Designation Areas-The designation of 635,894 acres as under restrictions for ORV use and the oil and gas category stipulations would help provide protection for 22 areas identified as possessing exceptional scenic qualities, and 65 miles of Wild and Scenic River study corridors.	Special Designation Areas-The designation of 635,894 acres and 250 miles of stream channel as under restrictions for ORV use and the oil and gas category stipulations would help provide protection for 22 areas identified as possessing exceptional scenic qualities, 65 miles of wild and Scenic River study corridors and water quality.

Recreation-A long-term increase in recreational ORV use on the 70,000 acres now in use would occur.	Recreation-A long-term increase in recreational ORV use on 70,000 acres now in use would occur.	Recreation-Restrictions on ORV use would decrease recreational ORV opportunities.	Recreation-Restrictions on ORV use would decrease recreational ORV opportunities.
Oil and gas activities permitted under the prevailing oil and gas category system application would cause the loss of some resource values on seven of the 22 areas identified as containing exceptional scenic recreational opportunities.	Oil and gas activities permitted under the oil and gas category system for this alternative would cause the loss of resource values on 22 areas identified as containing exceptional scenic recreational opportunities.	The oil and gas category stipulations for this alternative would protect resource values in the 22 areas identified as containing exceptional scenic recreational opportunities.	The oil and gas category system stipulations for this alternative would protect resource values in 22 areas identified as containing exceptional scenic recreational opportunities.
Maintenance of existing recreational improvements would protect recreational values and dollar investments. Protection of Wild and Scenic river study corridors would ensure that their essential recreational values are not diminished.	Maintenance of existing recreational improvements would protect recreational values and dollar investments. Protection of Wild and Scenic river study corridors would ensure that their essential recreational values are not diminished.	Maintenance of existing recreational improvements would protect recreational values and dollar investments. Protection of Wild and Scenic river study corridors would ensure that their essential recreational values are not diminished.	Maintenance of existing recreational improvements would protect recreational values and dollar investments. Protection of Wild and Scenic River study corridors would ensure that their essential recreational values are not diminished.
	The access easement to the Colorado River would help protect essential recreational opportunities.	The access easement to the Colorado River would help protect essential recreational opportunities.	The acess easement to the Colorado River would help protect essential recreational opportunities.
	Construction of rest rooms at heavily used sites along the Colorado River would improve river recreational opportunities. Prescribed fire would improve recreational hunting opportunities.	Construction of rest rooms at heavily used sites along the Colorado River would improve river recreational opportunities. Prescribed fire would improve recreational hunting opportunities.	Construction of rest rooms at heavily used sites along the Colorado River would improve river recreational opportunities.
			Acquiring scenic easements on 9,990 acres of private land along 80 miles of the Colorado and Dolores rivers would protect scenic recreational qualities there.

continued

TABLE S-3 (Continued)

Alternative A No Action	Alternative B Production	Alternative C Limited Protection	Alternative D Protection
Economic Conditions-The reductions from active preference could decrease ranch values by as much as 6 percent. The prices commercial outfitters could charge for their services could be affected in some recreation areas, and commercial use of one area could be discontinued.	Economic Conditions-Twenty-nine of 45 livestock operators would have more available forage. If this forage was grazed, their returns above cash cost would increase by $162,832 (+8 percent) which should increase their ranch values. However, reduction from active preference could reduce ranch values by as much as 4 percent. Increased production from ranchers residing in the GRA would increase regional income by $168,320 (+0.3 percent) and eight jobs (+0.2 percent). Land sales near Moab, Spanish Valley and Castle Valley could have a depressing effect on nearby private land market prices; however, all land sales would increase county revenues. Increased oil and gas drilling and production would eventually result in five to ten added local jobs (+0.1 to 0.2 percent) and $85,000 to $170,000 local income. Local units of government would receive increased property tax revenues and indirectly receive increased revenue from increased royalty payments to the State. There may be an unquantifiable reduced increase in tourist visitation and expenditures. The price outfitters charge for their services could be affected in some areas, and existing commercial use in other areas could be discontinued.	Economic Conditions-Watershed actions that could have quantifiable effects on water yield and salt loading would decrease the annual cost borne by water users in the Lower Colorado River Basin by $535,000 to $170,000 and result in a $55,000 loss of value from decreased water yield. Two of the 45 livestock operators would have less available forage; 24 of the 45 would have more available forage; and 12 of the 45 would receive major exclusions during the spring. Aggregate returns above cash costs would increase by $33,573 (+1 percent) which should also increase ranch values. However, the reductions from active preference could reduce ranch values by as much as 5 percent. Greater wildlife populations would increase hunter pressure, which could increase local income by as much as $185,000 and local employment by as many as seven jobs. Land sales near Castle Valley, Moab, and Spanish Valley would have a depressing effect on nearby private land market prices. Decreased oil and gas drilling and production would eventually result in two to five fewer local jobs (-0.1 percent) and less local government revenues from reduced property taxes and indirectly from reduced royalty payments to the State. Future gold	Economic Conditions-Watershed actions that could have quantifiable effects on water yield, salt loading, and sedimentation would decrease the annual cost borne by water users in the Lower Colorado River Basin by $920,000 to $1,220,000 and result in a $130,000 loss of value from decreased water yield. Ten of the 45 livestock operators would have less available forage; 18 of the 45 would have more available forage; and 38 of the 45 would receive major exclusions during the spring. Aggregate returns above cash costs would decrease by $61,000 (-3 percent), which should also decrease ranch values. Reductions from active preference could reduce ranch values by as much as 6 percent. Greater wildlife populations would increase hunter pressure, which could increase local income by as much as $190,000 and local employment by as many as seven jobs. Land sales near Castle Valley would have a depressing effect on nearby private land market prices. Decreased oil, gas, and uranium activities would eventually result in 65 fewer local jobs (-1.5 percent) less local government revenue from reduced property taxes and indirectly from reduced royalty payments to the State. Future gold

Subalternative: Grazing at active preference would result in an unquantifiable increase in sedimentation, salt pickup, and water yield. This would in turn decrease economic values generated by Lake Powell, increase cost borne by water users in the lower Colorado River Basin, and increase water yield values. If operators were to graze at active preference, or as close to active preference as they could, the cumulative increase in returns above cash cost would be 17 percent for cattle operators and 11 percent for sheep operators. Because in many cases forage production is expected to be less than active preference, grazing at active preference could result in short-term economic gains with long-term economic losses. Livestock grazing at active preference could negatively affect big game populations and reduce hunter success rates. Lower success rates would discourage hunters from hunting in the GRA. Decreased hunter pressure would reduce the $130,000 of personal income and five jobs now attributable to hunting in the GRA.

production and associated employment and income would also be impacted. Primitive nonmotorized recreation use and related local expenditures could be higher than would otherwise be the case. Existing commercial use of recreation areas would be preserved and the potential for commercial use of other areas would increase.

production and associated employment and income would also be impacted. Primitive nonmotorized recreation use and related local expenditures could be higher than would otherwise be the case. Existing commercial use of recreational areas and the potential for commercial use of other areas would increase.

Subalternative: Watershed actions that could have quantifiable effects on water yield, salt loading and sedimentation would decrease the annual cost borne by water users in the lower Colorado River Basin by $580,000 to $760,000 and result in a $127,000 loss of value from decreased water yield. Fifteen of the 45 livestock operators would have less available forage; 8 of the 45 would have more available forage; and 7 of the 45 would receive major exclusions during the spring. Aggregate returns above cash costs would decrease by $324,216 (-14 percent), which should also decrease ranch values. Reductions from active preference could reduce ranch values by as much as 8 percent. Greater wildlife populations would increase local income by as much as $190,000 and local employment by as many as seven jobs. The probability that hunter pressure and expenditures would increase to these levels is greater than under Alternative D.

continued

TABLE S-3 (Concluded)

Alternative A No Action	Alternative B Production	Alternative C Limited Protection	Alternative D Protection
Social Conditions-There would be little or no change from the existing environment. Under this alternative, changes in attitudes toward BLM would be affected only by outside factors and the way management actions are implemented.	Social Conditions-Local groups and communities would not be affected to such a degree as to noticeably affect their existing social environment. In general local attitudes toward BLM would improve because restrictions would be reduced and greater local resource use and development would be allowed. These attitudes would vary, however, by those individuals and groups who would gain and those who would lose under this alternative. Subalternatives: None of the management actions would impact local communities so far as to noticeably affect their existing social environment. Subalternative B would place the fewest restrictions on activities taking place on public land. This subalternative would be perceived by most residents as having the greatest beneficial impact on the local economy.	Social Conditions-None of the management actions would impact the the local groups or communities to such a degree as to affect their existing social environment. However, this alternative would probably be perceived by most residents as having a significant negative impact upon the local community.	Social Conditions-The social well-being of nine of the 45 livestock operators would be significantly affected. Local attitudes toward BLM would worsen because restrictions would be increased, less local resource use and development would be allowed, and this alternative would be perceived to have a significant negative impact on the local economy. These attitudes would vary, however, by those individuals and groups who would gain and those who would lose under this alternative. Subalternative: The social well-being of 12 of the 45 livestock operators would be significantly affected. Subalternative D would place the most restrictions on local use and development of public lands. Therefore, this subalternative would be perceived as having the greatest negative impact on the local economy.

THE PROPOSED RESOURCE MANAGEMENT PLAN

The proposed RMP for the GRA was selected from management actions analyzed in the Draft RMP/EIS (as updated in this document) on the basis of (1) their ability to resolve the issues raised during the planning process, (2) the capability of the public lands to respond to management, (3) the environmental consequences of the alternatives and subalternatives, (4) the planning criteria, and (5) public input. The proposed plan, with the exception of sections pertaining to livestock requirements, utility corridor avoidance areas, locatable minerals, humates, and wilderness, is patterned after the preferred alternative identified in the Draft RMP/EIS.

GOAL

The overall goal of the proposed plan is to provide for multiple uses on the public lands, while balancing conflicts between renewable and nonrenewable resources and incorporating necessary constraints to protect resources from irreversible decline.

MANAGEMENT ACTIONS

Actions designed to resolve identified planning issues would be implemented during the life of the plan. These actions are briefly described below by issue area. For a description of the planning issues refer to the Planning Area and Issues section of this summary.

Management actions proposed to resolve the Critical Watersheds Issue include installation of instream drop structures in eight streams; implementation of salinity control treatments on 41,000 acres; diversion of Stinking Spring; and manipulation of vegetation and land and watershed treatments on three critical watershed subbasins.

Management actions proposed to resolve the Livestock Requirments Issue include continuation of present management on 833,545 acres; implementation of livestock manipulation techniques on 793,031 acres; maintenance of existing land treatments; implementation of new land treatments on 68,105 acres; authorization of all grazing use at present levels (71,678 AUMs) in conjunction with a monitoring program to determine whether stocking rates should be adjusted; a change in season of livestock use on 54,380 acres; a change in class of livestock on 69,042 acres; management of 3 miles of perennial streams to restore three riparian areas; and manipulation of livestock grazing on 27,000 acres to reduce salinity in the Colorado river.

Management actions proposed to resolve the Wildlife Habitat Requirements Issue include maintenance of existing wildlife waters and reservation of unallocated forage and space on the following areas for deer and elk winter use: Pear Park, 14,720 acres; Spring Creek, 924 acres; and Castle Valley, 6,400 acres.

Management actions proposed to resolve the Off-Road Vehicle Use and Management Issue include designation of 1,183,660 acres as open to ORV use; designation of 596,234 acres as limited to existing roads and trails to protect watershed and scenic values; designation of 24,454 acres as closed to ORVs to protect scenic and recreation values; and designation of 15,206 acres as limited to designated roads and trails.

Management actions proposed to resolve the Lands Actions Issue include retention of 1,801,331 acres of public land; possible disposal of 11,629 acres of public land to serve public objectives; and identification of 6,594 acres of public land for further study. If possible, an easement for public access would also be obtained at the Cisco boat launch.

Management actions proposed to resolve the Utility Corridors Issue include the designation of approximately 140 miles of de facto corridors as official utility corridors and identification of 48,245 acres in resource conflict areas to be avoided by major rights-of-way.

Management actions proposed to resolve the Minerals Issue include leaving the entire GRA open to location of mining claims except for 1,850 acres of existing mineral withdrawals to protect recreation and scenic sites; maintenance of current potash leases and allowance of potash prospecting (with potential for production) on an additional 150,000 acres; application of oil and gas categories to protect critical wildlife habitat, watersheds, and recreation; continuation of sales of common varieties of minerals; continuation of the current humate contract, and allowance of sales of humates on an additional 1,500 acres.

Management actions proposed to resolve the Recreation Issue include maintenance of two developed campgrounds, five developed picnic areas, three scenic overlooks, 27 miles of scenic road system, and 10 miles of developed motorcycle trail; construction of rest rooms at seven heavily used recreation sites along the Colorado River; continued issuance of recreation permits; continuation of the existing river management program, continued management of 65 miles of the Colorado and Dolores River study corridors as required under the Wild and Scenic Rivers Act; and designation of 1,375 acres in Negro Bill Canyon as an ONA.

Management actions proposed to resolve the Fire Management Issue include implementation of a limited fire suppression policy on the entire GRA and initiation of prescribed fires and seeding on approximately 14,149 acres.

Wilderness suitability recommendations are deferred pending completion of the Utah statewide wilderness EIS. WSAs will continue to be managed under the BLM's Interim Management Policy and Guidelines for Lands Under Wilderness Review until either designated wilderness or released from study by Congressional action. Certain management actions in the proposed RMP would apply to lands under wilderness review if they are not designated wilderness. These actions are described in detail in Chapter 1 of this document.

Details regarding RMP support requirements, monitoring, implementation, and ongoing management programs and actions are also discussed in Chapter 1.

ENVIRONMENTAL CONSEQUENCES

Implementation of the proposed plan would reduce soil erosion, help stabilize stream channels, improve water infiltration, and increase soil productivity in target areas. Water quality of targeted drainages would improve. Salinity and sediment contributions into the Colorado River would be reduced.

Some short-term impacts on air quality would occur under a limited fire suppression policy and result from prescribed fires.

Vegetation would generally be maintained or improved as a result of watershed and livestock management actions. Vegetation would be altered or eliminated in several small areas as a result of project implementation. Sagebrush and pinyon-juniper communities would be changed to grass and browse on 68,105 acres through land treatments and on 14,149 acres through prescribed fires.

Initial livestock AUMs would be limited to 66 percent of active preference (average of past 5 years' licensed use). Monitoring studies will show changes in condition that will determine whether stocking rates should be adjusted.

Wildlife habitat would be managed in support of the estimated current bighorn sheep population and long-term herd management goals for deer, elk, and antelope. Implementation of livestock manipulation techniques would improve water and cover and reduce spatial competition with wildlife ungulates; land treatments would provide additional winter/spring forage for deer, elk, and antelope; changes in season of livestock use would reduce competition with bighorn sheep and improve riparian and aquatic habitat in target areas.

Under the proposed application of oil and gas leasing categories, the acreage in Category 1, Open to Leasing with Standard Stipulations, would be reduced from 1,682,762 to 1,156,560. In Category 2, Open to Leasing with Special Stipulations, the acreage would be increased from 58,221 to 563,808. Acres in Category 3, Open to Leasing with No Surface Occupancy, would be reduced slightly, from 70,401 to 70,274. Acres under Category 4, No Leasing, would be increased from 8,170 to 28,912. The entire GRA would be open to mining claims except for 1,850 acres under existing withdrawal orders.

No significant impacts would occur to cultural or visual resources.

ORV designations would protect resource values sensitive to such use. Negro Bill Canyon would be protected under an ONA designation. Sixty-five miles of Wild and Scenic River study corridor would receive interim protective management as required under the Wild and Scenic Rivers Act. Areas presently under wilderness review would not be impacted by the management actions of the proposed plan.

Easement acquisition would ensure continued access to the Cisco launch area. Application of the oil and gas category system would protect scenic values. Maintenance of existing recreation facilities would help ensure that the recreational opportunities associated with these values are not diminished.

ECONOMIC IMPACTS OF THE PROPOSED PLAN

The annual cost borne by water users in the lower Colorado River basin would be decreased by $495,000 to $370,000; there would be a $54,000 loss of value from decreased water yield.

None of the 45 livestock operators would have less available forage in the long term, and 24 of the 45 would have more available forage. Three of the 45 would

receive major exclusions during the spring. Aggregate returns above cash costs would increase by $129,000 (+5 percent). Reductions from active preference could reduce ranch values by as much as 6 percent.

Greater wildlife populations would increase hunter success rates and result in greater hunter pressure and local expenditures, and would increase local personal income and employment by as much as $185,000 and seven jobs, respectively.

Land sales near Castle Valley, Moab, and Spanish Valley would have a depressing effect on nearby private land market prices.

Decreased oil and gas drilling and production would eventually result in two to five fewer local jobs (-0.1 percent) and less local government revenues from reduced royalty payments to the State. Future gold production and associated employment and income would not be impacted.

Primitive nonmotorized recreation use and related local expenditures could be higher than would otherwise be the case. Existing commercial use of recreation areas would be preserved and the potential for commercial use of other areas would increase.

SOCIAL IMPACTS OF THE PROPOSED PLAN

None of the management actions would impact local groups or communities to such a degree as to affect their existing social environment.

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INTRODUCTION

PURPOSE OF AND NEED FOR ACTION

Under the authority of Section 202(f) of the Federal Land Policy and Management Act and Section 102(2)(C) of the National Environmental Policy Act, a process was initiated for the development, approval, maintenance, and amendment of resource management plans (RMPs) and their associated environmental impact statements (EISs). The pro- cess is guided by Bureau of Land Management (BLM) planning regulations found in Title 43 of the Code of Federal Regulations, Subpart 1600 (43 CFR 1600) and Council on Environmental Quality regulations found in 40 CFR 1500.

The Grand RMP/EIS, prepared in conformance with these laws and regulations, is presented in two volumes, the Draft RMP/EIS, which was sent out for public review in March of 1983, and this proposed RMP and final EIS, which includes the proposed plan and its environmental consequences, revisions and corrections to the Draft RMP/EIS, public comments on the draft, and the BLM's response to these comments. Both volumes have been filed with the Environmental Protection Agency.

The RMP/EIS is being completed for the Grand Resource Area (GRA) at this time for two reasons:

(1) The existing management framework plan (MFP) is outdated and in need of revision. Preparation of the RMP has been determined preferable to amendment of the MFP.

(2) The GRA was scheduled to complete a court-mandated grazing EIS, and it was decided that this would be more appropriately made a part of an RMP than done separately.

The Grand RMP has several objectives. It is designed to guide and control future management actions and the subsequent development of activity plans. The EIS portion analyzes the impacts of the management actions identified in the proposed plan and the alternatives.

In addition, the RMP process stimulates participation by the public and agencies of the Federal, State, and local governments. It also makes use of the best available data and analyses of alternatives. All of this will improve the basis for resource management decisions for public lands in the GRA.

An ancillary but important objective of this particular RMP is that of serving as one of the six pilot projects that will help provide guidance for future RMPs.

PLANNING AREA AND ISSUES

The GRA (Figure 1-1), which is part of Utah's Moab District, comprises BLM administered lands in Grand County and the northeastern tip of San Juan County in southeast Utah. The planning area is bordered on the north by the Vernal District, on the south by the San Juan Resource Area, on the east by the Utah-Colorado state line, and on the west by the Green River.

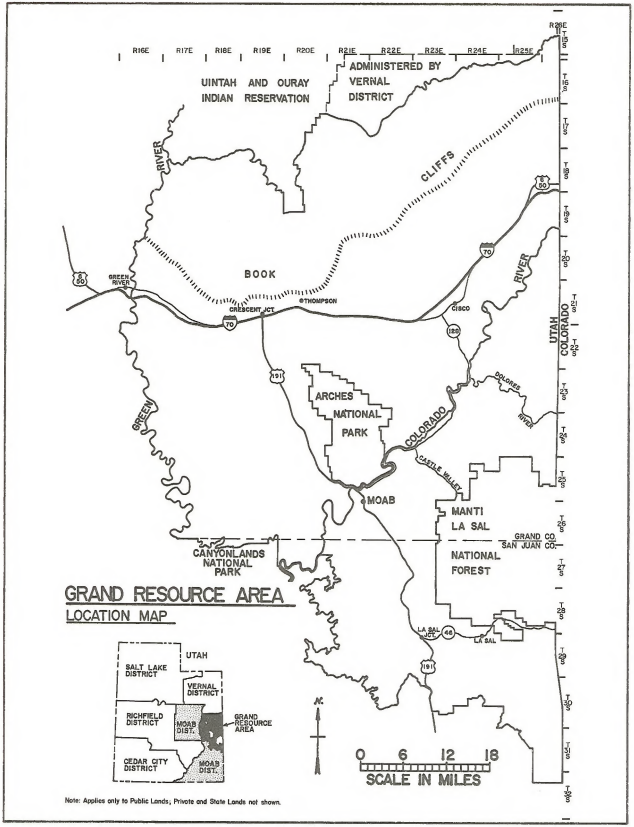


FIGURE I-1
General Location Map

The boundaries of the GRA contain 2,454,891 acres, of which 1,852,885 acres are public land. BLM's Vernal District manages all resources on 33,331 acres at the top of the Book Cliffs, leaving a total of 1,819,554 acres within the boundaries that are administered by the GRA.

Under an interdistrict agreement with BLM's Grand Junction, Colorado District, the GRA manages grazing on 40,653 acres in Colorado, and the Grand Junction District administers grazing on 76,613 acres in Utah. Under a similar agreement, the Forest Service administers grazing on 2,968 public land acres in the GRA.

The scale of the maps reproduced in this proposed RMP and final EIS prevented displaying the locations of private and State lands. These tracts are shown on the pocket map included with the Draft RMP/EIS. All management actions pertain to public lands administered by the GRA, except where specifically stated otherwise.

The role of the Grand RMP during the wilderness study phase of the Utah BLM's wilderness review is to define how the wilderness study areas (WSAs) within the GRA would be managed if not designated wilderness by Congress. The wilderness section of Chapter 1 of this proposed RMP and final EIS summarizes the RMP actions that would apply to the public lands presently located within WSAs. The mixture of actions presented repre- sents the No Wilderness alternative for each WSA which will be analyzed in the Utah statewide wilderness EIS.

In Chapter 4, page 4-1 of the Draft RMP/EIS, it was pointed out that the Grand RMP schedule and the Utah statewide wilderness EIS schedule were related through the wilderness issue. The Draft RMP/EIS contained preliminary wilderness suitability recommendations for seven WSAs. Since the publication of the Draft RMP/EIS, several new areas have been designated WSAs. In order to advance the new areas to the same stage of the wilderness review as the other WSAs, it has been necessary to prepare a site-specific analysis (SSA) for each area to complete requirements contained in the BLM's Wilderness Study Policy. As the preparation and public review of the final SSAs will not be completed until the beginning of 1984, it was decided to withdraw the preliminary wilderness suitability recommendations contained in the Draft RMP/EIS. This action will enable BLM managers to review the entire group of WSAs at one time. The review will take place during preparation of the Utah statewide wilderness EIS.

The RMP focuses on the following ten planning issues, which represent problem areas where management effort needs to be concentrated:

Critical Watersheds	Utility Corridors
Livestock Requirements	Minerals
Wildlife Habitat Requirements	Recreation
Off-Road Vehicle Use and Management	Fire Management
Lands Actions	Wilderness

These topics, which encompass concerns identified by members of the public, other agencies, entities of State and local governments, and BLM managers, are summarized as follows:

The Critical Watersheds issue revolves around (1) sedimentation and salinity in the

upper Colorado River basin from public lands in the GRA and (2) disturbance and degradation of critical watersheds and floodplains.

The Livestock Requirements issue is concerned with four basic conflicts: (1) mineral activities are causing a loss of forage for livestock in specific heavy use areas; (2) off-road vehicle (ORV) activity is causing a loss of forage for livestock in specific heavy use areas; (3) improper season of use on some allotments has resulted in grazing during periods critical to the growth of forage plants; and (4) land treatments are needed to improve forage and better disperse and manage livestock. The development and analysis of grazing alternatives for this issue must meet the requirements for the court-mandated grazing EIS.

The Wildlife Habitat Requirements issue results from three basic conflicts: (1) in some parts of the GRA, livestock and wildlife compete for forage, water, and space; (2) mineral activities are resulting in a loss of wildlife habitat; and (3) recreational uses such as ORV travel in portions of the GRA may be conflicting with wildlife.

The ORV Use and Management issue is concerned with evaluation and categorization of the public lands into three ORV use designations as required by Executive Order 11644. The categories include an open designation, where the use of ORVs would be allowed subject only to general restrictions; a limited designation, where ORV use would be subject to specific restrictions such as staying on designated or existing routes; and a closed designation where ORV use would be prohibited. Restrictions would not apply to authorized ORV use.

The Lands Actions issue is concerned with (1) the identification of lands suitable for disposal, (2) the need to guarantee continued public access to whitewater rafting, and (3) supporting the protection of scenic and other values along the Colorado and Dolores rivers.

The Utility Corridors issue focuses on (1) the need for designated utility corridors to alleviate congestion caused by existing and proposed rights-of-way and (2) identification of avoidance areas to protect critical resources from disturbance that would occur within such corridors.

The Minerals issue revolves around balancing the production of minerals with the protection of sensitive resource values. This will require identification of (1) areas and values in need of protection and (2) protective measures that can be taken.

The Recreation issue is concerned with providing recreational opportunities to meet the increasing demand while protecting the resource base.

The Fire Management issue is based on the use of fire as a management tool. Full suppression of all fires can be costly and does not always benefit rangeland resources; lands with potential for improvement through the use of induced or natural fires need to be identified.

Areas under wilderness review will continue to be managed following the guidance of BLM's Interim Management Policy for Lands Under Wilderness Review until they are either designated wilderness by Congress or released from wilderness review. Areas designated wilderness will be managed under the guidelines of the BLM's Wilderness Management Policy.

CHAPTER 1

PROPOSED RESOURCE MANAGEMENT PLAN

INTRODUCTION

Chapter 1 describes the proposed plan, which provides a balance between the protection of fragile and unique resources and the production and development of renewable and nonrenewable resources. Management actions were selected on the basis of (1) their ability to resolve the issues raised during the planning process, (2) the capability of the public lands to respond to management, (3) the environmental consequences of the alternatives and subalternatives, (4) the planning criteria, and (5) public input.

The proposed plan, with the exception of sections pertaining to livestock requirements, utility corridor avoidance areas, locatable minerals, humates, and wilderness, is patterned after the preferred alternative identified in the Draft Resource Management Plan and Environmental Impact Statement (RMP/EIS). Specific changes include: (1) an increase from 15 to 24 in the number of livestock grazing allotments where livestock manipulation techniques would be implemented, (2) a decrease from 13 to 4 in the number of allotments identified for season of use changes, (3) the manipulation rather than restriction of livestock grazing on 27,000 acres to reduce salinity, (4) a decrease from 130,164 to 48,245 in acres identified to be avoided by major right-of-way construction, (5) a decrease from 32,000 to 0 in acres for new mineral withdrawals, (6) an increase from 250 to 1,750 in acres available for humate sales, and (7) deferral of preliminary wilderness suitability recommendations pending completion of the Utah statewide wilderness EIS.

Approval of the RMP will mark the completion of one stage of the planning process. The RMP is not a final implementation decision on actions which require further specific plans, process steps, or decisions under specific provisions of law and regulations. More site-specific plans, such as allotment management plans (AMPs), will be completed by the resource activity programs. Procedures and methods for accomplishing the objectives of the RMP will be developed through these activity plans. In some cases additional engineering and other studies or specific project plans may be required. Additional environmental analyses will be conducted where appropriate to supplement the analysis in this final EIS.

GOAL OF THE PROPOSED PLAN

The overall goal of the proposed plan is to provide for multiple uses on the public lands, while balancing conflicts between renewable and nonrenewable resources and incorporating the necessary constraints to protect renewable resources from irreversible decline.

Trade-offs help safeguard wildlife habitat, critical watersheds, and nonmotorized recreation, while accommodating minerals, livestock grazing, and recreational off-road vehicle (ORV) use.

OBJECTIVES OF THE MANAGEMENT ACTIONS

Management actions that would be taken to resolve the planning issues have the following objectives:

- to reduce the impact of surface-disturbing activities on critical watersheds, while enhancing water quality and protecting key saline-alkali soils, riparian areas, floodplains, and municipal watersheds;

- to emphasize livestock use while improving or maintaining vegetative conditions to benefit both livestock and wildlife;

- to manage wildlife habitat to favor a diversity of game and nongame wildlife species, support Utah Division of Wildlife Resources (UDWR) long-range management goals for deer, elk, and antelope, and protect riparian and other areas important to wildlife (including raptors and other nongame birds and game fish);

- to provide opportunities for ORV use while protecting sensitive resources;

- to retain public lands in support of the objectives of the other resource management programs, provide for community expansion and economic development, and ensure continued public access to key recreation use areas;

- to provide a network of designated corridors for existing and future utility systems, while designating utility avoidance areas to protect other resource values and programs;

- to keep public lands open for exploration and development of mineral resources while protecting areas with sensitive resource values;

- to accommodate the expanding recreation use while reducing the impacts on the recreation resource base;

- to implement a limited fire suppression policy and initiate prescribed fires where treatment by fire would increase vegetation productivity, while safeguarding resource values, life, and property; and

- to define how the wilderness study areas (WSAs) would be managed if not designated wilderness by Congress.

MANAGEMENT ACTIONS UNDER THE PROPOSED PLAN

The following specific management actions would be taken under the proposed plan to resolve the planning issues described in the Draft RMP/EIS:

CRITICAL WATERSHEDS

Install instream drop structures in eight streams (about 3,500 acres, eight allotments) to decrease sedimentation and improve water quality. Figure 1-1 shows the general locations of watershed projects.

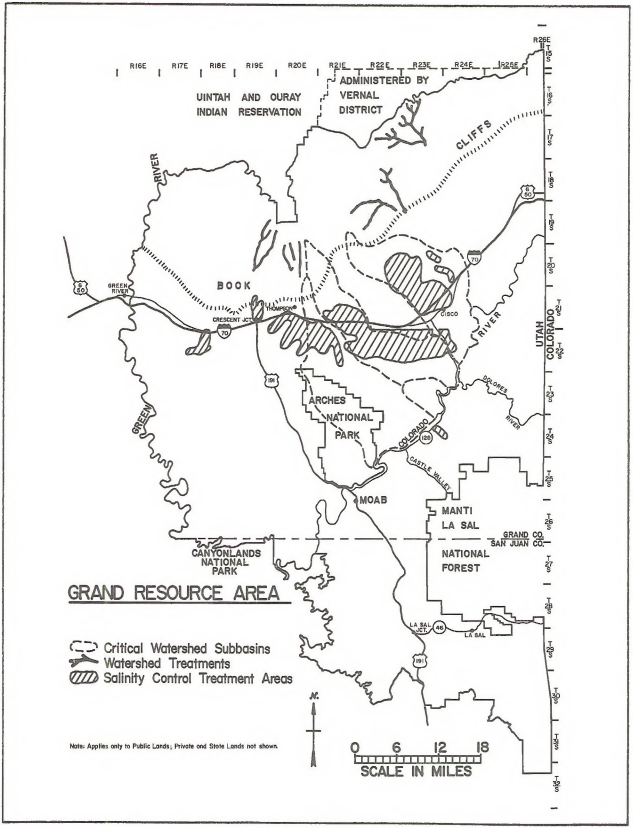


FIGURE 1-1

Proposed Management of Critical Watersheds

Implement salinity control treatments (gully plugs, contour furrows, retention dams) on 41,000 acres (ten allotments) to reduce salinity contribution to the Colorado River system by about 5,000 tons annually.

Divert and evaporate water from Stinking Spring to reduce salinity contribution to the Colorado River system by 3,100 tons annually.

Manipulate vegetation and initiate land and watershed treatments on three critical watershed subbasins (313,800 acres) to improve poor watershed conditions.

LIVESTOCK REQUIREMENTS

Continue present management on 833,545 acres (37 allotments) to benefit livestock and wildlife by maintaining and improving present medium to high ecological condition. Figures 1-2 and 1-3 show the general locations of livestock management actions. The allotments within which this action and the other grazing management actions would take place are listed in Appendix A of this proposed RMP and final EIS.

Implement livestock manipulation techniques (fences, water developments, rotation of grazing use areas) to benefit livestock and wildlife by improving present low ecological condition in heavy use areas and by maintaining and improving present medium to high ecological condition on 793,031 acres (24 allotments).

Maintain existing land treatments on 11 allotments to provide forage for livestock and wildlife. These are: (a) 25,766 chained acres; (b) 25,198 plowed acres; and (c) 1,025 sprayed acres.

Implement land treatments on 68,105 acres (13 allotments) to increase available forage by 8,514 animal unit months (AUMs), to allow increased use by livestock and wildlife. The increase in AUMs would be split evenly between livestock and wildlife where both are present. Land treatments include (a) plow and seed 29,640 acres; (b) chain and seed 32,160 acres; (c) drill seed 6,305 acres.

Authorize all grazing use at present levels to maintain and improve present ecological condition. The average licensed use over the past 5 years, minus the AUMs lost because of proposed management actions, equals 71,678 AUMs; 11,314 AUMs are presently available for wildlife. Monitoring studies (see Appendix L in the Draft RMP/EIS) will show changes in condition that will determine whether stocking rates should be adjusted. Estimated future AUMs for the proposed plan are 77,296 for livestock and 16,016 for wildlife. See Appendix A in this document for AUMs by allotment.

Change season of use on 54,380 acres (four allotments) to (a) provide for growth requirements of perennial plants, (b) restrict use of spring forbs by livestock in critical wildlife areas, and (c) protect soils in critical watershed areas.

Change class of livestock on 69,042 acres (one allotment) to reduce competition between livestock and wildlife.

Manage 3 miles of perennial streams by fencing and rotation of grazing use areas to restore three riparian areas for improved wildlife habitat.

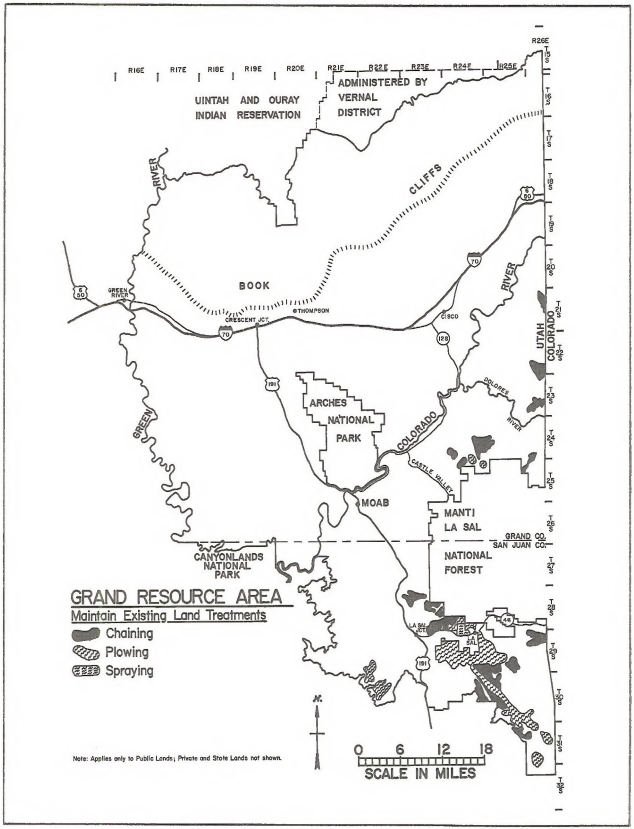


FIGURE 1-2
Existing Land Treatments

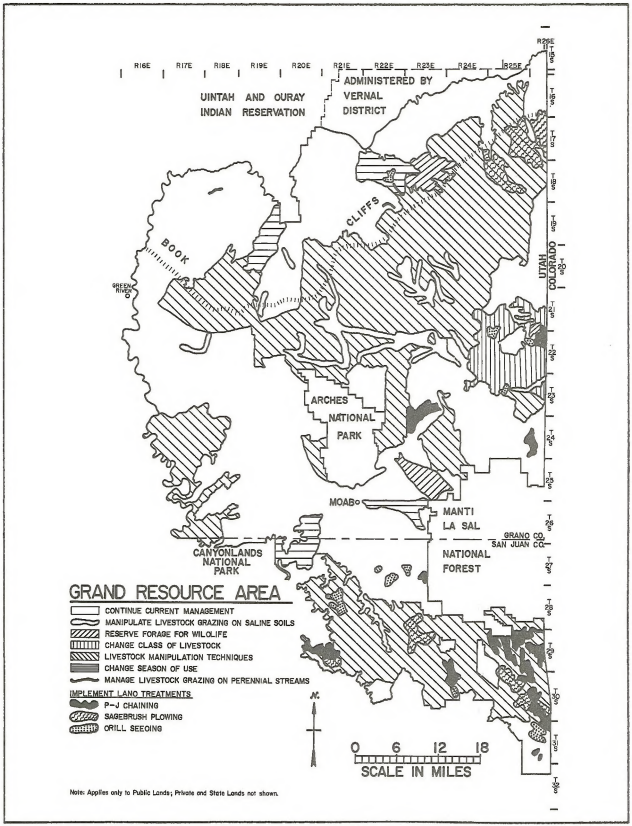


FIGURE 1-3

Proposed Management of Livestock Grazing

Manipulate livestock grazing on 27,000 acres (portions of ten allotments; 558 AUMs) to lessen impact on highly saline soils and reduce salinity in the Colorado River drainage.

WILDLIFE HABITAT REQUIREMENTS

Maintain existing wildlife waters.

Reserve unallocated forage and space on the following areas for deer and elk winter use: Pear Park, 14,720 acres; Spring Creek, 924 acres; Castle Valley, 6,400 acres.

Under the proposed plan, wildlife habitat would be managed in support of the estimated current bighorn sheep population (259) and estimated prior stable numbers of (or long-term herd management goals for) other big game species. These are 22,250 deer, 2,300 elk, and 887 antelope. This would be accomplished through maintenance of all existing wildlife waters and reservation of forage in Pear Park, Spring Creek, and Castle Valley for wildlife, and certain actions that would be taken primarily to resolve other planning issues. These include implementation of livestock manipulation techniques, maintenance and implementation of land treatments, authorization of grazing use at the level of the past 5 years' average licensed use, changes in season of use, changes in class of livestock, fencing and rotation of grazing use in three riparian areas, manipulation of livestock on 27,000 acres of saline soils, closure of certain areas to ORV use, avoidance of situating rights-of-way within 48,245 acres of resource conflict areas, adoption of a more protective oil and gas leasing category system, designation of a 1,375-acre Outstanding Natural Area (ONA) in Negro Bill Canyon, implementation of a limited fire suppression policy, and initiation of prescribed fires and seeding.

OFF-ROAD VEHICLE USE AND MANAGEMENT

Designate 1,183,660 acres as open to ORV use. Figure 1-4 shows the locations of ORV designations.

Designate 596,234 acres (Mancos Shale areas and the Colorado, Green, and Dolores river corridors, Canyon Rims Recreation Area, and Dead Horse Point State Park viewshed) as limited to existing roads and trails, to protect highly erodible Mancos Shale soils, watershed, and scenic values. This would help to reduce the annual introduction of 12,000 to 18,000 tons of sediment and 363 to 548 tons of salt into the Colorado River drainage.

Designate 24,454 acres (Behind the Rocks, Negro Bill Canyon, Westwater Canyon, Windwhistle and Hatch Point campgrounds, Canyonlands, Needles and Anticline overlooks, and Onion Creek sensitive plant site) as closed to ORVs (areas off existing developed roads), to protect scenic and recreational values. The Onion Creek site enclosure would also provide protection to a sensitive plant. This action would be taken to reduce soil erosion and the annual introduction of 100 tons of sediment into the Colorado River drainage.

Designate 15,206 acres as limited to designated roads and trails, to provide for ORV use while reducing annual soil erosion in this area by 200 tons. This action would result in closure of 7 miles of duplicate roads and protection of scenic values.

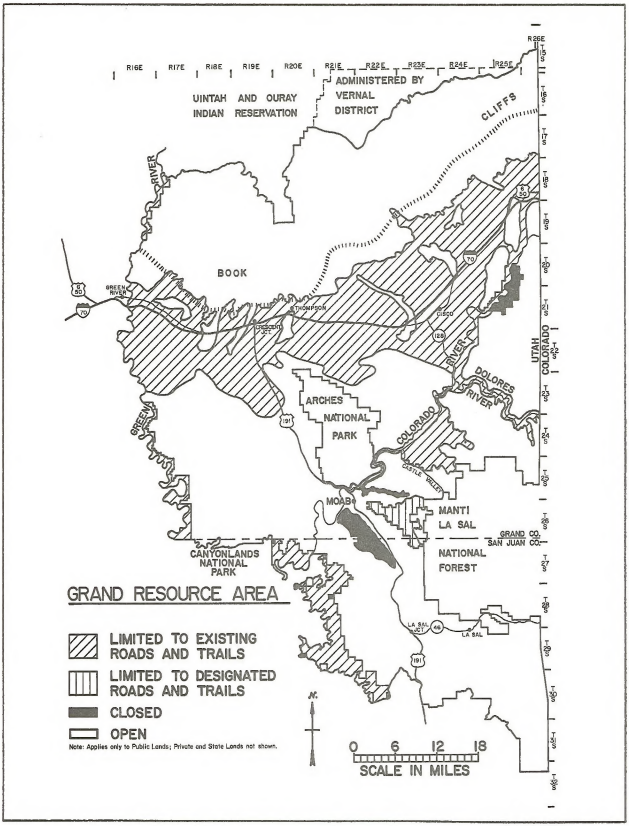


FIGURE 1-4

Proposed Off-Road Vehicle Use Designations

LANDS ACTIONS

Retain 1,801,331 acres of public land to protect environmental and economic assets and to foster multiple use management. Figure 1-5 shows the general location of lands actions.

Consider 11,629 acres (within 12 allotments; 153 AUMs) for disposal. Disposal of some of these lands would serve public objectives such as community expansion and economic development. Other lands, because of their locations or other characteristics, would be better suited to other ownership.

Also shown in Figure 1-5 are 6,594 acres of public land that have been identified for further study to determine whether they should be retained or disposed of.

Acquire an access easement on 6 acres of private land at the Cisco boat launch area for the purpose of providing public access to Westwater Canyon for recreational boating.

UTILITY CORRIDORS

Designate approximately 140 miles (16,000 acres) of de facto corridors as official utility corridors. Such designation would serve to minimize both the adverse environmental impacts and the proliferation of separate rights-of-way. It would also help minimize width requirements and maximize multiple occupancy. Figure 1-6 shows the locations of utility corridor management actions.

Avoid situating major rights-of-way within 48,245 acres in resource conflict areas to protect critical bighorn sheep habitat.

MINERALS

Leave the entire Grand Resource Area (GRA) (1.8 million acres) open to mining claims for locatable minerals under the 1872 Mining Law, with the exception of 1,850 acres of widely scattered campgrounds and scenic sites under existing mineral withdrawals. Figures 1-7 and 1-8 show the general locations of minerals management actions.

Allow potash prospecting (with potential of production) on approximately 150,000 acres, to encourage production of fertilizer for domestic use and for export. There are approximately 4,600 acres of existing potash leases.

Adopt the oil and gas category system below, which would protect critical wildlife habitat, watersheds, and recreational use.

Category	1	Open to leasing with a set of standard stipulations	1,156,560 acres
Category	2	Open to leasing with a choice of special stipulations to fit protection needs	563,808 acres
Category	3	Open to leasing, but with no surface occupancy (directional drilling from outside the area is required)	70,274 acres
Category	4	No leasing	28,912 acres

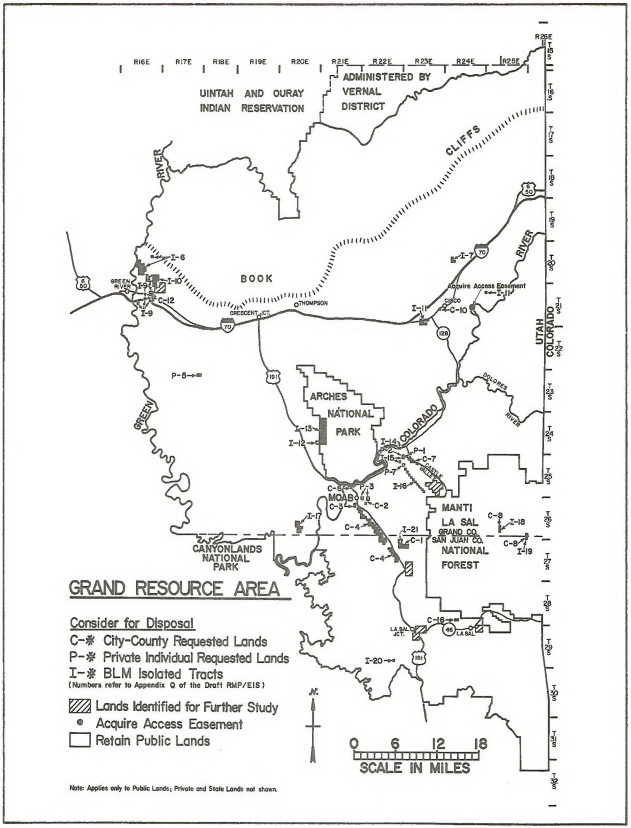


FIGURE 1-5

Proposed Lands Actions

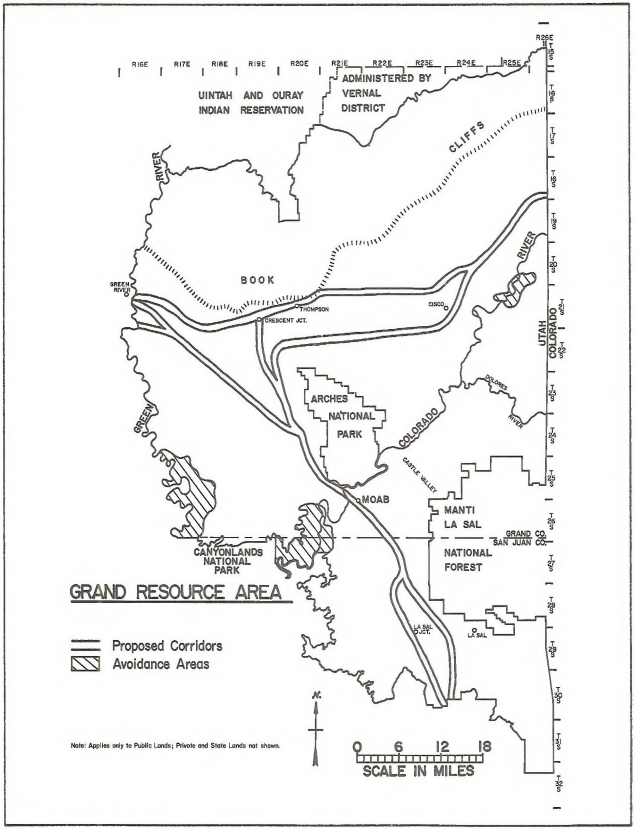


FIGURE 1-6

Proposed Utility Corridors and Avoidance Areas

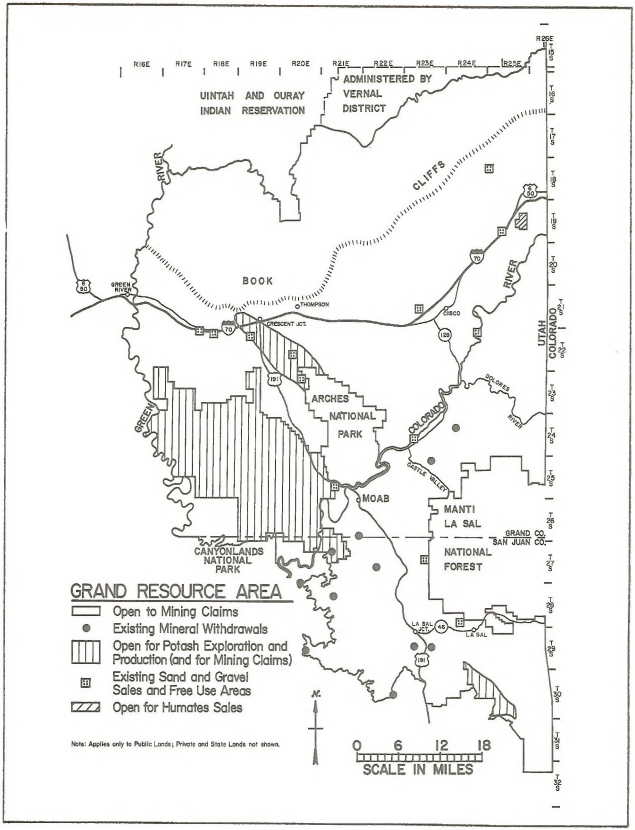


FIGURE 1-7

Proposed Management of Minerals Other than Oil and Gas

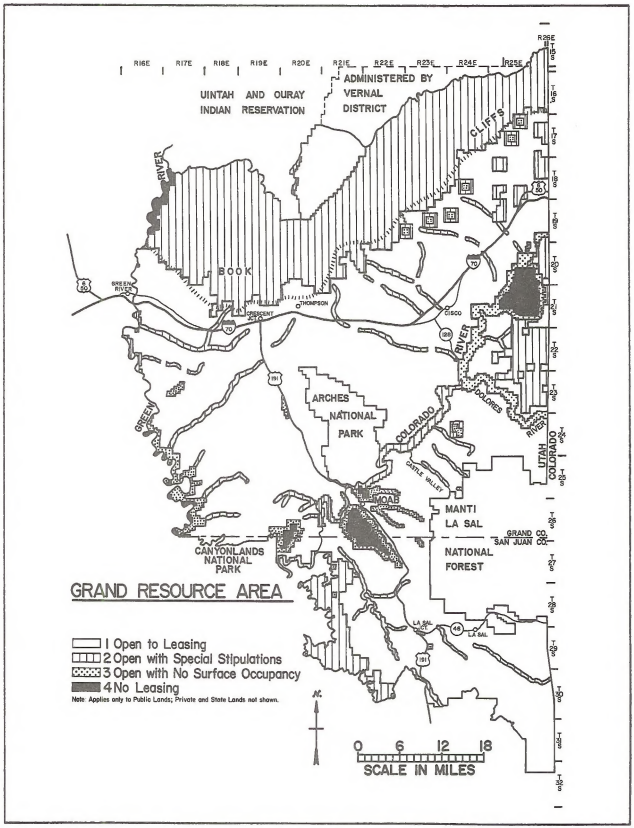


FIGURE 1-8

Proposed Application of Oil and Gas Leasing Categories

Continue to allow sales of common varieties of minerals (sand and gravel) on 6,000 acres free of mining claims, to provide materials for road construction, which could be an important factor in development of other resources.

Allow sales of humates on approximately 1,500 acres free of mining claims to provide material for use as a soil conditioner. This would be in addition to the existing 250-acre sale area.

RECREATION

Maintain two developed campgrounds (30 acres), five developed picnic areas (28 acres), and three developed scenic overlooks (1,120 acres) to provide public outdoor recreational opportunities. Figure 1-9 shows the general locations of recreation management actions.

Construct rest rooms at seven heavily used recreation sites along the Colorado River to reduce sanitation problems.

Continue to issue recreation use permits (four-wheel drive vehicle tours, horseback trips, bear hunting camps, survival school, etc.) to enhance outdoor recreational opportunities and provide business opportunities for private enterprise.

Maintain 5 miles of developed trails to provide outdoor hiking opportunities.

Continue to permit competitive and noncompetitive ORV events.

Maintain 10 miles of developed motorcycle trails to provide opportunities for recreational ORV motorcycle use.

Maintain 27 miles of developed scenic road system to provide access to sightseeing opportunities.

Continue the existing river management program on the Colorado and Dolores rivers (24,000 passenger days per year; 30 commercial outfitters) to provide for the safe and enjoyable long-term use of the river resource.

Continue to manage 65 miles of the Colorado and Dolores river study corridors as required under the Wild and Scenic Rivers Act. (These rivers were studied and recommended for designation under this act and will be managed to prevent changes in their character until Congress acts on the recommendation.)

Designate 1,375 acres in Negro Bill Canyon as an ONA to protect scenic recreational values, the sensitive plant Aquilegia micrantha, and the riparian area along the perennial stream.

FIRE MANAGEMENT

Implement a limited suppression policy on the entire GRA (1.8 million acres) which would allow fires to burn under initial monitoring on plant communities to create a diversity of vegetation and increase AUMs for both livestock and wildlife while reducing present fire suppression costs.

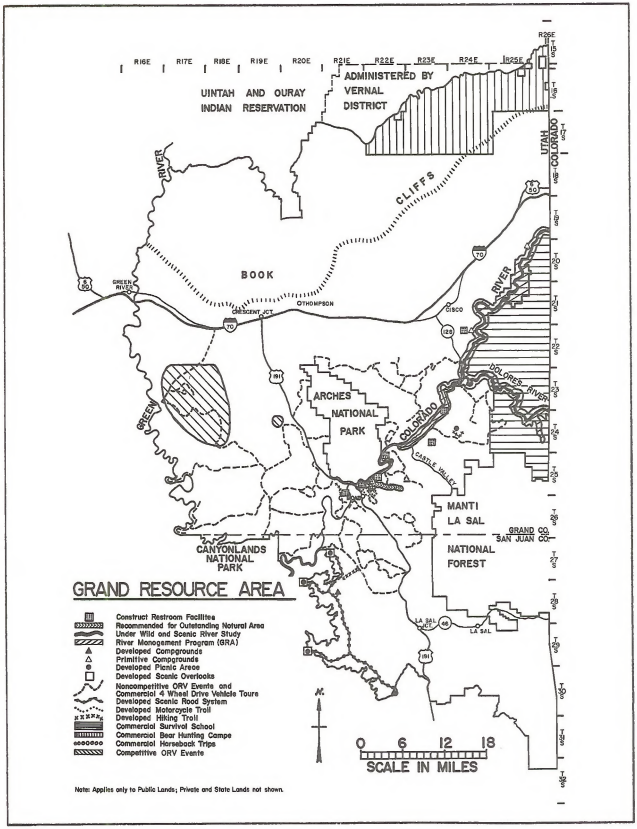


FIGURE 1-9

Proposed Recreation Management

initiate prescribed fire and seeding on approximately 14,149 acres (11 allotments), thereby increasing AUMs by approximately 1,770 for livestock and wildlife. (This figure was added into the future AUMs shown in Appendix A). Figure 1-10 shows the general locations of the prescribed fire areas.

MANAGEMENT OF WILDERNESS STUDY AREAS

The BLM wilderness review process consists of three distinct phases: inventory, study, and reporting. At the end of the inventory phase, ten WSAs were identified within the GRA. This number includes four areas of public land remanded to the Moab District for reinventory by the Interior Board of Land Appeals and a fifth area which was determined by this board to qualify for WSA status. Figure 1-11 shows the general locations of the WSAs.

The role of this RMP during the study phase of the Utah BLM's wilderness review is to define how the ten WSAs within the GRA would be managed if not designated wilderness by Congress. The proposed RMP does not make a recommendation regarding wilderness suitability. The wilderness suitability of the WSAs will be addressed in the Utah statewide Wilderness EIS. These preliminary wilderness suitability recommendations will be available for public review during 1984. Further information about each of the WSAs is contained in the wilderness site-specific analyses, written to meet the requirements of BLM's Wilderness Study Policy.

Until Congress takes action on designating wilderness areas, activities that presently occur and any action proposed in an area under wilderness review will be governed by BLM's Interim Management Policy (IMP). Areas designated wilderness by Congress will be managed under the guidelines of BLM's Wilderness Management Policy.

Areas not designated wilderness by Congress would be released from IMP management, and the RMP actions summarized below (which represent the No Wilderness alternative for each WSA) would apply. These actions are shown on the maps in this chapter.

UT-060-068A, Desolation Canyon

The 83,070-acre portion of the Desolation Canyon WSA within the GRA is located northeast of Green River, Utah along the eastern shore of the Green River. Present management of livestock would continue, except along one perennial stream where livestock use would be more intensively managed to protect riparian vegetation. The areawide monitoring program would be used to determine future stocking rates within this area. ORV use would be limited to existing roads and trails within 1.5 miles of the eastern bank of the Green River. The remainder of the area would be designated open to ORV use. All public lands would be retained by the Federal government. The lands within this area would be open to mining claim location and development. New oil and gas leasing would not be allowed within a 2-mile strip along the eastern bank of the Green River to protect scenic values. (The disposition of oil and gas leasing along the western bank is being considered in the Price River Resource Area Management Framework Plan.) The remainder of the area would be open to oil and gas leasing with special stipulations. All of this area would be managed under a limited fire suppression policy.

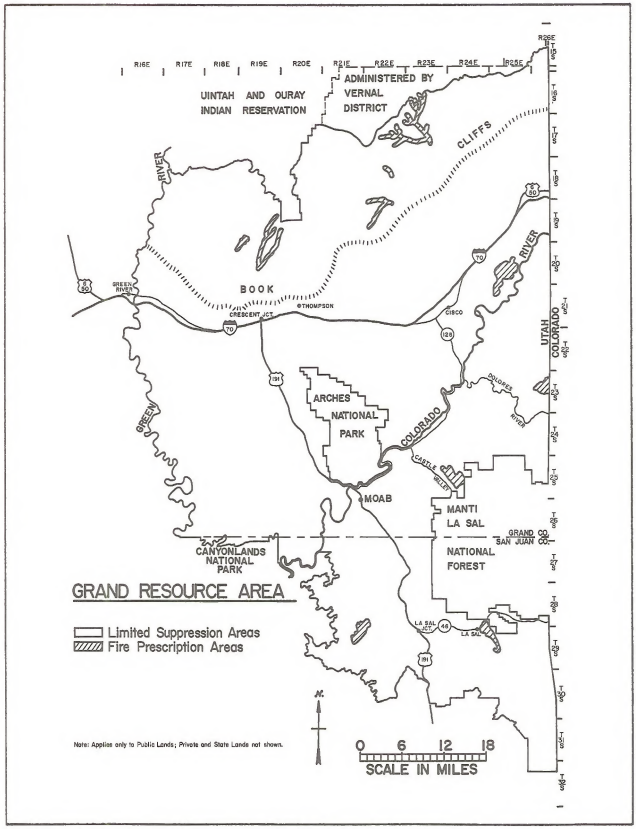


FIGURE 1-10

Proposed Fire Management

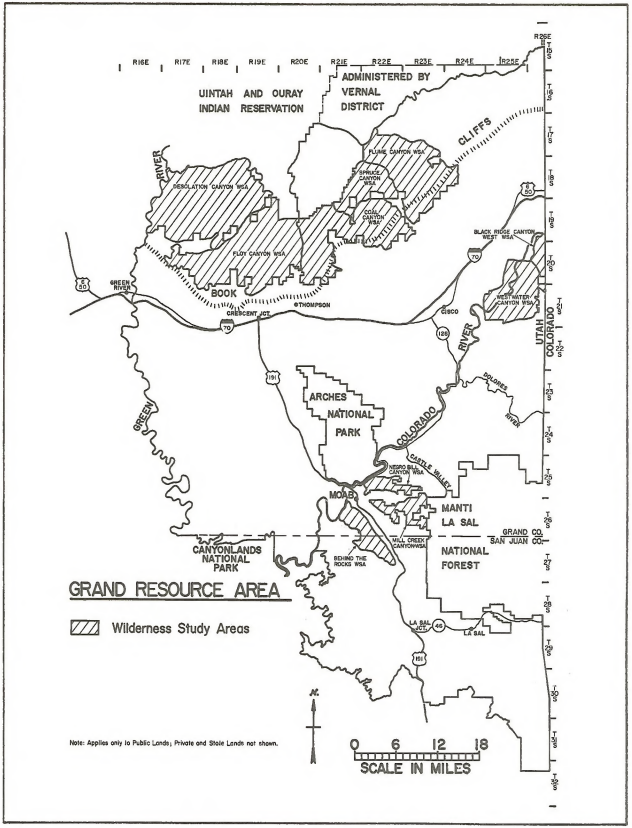


FIGURE 1-11
Wilderness Study Areas

UT-060-068B, Floy Canyon

The 72,605-acre Floy Canyon WSA is located in the Book Cliffs north of Crescent Junction, Utah. Instream drop structures would be installed in Floy and Thompson canyons to improve water quality. Present livestock management would continue, except on the Horse Canyon Allotment, where livestock manipulation techniques would be implemented; on the Floy Canyon Allotment, which would have a change in season of use; and on a portion of the Thompson Canyon allotment, where livestock grazing would be manipulated to protect saline soils. The areawide monitoring program would be used to determine future stocking rates within this area. All of this area would be designated open to ORV use. All public lands would be retained by the Federal government. The lands within this area would be open to mining claim location and mineral development. All of this area would be open to oil and gas leasing with special stipulations to protect watersheds, floodplains, and soils highly subject to erosion, except for a small portion along the southern boundary northwest of Crescent Junction which would be open to leasing with standard stipulations. A prescribed fire and seeding program would be implemented in several locations in the center of the area. The remainder of the area would be managed under a limited fire suppression policy.

UT-060-100B, Flume Canyon

The 50,800-acre Flume Canyon WSA is located in the Book Cliffs north of Cisco, Utah. It is the closest of the Book Cliffs WSAs to the Colorado border. Instream drop structures would be installed in Diamond Canyon and Westwater Creek to improve water quality. Present management of livestock would continue, except in Pear Park, where all forage would be reserved for wildlife; in the Diamond Allotment, which would have a change in season of use and a land treatment; and in the Sulfur Canyon and Cisco Mesa allotments, where livestock manipulation techniques would be implemented. The areawide monitoring program would be used to determine future stocking rates within this area. All of this area would be designated open to ORV use. All public lands would be retained by the Federal government. The lands within this area would be open to mining claim location and development. All of this area would be open to oil and gas leasing with special stipulations to protect watersheds, floodplains, soils highly subject to erosion, and elk winter range, except for its southern tip which would be open to leasing with standard stipulations. Commercial bear hunting camps would be allowed in part of the northern portion of this area. A prescribed fire and seeding program would be implemented in one area just within the northern boundary. The remainder of the area would be managed under a limited fire suppression policy.

UT-060-100C, Spruce Canyon

The 20,350-acre Spruce Canyon WSA is located in the Book Cliffs to the west of the Flume Canyon WSA. Instream drop structures would be installed in Diamond Canyon to improve water quality. Present management of livestock would continue, except in the Diamond Allotment, which would have a change in season of use and a land treatment, and in the Cisco Mesa Allotment, where livestock manipulation techniques would be implemented. The areawide monitoring program would be used to determine future stocking rates within this area. All of this area would be designated open to ORV use. All public lands would be retained by the Federal government. The lands with-

In this area would be open to mining claim location and development. All of this area would be open to oil and gas leasing with special stipulations to protect watersheds, floodplains, soils highly subject to erosion, and elk winter range. A prescribed fire and seeding program would be implemented in one area just within the southern boundary. The remainder of the area would be managed under a limited fire suppression policy.

UT-060-100C, Coal Canyon

The 61,430-acre Coal Canyon WSA is located in the Book Cliffs northeast of Thompson, Utah. Instream drop structures would be installed in Horse and Cottonwood canyons to improve water quality. Gully plugs, contour furrows, and retention dams would be constructed in the Sagers and Cisco watershed subbasins to help reduce salinity within the Colorado River. Vegetation manipulation projects and land and watershed treatments would be implemented within the critical watershed subbasin found within this WSA to improve poor watershed conditions. Present management of livestock would continue, except in the Cisco Mesa, Cisco Springs Wash, Nash Wash, and Barley Flat-Ronzio allotments, where livestock manipulation techniques would be implemented. Also on the Barley Flat-Ronzio Allotment, livestock grazing on saline soils would be manipulated. The areawide monitoring program would be used to determine future stocking rates within this area. All of this area would be designated open to ORV use. All public lands would be retained by the Federal government. The lands within this area would be open to mining claim location and mineral development. All of this area would be open to oil and gas leasing with special stipulations to protect watersheds, floodplains, soils highly subject to erosion, and deer winter range, except for the southeast corner of the area, which would be open to leasing with standard stipulations. A prescribed fire and seeding program would be implemented in one portion of the northeast section of the area. The remainder of the area would be managed under a limited fire suppression policy.

UT-060-116/117, Black Ridge Canyons West

The 5,100-acre portion of the Black Ridge Canyons West WSA within the GRA is located along the west side of the Utah-Colorado border just south of the Colorado River. Livestock would continue to be managed by the Grand Junction District. All of this area would be designated open to ORV use. All public lands would be retained by the Federal government. The lands within this area would be open to mining claim location and mineral development. The central portion of this area would be open to oil and gas leasing with special stipulations to protect deer and elk winter range and the Colorado River corridor and to prevent excessive erosion on slopes greater than 50 percent. Portions around the eastern boundary would be open to leasing with no surface occupancy. Commercial survival school outings would continue to be allowed within this area. All of this area would be managed under a limited fire suppression policy.

UT-060-118, Westwater Canyon

The 31,160-acre Westwater Canyon WSA is located near the Utah-Colorado border. Present management of livestock would continue, except on the Agate Allotment, where livestock manipulation techniques would be implemented, and on the Buckhorn Allotment, where the class of livestock would be changed. The areawide monitoring program would be used to determine future stocking rates within this area. The central

section of this area along the eastern bank of the Colorado River would be closed to ORV use. ORV use in the area adjacent to the north bank of the Colorado River would be limited to existing roads and trails. The remaining portion of the area would be designated open to ORV use. All public lands would be retained by the Federal government. Major rights-of-way would be excluded from the central portion of the area along both sides of the Colorado River. The lands within this area would be open to mining claim location and development. New oil and gas leasing would not be allowed in the central and eastern portions of this area, while portions of the areas along the northern, western, and southern boundaries would be open to leasing with no surface occupancy to protect water quality, the Colorado River corridor, and wildlife values and to prevent excessive erosion on slopes greater than 50 percent. Certain areas adjacent to the western and southern boundaries would be open to leasing with standard stipulations. Commercial survival school outings would be allowed within this area. The river recreation management program would continue along the portion of the Colorado River within this area. A prescribed fire and seeding program would be implemented in a portion of this area along its western boundary. The remainder of the area would be managed under a limited fire suppression policy.

UT-060-138, Negro Bill Canyon

The 7,620-acre Negro Bill Canyon WSA is located about 3 miles east of Moab, Utah. It includes Negro Bill Canyon and a portion of the surrounding slickrock plateau. Present management of livestock would continue. Livestock would continue to be excluded from the lower 3 miles of the canyon. The areawide monitoring program would be used to determine future stocking rates within this area. Negro Bill Canyon would be designated closed to ORV use. All public lands would be retained by the Federal government. The lands within this area would be open to mining claim location and development. The canyon portion of the area would be open to oil and gas leasing with no surface occupancy, and another area in the northwest corner would be open to leasing with special stipulations to protect riparian vegetation and to prevent excessive erosion on slopes greater than 50 percent. The remainder of the area would be open to leasing with standard stipulations. The canyon portion of the area would be managed as an ONA. All of this area would be managed under a limited fire suppression policy.

UT-060-139A, Mill Creek

The 9,830-acre Mill Creek WSA is located about 1 mile east of Moab, Utah. Present management of livestock would continue, except on the South Sand Flats Allotment, where the season of use would be changed. The areawide monitoring program would be used to determine future stocking rates within this area. ORV use within the Mill Creek area would be limited to designated roads and trails. All public lands would be retained by the Federal government. The lands within this area would be open to mining claim location and development. Mill Creek Canyon would be open to oil and gas leasing with no surface occupancy to protect watershed values. The remainder of the area would be open to leasing with standard stipulations. All of this area would be managed under a limited fire suppression policy.

UT-060-140A, Behind the Rocks

The 12,635-acre Behind the Rocks WSA is located less than a mile from Moab, Utah on top of the red rock rim along the west sides of Moab and Spanish valleys. Present management of livestock would continue. The areawide monitoring program would be used to determine future stocking rates within this area. All of the area would be designated closed to ORV use. All public lands would be retained by the Federal government. The lands within this area would be open to mining claim location and development. No new oil and gas leasing would be allowed in the central portion of the area. The area just within the boundary would be open to leasing with no surface occupancy. All of this area would be managed under a limited fire suppression policy.

SUPPORT REQUIREMENTS

Approval of the RMP will mark the completion of one stage of the planning process. The RMP is not a final implementation decision on actions that require further specific plans, process steps, or decisions under specific provisions of law and regulations. More site-specific plans, such as AMPs, will be completed by the resource activity programs. Procedures and methods for accomplishing the objectives of the RMP on the ground will be developed through these activity plans.

The following additional project layout, implementation, and monitoring support actions would be necessary to implement the proposed plan:

CRITICAL WATERSHEDS

- water inventory;
- survey and design of instream drop structures;
- preliminary engineering design and updated cost estimates and analysis for Stinking Spring, including input from appropriate staff specialists;
- layout and design of salinity control structures;
- inventory of critical erosion areas, designated channels, and potential treatment areas;
- low level aerial photography of subbasins and salinity project areas;
- evaluation of aerial photos.

LIVESTOCK REQUIREMENTS

- coordination with ranchers on livestock manipulation;
- survey and design for range improvements and land treatments;
- monitoring studies.

WILDLIFE HABITAT REQUIREMENTS

- monitoring studies.

OFF-ROAD VEHICLE USE AND MANAGEMENT

- additional signing program;
- compliance monitoring in ORV designation areas.

LANDS ACTIONS

- cadastral survey;
- land appraisal;
- mineral evaluation;
- mining claim validation;

UTILITY CORRIDORS

- large-scale map showing existing rights-of-way.

RECREATION

- installation of rest rooms.

FIRE MANAGEMENT

- monitoring studies.

The support actions listed above are foreseeable at this time. The need for additional support actions, such as engineering and other studies or specific project plans, may be identified as a result of further planning. All such actions would be designed to achieve the objectives of the RMP. Additional environmental analyses will be conducted where appropriate to supplement the analysis in this final EIS.

MONITORING THE GRAND RESOURCE MANAGEMENT PLAN

The general implementation schedule for the Grand RMP is shown below. The implementation of the Grand RMP will be monitored during the life of the plan to ensure that management actions are meeting their intended purposes. Informal monitoring of the plan will take place frequently as management actions are implemented. Management actions arising from plan decisions will be compared with the objectives to ensure consistency with the intent of the plan. Formal monitoring reviews will take place at intervals not to exceed 5 years. These reviews will (1) assess the progress of plan implementation and determine if management actions are resulting in satisfactory progress toward achieving objectives, (2) evaluate the plan to see if it is still consistent with the plans and policies of State or local government, other Federal agencies, and Indian tribes, and (3) ascertain whether new data are available that would require alteration of the plan.

As part of the monitoring review, the government entities mentioned above will be requested to evaluate the plan and advise the District Manager of its consistency with their officially approved resource management related plans and policies. Authorized advisory groups will also be consulted during the review in order to secure their input.

Upon completion of a periodic monitoring review or in the event that modifying the plan becomes necessary, the Moab District Manager will determine what, if any, changes are necessary to ensure that the management actions of the plan are consistent with its objectives. If the District Manager finds that a plan amendment is necessary, an environmental analysis of the proposed change will be conducted and a

recommendation on the amendment will be made to the State Director. If the amendment is approved, it may be implemented 30 days after notice in the Federal Register.

Potential changes in the plan may take the form of maintenance actions or plan amendments. Maintenance actions respond to minor data changes. Such maintenance is limited to further refining or documenting a previously approved decision incorporated in the plan. Maintenance actions do not require the formal public involvement and interagency coordination process undertaken for plan amendments. A plan amendment may be initiated because of the need to consider monitoring findings, new data, new or revised policy, a change in circumstances, or a proposed action that may result in a change in the scope of resource uses or a change in the terms, conditions and decisions of the approved plan.

GENERAL IMPLEMENTATION SCHEDULE

The following schedule shows estimated completion dates for proposed management actions. Implementation of management actions is subject to available funding.

Critical Watersheds

1986 Install instream drop structures
1986 Divert Stinking Spring
1993 Implement salinity control treatments
1993 Manipulate vegetation and initiate land and watershed treatments

Livestock Requirements

1984 Authorize all grazing use at present levels (71,678 AUMs) and implement monitoring studies to determine whether stocking rates should be adjusted
1985 Change season of use on 4 allotments
1985 Change class of livestock on 1 allotment
1985 Manage 3 miles of streams by fencing and rotation of grazing use
1986 Manipulate grazing on 27,000 acres
1992 Implement livestock manipulation techniques on 24 allotments
1992 Implement land treatments on 13 allotments

Wildlife Habitat Requirements

1985 Reserve forage and space for deer and elk winter range in Pear Park, Spring Creek, and Castle Valley

Off-Road Vehicle Use and Management

1985 Designate 1,183,660 acres as open to ORV use
1985 Designate 596,234 acres as limited to existing roads and trails
1985 Designate 24,454 acres closed to ORV use
1985 Designate 15,206 acres as limited to designated roads and trails

Lands Actions

1985 Acquire an access easement at Cisco boat launch
1989 Consider 11,629 acres for disposal
1989 Study 6,594 acres to determine whether they should be retained or disposed of for other purposes

Utility Corridors

1984 Designate 140 miles of de facto corridors as official corridors
1984 Avoid future utility corridor development on 48,245 acres

Minerals

1984 Allow potash leasing on approximately 150,000 acres upon application
1984 Apply the revised oil and gas leasing category system
1984 Allow sales of humates on 1,500 acres

Recreation

1985 Designate 1,375 acres in Negro Bill Canyon as an ONA
1988 Construct rest rooms at seven locations

Fire Management

1985 Implement a limited fire suppression policy on the entire GRA
1991 Initiate prescribed fire and seeding on approximately 14,149 acres

ONGOING MANAGEMENT PROGRAMS AND ACTIONS THAT WOULD REMAIN IN EFFECT AFTER APPROVAL OF THE RMP

The Grand RMP focuses on ten significant resource management issues. Other ongoing BLM management programs and actions not discussed in the proposed plan would continue. This section briefly describes these programs and management actions to eliminate confusion regarding their status relevant to the RMP.

GRAZING ADMINISTRATION

Livestock grazing administrative functions not discussed in the proposed plan will continue. These include issuing grazing licenses, processing allotment transfers, establishing and reading range monitoring studies, conducting field examinations, supervising allotments, processing trespass actions, making public contacts, and completing benefit-cost analysis studies for range projects.

WILDLIFE HABITAT MANAGEMENT

Quality wildlife habitat will continue to be maintained and improved through existing and planned habitat management plans (HMPs). Riparian and wetland habitat and habitat for threatened and endangered species will continue to be identified and protected. Wildlife habitat studies and monitoring will continue as funding allows.

MINING LAW ADMINISTRATION

Areas not specifically withdrawn from mineral entry will continue to be managed under the 43 CFR 3809 regulations and the mining laws to help meet demand for minerals while preventing unnecessary or undue degradation of other resource values. Activities in areas under wilderness review will continue to be managed under the 43 CFR 3802 regulations to protect their wilderness character until the issue is resolved.

REALTY

Applications for minor rights-of-way and for use of the public lands through land use permits, temporary use permits, leases, and cooperative agreements will continue to be considered individually. Proposals under Project BOLD and the State Indemnity program will also be considered as they are submitted. Recommendations made and actions approved will be consistent with the objectives of the RMP.

The withdrawal review program will continue to review existing withdrawals from the land laws to ensure that such withdrawals are still needed and consistent with present management.

FOREST MANAGEMENT

Permits for harvest of woodland products for noncommercial use will continue to be sold to the public consistent with the availability of woodland products and the protection of sensitive resource values.

CULTURAL RESOURCE MANAGEMENT

Cultural resource clearances will be completed on all projects requiring BLM approval or initiated by the BLM that include surface disturbance. Areas or sites eligible for nomination to the National Register of Historic Places will be considered for nomination.

WATER MANAGEMENT

The inventory of water resources on the public lands will continue. Water sources located on public land necessary to meet BLM program objectives will be developed and filed on according to applicable State and Federal laws and regulations. Water quality of perennial streams will continue to be monitored, and climatological data will continue to be gathered.

ENDANGERED SPECIES

The protection of habitat for endangered or threatened plant and animal species will be considered prior to taking actions that could alter or disturb such habitat.

TRANSPORTATION MAINTENANCE

The BLM road maintenance program will continue.

WILDERNESS

Areas under wilderness review will continue to be managed following the guidance of BLM's Interim Management Policy for Lands Under Wilderness Review. This policy will be in effect until areas are released from interim management. Areas designated wilderness will be managed under the guidelines of BLM's Wilderness Management Policy.

CONTRACTS

Existing approved contracts will not be affected by the RMP.

COMPARATIVE SUMMARY

Table 1-1 compares the proposed plan with the preferred alternative of the Draft RMP/EIS. The proposed plan is described to the extent that it differs from the preferred alternative. The comparative analysis for the other alternatives was presented in the draft document.

TABLE 1-1

Comparative Summary of Management Actions and Impacts
of the Draft Preferred Alternative and the Proposed Plan

ALTERNATIVE C, LIMITED PROTECTION	PROPOSED RESOURCE MANAGEMENT PLAN
Soils. Installation of instream drop structures would reduce soil erosion in channels and provide potential for stabilization of channel banks and reestablishment of vegetation. Short-term increases in erosion would result from vegetation manipulation. Increased ground cover would reduce erosion rates from existing conditions. Additional mitigation of oil and gas activity would minimize soil losses as a result of surface disturbing activities. Restriction of ORV use and livestock grazing on soils derived from Mancos Shale and on designated municipal watersheds would improve water infiltration, minimize soil compaction, and result in a decrease in soil loss and an increase in productivity.	Soils. Actions and impacts would be the same as under the preferred alternative, except that improvements in water infiltration, lessening of soil compaction, decreases in soil loss, and increases in productivity would result from restriction of ORV use and manipulation of livestock grazing.
Water Quality. Installation of instream drop structures would increase water storage upstream from the water structures and improve the overall water quality of targeted drainages. Existing water quality would be improved through reduction of 8,100 tons of salt and sedimentation to the Colorado River annually. Water yield would be reduced because of the control of 670 acre-feet of saline runoff and saline springs through salinity control projects on a total of 41,000 acres. Changing the season of use on allotments that have a majority of soils derived from Mancos Shale and restricting livestock on 27,000 acres of highly saline soils would reduce salt by 5,808 tons, sediment by 187,640 tons, and runoff by 2,305 acre-feet. Control of ORV use and oil and gas development could result in an additional reduction of 500 tons in the amount of salt introduced into the Colorado river, as well as protection of municipal watersheds, such as Mill Creek.	Water Quality. Actions and impacts would be the same as under the preferred alternative, except that season of use would not be changed on allotments that have a majority of soils derived from Mancos Shale. Manipulation of livestock grazing on 27,000 acres of highly saline soils would reduce salt by 1,018 tons, sediment by 27,945 tons and runoff by 66 acre-feet.
Air Quality. Some significant short-term impacts on air quality could occur under a limited fire suppression policy or during prescribed fires.	Air Quality. Actions and impacts would be the same as under the preferred alternative

TABLE 1-1 (Continued)

ALTERNATIVE C, LIMITED PROTECTION	PROPOSED RESOURCE MANAGEMENT PLAN
Vegetation. Riparian vegetation would increase around instream structures. There would be a slight increase in vegetation around salinity control treatments. Seventy acres (2 AUMs) of vegetation would be lost through the construction of an evaporation pond. Vegetation would increase over the long term wherever watershed treatments are initiated. Present livestock management at the level of the past 5 years' licensed use would maintain ecological conditions in most instances. Overall vigor would be maintained or may improve on allotments presently under AMPs (403,655 acres). Vegetation composition would be changed from pinyon-juniper and sagebrush to grass species through maintenance of land treatments (52,000 acres). Perennial forage plants would be protected during critical growth periods through change in season of use for livestock grazing (358,775 acres). A change in the class of livestock would increase vigor and production of browse species (69,042 acres). Resting 3 miles of perennial streams from grazing would improve the condition of desirable vegetation. Ecological condition would improve through restriction of grazing on saline soils (27,000 acres). Maintenance of existing waters would prevent improvement of vegetation around the waters. Some protection would be afforded to vegetation through restriction of ORV use. There would be an estimated 5 percent increase in vegetation, and a sensitive plant would be protected through closing certain areas to ORV use. Vegetation would be maintained on 32,000 acres presently open to mining claims; 300 to 400 acres would be altered yearly through oil and gas activity. The 250 acres under contract for humate development would be subject to disturbance. The present loss of vegetation through activities under recreation use permits would continue. There would be a long-term loss of pinyon-juniper and sagebrush vegetation of undetermined amount under a limited fire suppression policy. Sagebrush and pinyon-juniper communities would be changed to grass and browse on 68,105 acres through land treatments and on 14,149 acres through prescribed fires. Vegetation on 11,629 acres would be lost to BLM management through	Vegetation. Actions and impacts would be the same as under the preferred alternative except that 54,380 acres of perennial forage plants would be protected during critical growth periods through a change in season of use; 1,750 acres would be subject to disturbance from humate development; ecological condition would be maintained or improved on 793,031 acres through livestock manipulation techniques; and vegetation could be disturbed on the 32,000 acres that would have been withdrawn from mineral entry under the preferred alternative.

ALTERNATIVE C, LIMITED PROTECTION	PROPOSED RESOURCE MANAGEMENT PLAN
lands disposal. There would be a slight decrease in vegetation over the entire acreage open to sales of common minerals and a total loss of vegetation at each individual site. Ecological condition would be maintained or improved on 488,636 acres through livestock manipulation tecniques.	
Livestock. Initial livestock AUMs would be limited to 66 percent of active preference. Monitoring studies would determine allowable use. Livestock would be slightly disturbed by other ongoing resource uses (ORV, recreation use, oil and gas and other mineral activities). Construction of an evaporation pond would result in a loss of 2 AUMs. Land treatments would provide an additional 4,734 AUMs. A total of 1,497 sheep AUMs would be converted to cattle AUMs. Use would be reduced by 588 AUMs on highly saline soils. About 153 AUMs would be lost through lands disposal. An increase of 1,309 AUMs through prescribed fire is expected.	Livestock. Actions and impacts would be the same as under the preferred alternative
Wildlife. Continued present livestock management would result in a loss of habitat productivity on 9 allotments. Bighorn sheep, antelope, deer, and elk would continue to compete with livestock for forage and space on 8 allotments. Aquatic and riparian habitat would continue to decrease on one allotment. The implementation of livestock manipulation techniques would improve water, cover and reduce spatial competition for wildlife ungulates on 15 allotments. Land treatments would provide an additional 4,155 AUMs of winter/spring forage for deer, elk, and antelope. Changing the season of use would reduce competition for bighorn on three allotments, antelope on four allotments, and elk on four allotments. A change in season of use would help to improve aquatic/riparian habitat toward a climax vegetation ecological condition on one allotment. Changing the class of livestock would reduce deer and elk competition for winter/spring forage on one allotment. Management of three perennial	Wildlife. Actions and impacts would be the same as under the preferred alternative, except that the implementation of livestock manipulation techniques would improve water and cover and reduce spatial competition of wildlife ungulates on 20 allotments; land treatments would provide an additional 3,780 AUMs of winter/spring forage for deer elk, and antelope; changes in season of use would reduce competition of bighorn sheep on one allotment and would improve riparian and aquatic habitat toward a climax ecological condition on two allotments.

ALTERNATIVE C, LIMITED PROTECTION	PROPOSED RESOURCE MANAGEMENT PLAN
streams would improve riparian and aquatic habitat. Restriction of livestock grazing from 27,000 acres of saline soils would increase forage, water, and cover for nongame species. Reserving all forage on Pear Park, Spring Creek, and Castle Valley areas for deer and elk would increase winter/spring forage for deer and elk. Disturbance of wildlife and their habitat would be reduced by limitation of ORVs to existing roads and trails. The exclusion of rights-of-way within 130,164 acres would protect 48,245 acres of critical bighorn sheep habitat (including Mineral Bottom, Potash, and Westwater areas). Potash development could result in a loss of 50 percent (13,567 acres) of bighorn sheep habitat located within existing or potential lease areas. One hundred percent (200,769 acres) of the deer and elk winter range and calving and fawning areas located within Herd Unit 28-B would be protected from oil and gas exploration by Category 2 special stipulations. Nineteen percent (18,391 acres) of the antelope kidding areas in the Cisco desert, 9 percent (7,040 acres) of Hatch Point would be protected from oil and gas exploration by Category 2 stipulations. Thirty-four percent (16,873 acres) of bighorn habitat within Potash, Mineral Bottom, and Westwater would be protected by Categories 3 and 4. Of the remaining areas, 66 percent is designated as Category 1 and bighorn could be lost through stress and displacement. Golden eagle nest sites in the Cisco Desert would be protected on 2,880 acres by Category 2 designation and on 960 acres designated as Category 3. Prescribed fires would increase wildlife forage by 731 AUMs.	
Mineral Resources. Initiate an oil and gas category system which assigns 1,156,560 acres to Category 1; 563,808 acres to Category 2; 70,274 acres to Category 3; and 28,912 acres to Category 4. As a result of this system, about 145 oil and gas wells would be drilled annually in the resource area. About 49,500 barrels of oil and 9,560,000 to 9,960,000 MCF	Mineral Resources. Actions and impacts would be the same as under the preferred alternative, except that humate production is estimated at 150,000 tons per year after projects begin, depending on market conditions and interest in development.

TABLE 1-1 (Continued)

ALTERNATIVE C, LIMITED PROTECTION	PROPOSED RESOURCE MANAGEMENT PLAN
of natural gas would be removed from public lands annually in the resource area. Maintain the policy of selling sand, gravel, and humate materials under contract to private interests and granting them free to local government, from lands free of mining claims, on a case-by-case basis. Gravel removal has run as high as 2.5 million tons per year. Humate production is estimated at 50,000 tons per year after the project begins. Maintain three existing potash leases. Continue the policy of leasing additional potash throughout areas of known reserves. Maintain the rights of mining claimants under the Act of 1872. Gold production from claims could run as high as 600 ounces per year, depending on market conditions. Also under this action, uranium produced could run as high as 1,000,000 pounds of yellowcake per year depending on market considerations.	
Mineral Rights. The entire GRA would be open to mining claims with the following exceptions: 1,850 acres under existing withdrawal orders for protection of campgrounds and scenic sites; 32,000 acres under new withdrawal orders for protection of scenic lands along the Colorado River. Under the new withdrawal, existing mining claims would still be recognized but lands where claims are abandoned could not be restaked. There is no means of estimating any rate of abandonment under this alternative. A few uranium claims and at least 200 of 500 placer claims in the GRA would fall in the withdrawal area.	Mineral Rights. The entire GRA would be open to mining claims except for 1,850 acres under existing withdrawal orders for protection of campgrounds and scenic sites.
Transportation. Under this alternative access roads and trails being established each year as a result of ORV use would decrease as 596,234 acres would be limited to existing roads and trails. An additional 24,454 acres would be closed to ORVs, resulting in degeneration of roads and trails in these areas. This could reduce access to portions of the area. The impact on transportation from development of mining claims would be insignificant. Adoption of the proposed oil and gas categories would result in a slight decrease in the number of new	Transportation. Actions and impacts would be the same as under the preferred alternative, except that full development of locatable minerals would result in 10 to 15 miles of new roads per year.

TABLE 1-1 (Continued)

ALTERNATIVE C, LIMITED PROTECTION	PROPOSED RESOURCE MANAGEMENT PLAN
roads being constructed for access. New road construction may fall below the current 75 to 100 miles per year.	
Cultural Resources. No significant impacts could occur to cultural resources because any significant action must be accompanied by an archaeological clearance.	Cultural Resources. Actions and impacts would be the same as under the preferred alternative.
Visual Resources. The chaining of pinyon-juniper in land treatment actions would have a short-term effect on the visual quality. The regrowth of vegetation would restore the original visual characteristics. Oil, gas, and potash activities could temporarily change the visual quality; however, mitigating measures in the lease stipulations and in the surface mining regulations would restore visual characteristics over the long term.	Visual Resources. Actions and impacts would be the same as under the preferred alternative.
Special Designation Areas. The designation of 89,455 acres as suitable for wilderness could protect the wilderness values of those areas. ORV use restrictions on 635,894 acres would result in the protection of scenic values in these areas. Excluding rights-of-way from 130,164 acres adds additional protection of wilderness values on 89,455 acres of lands recommended as suitable for wilderness. The application of oil and gas leasing categories proposed would provide protection under Categories 2, 3, and 4 for 22 areas identified as possessing exceptional scenic qualities. Included are 89,455 acres in WSAs recommended for preliminary wilderness suitability and 65 miles of Wild and Scenic River study corridors.	Special Designation Areas. No wilderness suitability recommendations are contained in the proposed plan (refer to the wilderness section earlier in this chapter for further information). ORV use restrictions on 635,894 acres would result in protection of scenic values in these areas. Excluding rights-of-way from 48,245 acres in resource conflict areas would protect critical bighorn sheep habitat. The application of oil and gas leasing categories proposed would provide protection under Categories 2, 3, and 4 for 22 areas identified as possessing exceptional scenic qualities. Included are 65 miles of Wild and Scenic River study corridors.
Recreation. Acquisition of an easement would ensure continued access to the Cisco launch area for Colorado River recreationists. Designating 7 miles of duplicate roads as closed would decrease ORV use by less than 1 percent. Control of the oil and gas activities allowed under the leasing category system application as proposed for this alternative would provide protection for the scenic values in the 22 areas identified in Table 2-9 of the draft. Mainten-	Recreation. Actions and impacts would be the same as under the preferred alternative

TABLE 1-1 (Continued)

ALTERNATIVE C, LIMITED PROTECTION	PROPOSED RESOURCE MANAGEMENT PLAN
ance of existing recreational facilities, hiking trails, motorcycle trails, and developed scenic roads would protect the dollar investments in them and ensure that recreational opportunities associated with the values protected are not diminished. Economic Conditions. Watershed actions that could have quantifiable effects on water yield and salt loading would decrease the annual cost borne by water users in the lower Colorado River basin by $535,000 to $170,000 and result in a $55,000 loss of value from decreased water yield. Two of the 45 livestock operators would have less available forage; 24 of the 45 would have more available forage; and 12 of the 45 would receive major exclusions during the spring. Aggregate returns above cash costs would increase by $33,573 (+1 percent) which should also increase ranch values. However, the reductions from active preference could reduce ranch values by as much as 5 percent. Greater wildlife populations would increase hunter success rates and result in greater hunter pressure, local expenditures, and would increase local personal income and employment by as much as $185,000 and seven jobs, respectively. Land sales near Castle Valley, Moab, and Spanish Valley would have a depressing effect on nearby private land market prices. Decreased oil and gas drilling and production would eventually result in two to five fewer local jobs (-0.1 percent) and less local government revenues from reduced royalty payments to the State. Future gold production and associated employment and income would also be impacted. Primitive nonmotorized recreation use and related local expenditures could be higher than would otherwise be the case. Existing commercial use of recreation areas would be preserved and the potential for commercial use of other areas would increase.	Economic Conditions. Actions and impacts would be the same as under the preferred alternative, except that the annual cost borne by water users in the lower Colorado River basin would be decreased by $495,000 to $370,000; there would be a $54,000 loss of value from decreased water yield; none of the 45 livestock operators would have less available forage in the long term; 24 of the 45 would have more available forage; 3 of the 45 would receive major exclusions during the spring; aggregate returns above cash costs would increase by $129,800 (+5 percent); reductions from active preference could reduce ranch values by as much as 6 percent; and future gold production and associated employment and income would would not be impacted.

TABLE 1-1 (Concluded)

ALTERNATIVE C, LIMITED PROTECTION	PROPOSED RESOURCE MANAGEMENT PLAN
Social Conditions. None of the management actions would impact the local groups or communities to such a degree as to affect their existing social environment. However, this alternative would probably be perceived by most residents as having a significant negative impact upon the local community.	Social Conditions. Actions and impacts would be the same as under the preferred alternative, except that most residents would view the proposed plan as having less of a local impact than the preferred alternative.

NOTE: Refer to Table S-3 (page S-15 of this document) for a comparison of the subalternatives with the alternatives analyzed in the Draft RMP/EIS.

CHAPTER 2

ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED RESOURCE MANAGEMENT PLAN

INTRODUCTION

Impacts of the management actions that make up the proposed resource management plan (RMP) are analyzed on the basis of 15 land uses and environmental components, called indicators. These are soils and water quality, air quality, vegetation, livestock grazing, wildlife, mineral resources, mineral rights, transportation, cultural resources, visual resources, special designation areas, recreation, economic conditions, and social conditions. Most of the references cited in this final document were listed in the draft. Any new literature citations are listed in Chapter 3, Additions and Corrections to the Draft.

CRITICAL WATERSHEDS

INSTALLATION OF INSTREAM DROP STRUCTURES IN EIGHT STREAMS

Soils and Water Quality. Installation of instream drop structures would reduce soil erosion in channels and provide potential for stabilization of channel banks and reestablishment of vegetation. Water storage above the structures would be increased, but cannot be quantified because the amount of water stored would depend on the sizes and locations of the structures. The target impacts are to (1) maintain or improve channel conditions, (2) reduce sediment yield, flood peaks, and susceptibility to flash floods, and thereby (3) improve the overall water quality of drainages in the Cottonwood, Diamond, Thompson Canyon, Crescent Canyon, Floy Creek, Floy Canyon, Middle Canyon, Main Canyon, Corral Wash, Cisco Mesa, and Barley Flat-Ronzio allotments.

Vegetation. Riparian vegetation along the stream banks within 10 to 20 yards upstream from the structures would increase. An additional impact, which would occur if the structures bring about the raising of the water table, would be a change in vegetation from sagebrush to a more varied composition of perennial grasses (e.g., needlegrass, bluegrass, mountain brome) throughout the affected stream floodplain.

Livestock Grazing. There would be a substantial but unquantifiable increase in available forage if the water table is raised sufficiently to change the vegetation beyond the immediate vicinity of the structures.

IMPLEMENTATION OF SALINITY CONTROL TREATMENTS ON 41,000 ACRES

Soils and Water Quality. Implementation of the suggested salinity control treatments would reduce active soil erosion (BLM, 1977c). Areas of gully and rill erosion would be stabilized, and the upward extension of gully systems reduced (Jackson and Julander, 1982). This would result in collection of approximately 335 acre-feet of runoff from 41,000 acres of highly saline soils, trapping an anticipated 141,040 tons of sediment and reducing salinity contribution to the Colorado River system by approximately 5,140 tons per year. Appendix E of the draft shows the acreage of proposed treatment of highly saline soils by allotment, an estimate for runoff

coming from these soils, and the anticipated tons of sediment trapped by these structures, using an average of 3.44 tons per acre (Jackson and Julander, 1982).

Vegetation. Because of the nature of the associated soils, impacts to vegetation would be confined to within 2 or 3 feet of the structures themselves. There would be a slight increase in vegetation in this immediate area. A recent (September, 1982) field observation of existing structures in the same area showed an increase in rubber rabbitbrush and snakeweed, with hardly any difference in grass species. Near those structures where crested wheatgrass seed had been broadcast, there was a definite increase in the number of plants that survived, as a result of the water held by the structures.

Wildlife. Forage, cover, and water for wildlife ungulates and nongame wildlife species would increase, allowing populations of nongame birds and mammals to increase (Carothers, 1977). Deer populations would remain stable.

DIVERSION AND EVAPORATION OF WATER FROM STINKING SPRING

Soils and Water Quality. Diversion and evaporation of water from Stinking Spring would require construction of an evaporation pond. The evaporation pond would reduce water yield by 128 acre-feet and the salt load to the Colorado River by 3,100 tons per year (BLM, 1980a).

Vegetation. Construction of the evaporation pond would remove about 70 acres from vegetative production.

Livestock Grazing. Two animal unit months (AUMs) of livestock forage would be lost on this low production site.

VEGETATION MANIPULATION AND LAND AND WATERSHED TREATMENTS ON THREE CRITICAL WATERSHED SUBBASINS

Soils and Water Quality. Specific vegetation manipulation practices and land and watershed treatments have not been described, nor have their locations been identified; therefore, definite impacts cannot be anticipated at this time. However, a short-term impact to soils and vegetation would occur through any initial surface disturbance. A long-term increase in vegetation and resultant decrease in erosion, sedimentation, and salinity could be expected to occur from any watershed treatments.

Vegetation. Vegetation would increase over the long term wherever these practices are initiated.

Livestock Grazing. Depending on the type and method of watershed and vegetation treatment, livestock forage would increase to some degree. No quantification can be made at this time.

Wildlife. Implementing vegetation manipulation and land treatments on three critical watershed subbasins (313,800 acres) would increase forage, water, and cover for nongame birds and small mammals. Nongame bird and small mammal populations would increase, and wildlife ungulate populations would remain stable (Carothers, 1977).

LIVESTOCK REQUIREMENTS

CONTINUATION OF PRESENT LIVESTOCK MANAGEMENT ON 833,545 ACRES

Soils and Water Quality. Continuation of present livestock management practices on 37 allotments would impact soil through surface disturbance, soil compaction and water infiltration, and changes in ground cover. Since these factors influence the erosion rate and sediment yield, erosion rates and trends would continue at present levels. Decreases in soil erosion generally follow increases in production of vegetation and improvement in ecological condition, although soil changes lag behind plant changes (USDA, 1976). Maintaining the present medium to high ecological condition would allow soil loss values to remain at or below the T value. Areas of high geologic erosion are generally in critical erosion condition. These soils occur on slopes greater than 50 percent and are in medium or high ecological condition.

Vegetation. Continuation of current livestock management on 37 allotments (Appendix A) would affect ecological condition (Appendix I of the draft). Much of the area that is not grazed during critical growing periods is in high or climax condition. These sites would continue in high or climax condition. On other sites, since present ecological condition results partly from past livestock use, present management at the level of the past 5 years' average use would maintain ecological condition in most instances. Some sites that receive substantial livestock use would decline in ecological condition as desirable forage plants are replaced by undesirables that are not components of the site in upper seral stages. See Appendix I of the draft for present ecological condition of each allotment, and Appendix A of this proposed RMP and final EIS for a listing of the specific allotments that would continue under present management.

Livestock Grazing. Maintaining the present ecological condition would maintain the present forage yield and enable livestock grazing to continue at current levels (71,678 AUMs).

Wildlife. Continuation of present livestock management on 37 allotments would not affect wildlife ungulates on 29 allotments; however, on the remaining eight allotments, some habitat concerns exist.

On the Blue Hill Allotment, the deer population is stable to increasing, and the elk population is increasing. This allotment has been identified as an area where there is potential for competition with livestock. Since reproductive success and fawn or calf survival depend largely on the condition of the female animal when she leaves the winter/spring range, forage quality and quantity must be sufficient to support these herds through the winter and spring (Wallmo, 1981; Kerr, 1979). See Appendix I of the draft for seasons of use. Threshold levels for livestock and elk competition problems are unknown.

Bighorn populations are increasing, and they would continue to do so until threshold levels are reached. There is a potential for desert and Rocky Mountain bighorn sheep to compete with cattle for forage and space on five allotments: Arth's Pasture, Big Flat-Ten Mile, Kane Springs, Little Hole, and Rattlesnake. (Refer to Appendix I of the draft for seasons of use and species overlaps).

Specific evidence, documented by several researchers, indicates that livestock

compete directly with bighorn sheep for food, space, and water (BLM, 1981c). Domestic sheep could also transmit parasites and disease to bighorn on three of these allotments (Big Flat-Ten Mile, Little Hole, and Rattlesnake). Threshold levels for livestock and bighorn sheep competition and parasite and disease transmission are unknown.

Under current livestock management, antelope populations would remain stable or slightly increase on the Bar-X Allotment, and decrease on the Windwhistle Allotment. The presently stable to decreasing trend is attributed to drought, severe winter weather, predation, and marginal or unsuitable habitat conditions.

On the Granite Creek Allotment, which is one of three allotments presently supporting trout fisheries and where aquatic and riparian habitat shows evidence of past concentration of livestock along drainage bottoms, present ecological condition is 50 percent low and 50 percent medium. Riparian and aquatic habitat would continue to decrease in ecological condition.

IMPLEMENTATION OF LIVESTOCK MANIPULATION TECHNIQUES ON 793,031 ACRES

Soils and Water Quality. Livestock manipulation techniques would reduce runoff, sediment, and salt from project areas by 15 percent after 15 years (BLM, 1977c). Improving overuse areas to medium or high ecological condition would reduce sediment and potential salt loads by 30 to 65 percent. Reduction estimates were derived by comparing universal soil loss estimates for saline-alkali soils (Appendix C of the draft).

Vegetation. It is estimated that perennial forage plants would increase by 5 to 25 percent. A plant's health and survival depend on its abilities to synthesize and store food, form vegetative structures for renewal of top growth, maintain a healthy root system, and develop reproductive organs (Stoddart, et al., 1975). Grazing, through removal of photosynthetic leaf tissue, interferes with these processes. Systematic grazing mangement is designed to offset these impacts by providing rest. Water developments may improve livestock distribution and thus improve ecological conditions in previous heavy use areas.

Livestock Grazing. Fences, water developments, and rotation of grazing use areas would have a greater impact on cattle than on sheep, because cattle are social animals and creatures of habit. Any significant change in their habitual use patterns through concentration, change in season of use for a particular use area, or change in pasture would have a short-term impact on their well-being and productive capacity.

Concentration of livestock would reduce the opportunity for selective grazing and cause them to utilize less palatable forage plants. Their initial response to concentration in a single grazing unit would be to walk the fences, spending less time grazing; this would result in weight loss, potential reduction in calf crop percentage, lighter calves, and possibly a longer period of adjustment to the seasonal movement of livestock. However, as cattle become adjusted to the periodic pasture changes, and replacement animals remain in the herd, the potential for improved production in terms of calves and pounds of beef would be enhanced because of the increased forage production as a result of grazing systems and because new areas of the allotment could be used if waters are developed.

Wildlife. Implementation of livestock manipulation techniques on 24 allotments (Appendix A) would improve water and cover and reduce spatial competition for wildlife ungulates on 20 allotments.

Winter/spring forage would increase through managing for a subclimax seral stage on the following allotments for the species indicated: Barley Flat-Ronzio, deer and elk; Cisco Springs Wash, Cisco Mesa, Corral Wash, San Arroyo, Sulphur Canyon, deer and antelope; Floy Creek, deer; Hatch Point, deer, elk, antelope, and bighorn sheep; Horse Canyon, deer; Lisbon, deer, elk, and antelope; Nash Wash, deer; Professor Valley, deer and elk; Spring Canyon Bottom, bighorn sheep; Steamboat Mesa, deer and elk; Ten Mile Point and Mineral Point, bighorn sheep; Pipeline and Harley Dome, antelope.

Implementation of these techniques would increase yearlong forage, provide additional water, and reduce spatial competition for bighorn sheep on Spring Canyon Bottom, Hatch Point, Ten Mile Point, and Mineral Point allotments (BLM, 1981c).

Antelope populations would remain stable to increasing on seven allotments in the Cisco herd unit; population trends for the Hatch Point herd unit cannot be anticipated, since this herd currently has low numbers and is in a downward trend. The presently stable to decreasing trend is attributed to drought, severe winter weather, predation, and marginal or unsuitable habitat conditions.

Bighorn sheep populations are expected to continue to increase as a result of reduced spatial competition and increased forage availability (BLM, 1981c).

Deer populations would remain stable to increasing, and elk populations would continue to increase.

MAINTENANCE OF EXISTING LAND TREATMENTS ON 51,989 ACRES

Soils and Water Quality. As treated areas need maintenance, practices would be done to maintain the desired vegetation. Although an area may have been previously treated by spraying, plowing, or chaining, followup treatments to maintain forage for livestock and wildlife would not be limited to the original method. Separate environmental assessments (EAs) will be prepared before any projects are initiated.

Plowing and seeding would reduce plant cover and lead to localized short-term erosion, but in the long term, soil erosion would be reduced as ground cover increased. Grass and browse species would become established, holding the soil in place and increasing water infiltration, thus reducing soil erosion and improving water quality.

Chaining would cause short-term surface disturbance and the uprooting of trees, possibly increasing soil loss by one-half ton per acre. Buckhouse and Gifford (1976) studied areas in southern Utah that received this treatment and found that sediment yield did not increase if the debris was left in place. In the long term, sediment yield would be reduced even more as ground cover increased.

Drill seeding would not decrease sediment yield or surface runoff, since the existing vegetation cover would not be removed, and soil disturbance would be localized and minimal. In the long term, since previously bare soil spots would be

covered by vegetation, sediment yield and surface runoff would be reduced, decreasing suspended solids in stream water.

Any form of land treatment maintenance other than aerial spraying would result in some surface disturbance, and would therefore cause a short-term increase in erosion, runoff, and sediment. The loss of vegetative cover would double or triple the soil's susceptibility to erosion. However, if debris is left in place, sediment yields would be minimized because the cover provided by the debris would intercept and dissipate the erosive action of raindrops, decreasing onsite erosion. Once grass species become established, they would hold the soil in place and increase water infiltration, thereby decreasing the solids suspended in stream water. Erosion would decrease as the ground cover increased.

Vegetation. There would be a short-term decrease in vegetation in areas that were chained or plowed and seeded, but within 2 to 3 years the land should produce a greater quantity of forage and a greater variety of species than before the maintenance treatment, although reinvasion of pinyon-juniper and sagebrush would occur. The useful life of chainings and seedings is generally 20 to 30 years (Tueller and Tausch, 1977). The basic impact to vegetation would be no change from what now exists or has existed as a result of the initial land treatment.

Presently available information indicates that 2,4-D is the herbicide of choice for aerial spraying. It would degrade in 2 to 6 weeks, not accumulating in the soil nor entering the stream system. Spraying 2,4-D can reduce big sagebrush from 67 to 100 percent (Blaisdell and Mueggler, 1956), releasing moisture and nutrients for other types of vegetation. Composition could be expected to change from dominant sagebrush to 10 percent sagebrush with more grasses and browse species within 2 to 3 years. The land should produce a greater variety of species than before treatment, although reinvasion would occur. Research in northern Utah showed an average increase in herbaceous forage yield of 166 percent after spraying (Cook, 1963). Note that this discussion is for areas that have previously been seeded. No new seeding would take place. (See Appendix A of the draft for an explanation of standard mitigating measures for spraying.)

Spraying herbicides is likely to be used in the future because of its predictability and relatively low cost, and because there is considerable practical experience with the technique. While 2,4-D does not harm grasses, Keith, et al. (1959) reported an 83 percent reduction in perennial forbs the year after the spray project. Laycock (1979) reported that forbs returned to their former abundance, and sometimes increased in abundance, within 5 to 19 years after the spraying.

In general, the main impact of this and other maintenance treatments would be to change composition from pinyon-juniper and sagebrush to grass species. An impact to vegetation in other areas may occur if those areas are grazed more heavily while treatment areas are being rested.

Livestock Grazing. Initial disturbance from maintenance of existing land treatments would change the vegetation to such a degree that livestock could not graze the area for approximately 2 years, until the vegetation becomes reestablished. This time frame would vary, depending on the treatment. In areas where the forage species are still abundant, the rest period would be much shorter than in areas where the vegetation has to become established.

Wildlife. Maintenance actions would result in a long-term increase in the quality of forage over what the condition would have been, had the initial treatment been allowed to deteriorate. However, this would not result in an increase in AUMs, since the AUMs were allocated previously, after the initial treatment. Forage for deer and elk would be maintained on these 11 allotments (see Appendix A), allowing the populations to remain stable.

IMPLEMENTATION OF NEW LAND TREATMENTS ON 68,105 ACRES

Soils and Water Quality. Implementation of new land treatments on 68,105 acres would have the same general impacts on soils and water quality as described under maintenance of existing land treatments.

Vegetation. The impacts to vegetation described under maintenance of existing land treatments would occur on the 68,105 acres where new land treatments would be implemented.

Livestock Grazing. On the average, implementation of land treatments would decrease forage for the first 2 years, until the seeded species become established. Livestock would be restricted from using these areas, most of which are now being grazed to some extent. Disturbance of grazing habits might cause a negligible decrease in weight gain, depending on the amount of movement necessary to keep livestock off the area for 2 years.

The long-term impact would be an increase of 4,734 AUMs for livestock. Since most of the treatment areas would be grazed in the spring, the long-term increase in amount and quality of forage would increase weight gain and calf crop percentage.

Wildlife. Implementation of land treatments on 13 allotments would provide an additional 3,780 AUMs of winter/spring forage for deer, elk, and antelope (See Appendix A). This action would allow deer, elk, and antelope populations to remain stable or increase.

AUTHORIZATION OF GRAZING USE AT PRESENT LEVELS

Soils and Water Quality. Authorization of grazing use at present levels (71,678 AUMs, see Appendix A) would result in continued surface disturbance and plant defoliation. Both these factors increase susceptibility to erosion and related sedimentation.

The current degree of impact (cumulative soil loss estimate) for these allotments is unknown. However, it is assumed that medium or high ecological condition would minimize soil loss estimates and keep soil loss below the T value.

Vegetation. On the 616,267 acres that are in high and climax condition, no significant impact to vegetation would occur. On the 923,383 acres that are in low to medium condition, vegetation would probably decline even further. Other proposed management actions, such as livestock manipulation techniques, would lessen the impact.

Livestock Grazing. The future AUMs shown in this management action represent the total of changes that would result from all actions under the proposed plan. Impacts are analyzed in the narrative for each of these actions.

Wildlife. Continued authorization of grazing use at present levels would cause some habitat concerns for wildlife ungulates on eight allotments and for riparian and aquatic habitat on one allotment. Deer populations would remain stable to increasing, and elk populations would continue to increase on the Blue Hill Allotment.

There is potential for competition between livestock and bighorn sheep, primarily during the winter and early spring, on five allotments: Arth's Pasture, Big Flat-Ten Mile, Kane Springs, Little Hole, and Rattlesnake. (Seasons of use and species overlaps are shown in Appendix I of the draft.)

Antelope populations would remain stable or slightly increase on the Bar-X Allotment and decrease on the Windwhistle Allotment. The presently stable to decreasing trend is attributed to drought, severe winter weather, predation, and marginal or unsuitable habitat conditions.

Riparian and aquatic habitat would continue to decrease in ecological condition on the Granite Creek Allotment.

CHANGES IN SEASON OF USE ON 54,380 ACRES

Soils and Water Quality. The changes in season of use would result in an estimated reduction of 900 acre-feet of runoff, 33,300 tons of sediment, and 370 tons of salt delivered to the Colorado River in 3 years.

Vegetation. The start of the growing season is the most critical time for perennial plants. Grazing at this time, particularly on desert ranges, is detrimental to the ability of the plant to reproduce and sustain itself (Stoddart, et al., 1975).

The season of use changes on four allotments would provide rest for the desirable plant species during the critical green-out and early growth period. Two of the allotments would be grazed in the winter, and livestock would be taken off to protect plants during the spring. Livestock would not be put on the other two allotments until the plants have made some growth. These two allotments would be grazed during the summer. This change in season of use on summer grazing allotments would allow the forage plants to build up their carbohydrate reserves before grazing begins.

Livestock Grazing. A change in season of use to restrict spring grazing on these four allotments would amount to more than 2 weeks' time on only one allotment. It could be a significant impact to the livestock on the particular allotments, however. Livestock would have to be removed from the allotment and taken elsewhere, either for grazing in other areas or for feeding of hay. Spring grazing provides more nutrition than forage grazed during any other season of the year (Cook, 1971), and nutritious forage is critical to gestation and lactation, which take place during the spring months. The individual animals would not have access to this spring forage.

Wildlife. A change in season of use would restrict livestock use of winter/spring forage, allowing bighorn sheep populations to remain stable or increase as a result of improved habitat (BLM, 1981c; BLM, 1970). Bighorn sheep compete for forage and space on the Potash Allotment. The restriction of livestock grazing through a change in season of use would help to improve riparian and aquatic habitat toward a climax ecological condition in the Diamond and Floy Canyon allotments.

CHANGE IN CLASS OF LIVESTOCK ON 69,042 ACRES

Vegetation. A change in the class of livestock from sheep to cattle would decrease the vigor and production of grasses because of increased grazing pressure. There would be comparable increase in the vigor of browse species.

Livestock Grazing. With the change in class of livestock on the Buckhorn Allotment, 1,497 AUMs presently used by sheep would be converted to cattle. The number of AUMs that would be available for cattle is unknown at this time, since the conversion rate would have to be determined from inventory data for this particular allotment. For Appendix A, 1,497 AUMs are shown.

Wildlife. Changing the class of livestock from sheep to cattle on the Buckhorn Allotment (4 percent of the Grand Resource Area (GRA)) would help reduce competition for winter/spring forage for approximately 2,189 deer and 100 elk. These herd units are presently at 90 percent of estimated prior stable numbers of deer, and 50 percent of estimated prior stable numbers of elk (Tables 3-2 and 3-3 are reprinted in Chapter 3 of this document). The populations would remain stable or increase as a result of this action (Wallmo, 1981).

MANAGEMENT OF 3 MILES OF PERENNIAL STREAMS

Soils and Water Quality. Managing perennial streams by fencing or rotation of grazing use would control grazing of the vegetation that is useful to stream protection. This existing streamside vegetation is valuable to the aquatic environment because it reduces water temperatures, provides natural cover, increases terrestrial food, reduces sediment and runoff, and stops minor slash and debris movement. Soil disturbance along the stream channels in these degraded areas would be minimized, and the overall water quality of Cottonwood, Diamond, and Rattlesnake drainageways would improve slightly.

Vegetation. Rest from grazing would improve the condition of riparian vegetation. But spring rest alone has little effect in riparian areas, because any increase achieved can be nullified when grazing is resumed and cattle congregate along the stream bottoms (Martin, 1973). With only periodic rest, any increase in desirable forage species may be offset by a decrease in undesirables, with no resulting gain in ground cover.

Livestock Grazing. Livestock would be denied the use of these areas during certain periods. As forage conditions improve over the long term, livestock would benefit.

Wildlife. Management of 3 miles of perennial stream by fencing and rotation of grazing use areas on the Diamond, Cottonwood, and Showerbath Springs allotments would allow vegetative cover to increase, thereby improving riparian and aquatic habitat for nongame birds and mammals and fish. Deer populations would remain stable.

MANIPULATION OF LIVESTOCK GRAZING ON 27,000 ACRES OF SALINE SOILS

Soils and Water Quality. Highly saline lands are often characterized by unstable soils and sparse vegetation. The fine-textured soils are easily compacted by trampling, resulting in low infiltration, high runoff, increased salinity, and low

levels of effective soil moisture (BLM, 1977c). Removal of livestock from such lands would be an effective means of controlling salinity (BLM, 1980a).

Studies on a similar watershed in Colorado indicate runoff in the hilly Mancos Shale areas occurs almost wholly in response to high-intensity summer rains. Gullies draining heavily grazed watersheds have nearly twice as much erosion as those from ungrazed watersheds. Heavily grazed watersheds produce 30 percent more runoff and 45 percent more sediment load than do ungrazed watersheds. Maximum reduction in sediment load occurs after 3 years of exclusion from grazing (Lusby, 1970).

Manipulation of livestock grazing on 27,000 acres of highly saline soils would result in an annual reduction in sediment of 27,945 tons within 3 years. Assuming that 3 percent of that sediment is salt from Mancos-derived soils (BLM, 1977c), there would be a reduction of 838 tons per year in the salt delivered to the Colorado River system. There would also be a reduction in runoff of 66 acre-feet, lowering the amount of salt load to the Colorado another 180 tons. The total salt reduction would be approximately 1,018 tons.

Vegetation. Livestock grazing gives a competitive advantage to some plants by decreasing the vigor of grazed species. The vigor of these grazed plants would increase in areas of grazing manipulations. The vigor of previously ungrazed plants would decrease. The net effect would be an improvement in ecological condition.

Although the vigor of individual forage species would increase, the increase in density would not be as high for those species that reproduce primarily by seed, since they would not receive the beneficial effect of livestock trampling.

The rate of recovery in low condition areas would be slow because of the lack of rainfall and the poor productivity of soils.

Livestock Grazing. Manipulating livestock grazing on 27,000 acres of highly saline soils would decrease available forage by 558 AUMs.

Wildlife. This action would increase forage, water, and cover for nongame wildlife species and allow deer, elk, and antelope populations to remain stable. Aquatic habitat would improve slightly as a result of reduced salinity and sedimentation, but fish populations would not increase as a result of this action.

WILDLIFE HABITAT REQUIREMENTS

MAINTENANCE OF EXISTING WILDLIFE WATERS

Vegetation. Maintenance of existing wildlife waters would prevent improvement of vegetation within 150 feet of those waters because of continued trampling and grazing by wildlife and, in some places, by livestock. Ecological condition on these sites would remain as it is at present or decline.

Livestock Grazing. Maintenance of wildlife waters which are also used by livestock would allow for continued livestock grazing near those waters.

Wildlife. This action would help to support antelope and other nongame wildlife in the Cisco Desert and Hatch Point areas. These wildlife water developments are located in areas where water is a limiting factor for wildlife.

RESERVATION OF UNALLOCATED FORAGE ON 22,044 ACRES FOR WILDLIFE

Wildlife. The reservation of all forage and space for current wildlife populations on the Pear Park (105 deer, 30 elk), Spring Creek (42 deer), and Castle Valley (550 deer) areas would protect winter/spring habitat for deer and elk.

OFF-ROAD VEHICLE USE AND MANAGEMENT

DESIGNATION OF 1,183,660 ACRES AS OPEN TO OFF-ROAD VEHICLE USE

Soils and Water Quality. Designation of 1,183,660 acres as open to off-road vehicle (ORV) use would allow the trend toward increasing use to continue, with the potential for additional soil surface and cryptogam disturbance and soil compaction on the entire designation area. Recreational ORV use is expected to increase on 47,840 acres. The severity of the impact would depend on the intensity of use. The effects of ORV activity on the desert environment are serious, long-lasting, and highly visible; damage is generally greatest on slopes exceeding 25 percent (BLM, 1977c) and on highly erodible soils such as those derived from Mancos Shale.

Impacts to the soil from more ORV use would lead to increases in runoff and sedimentation, because vehicle trails channelize runoff and increase susceptibility to rill and gully erosion. For example, increases in sediment production resulting from ORV use can range from 50 to more than 500 percent, depending upon the site (BLM, 1977c).

Vegetation. There would be a slight overall decrease in vegetation from occasional disturbance by ORV use. The Dolores Triangle Sand Flats area, in particular, has a substantial ongoing impact. Most of the disturbance throughout the subject acreage occurs in already denuded areas, but some adjacent plants are being disturbed or lost through ORV activity. The effect of the open designation covering 1,183,660 acres would be the loss of individual plants on 47,840 acres where disturbance is evident. Riparian vegetation would show the greatest decrease as a result of ORV activity, but the areawide impact would be insignificant.

Livestock Grazing. The impact to livestock would be negligible. Essentially the entire area is open now, and the impact would cause so little change that it cannot be quantified in AUMs.

Recreation. This action would allow a long-term increase in recreational ORV use on 47,840 acres. This conclusion is based on the 70,000 acres that are now receiving active ORV use. The increasing trend for ORV use is also indicated by the statewide increase in registrations of dirt bikes and dune buggies.

DESIGNATION OF 596,234 ACRES AS LIMITED TO EXISTING ROADS AND TRAILS

Soils and Water Quality. Limiting ORV use on 596,234 acres would decrease erosion and sedimentation. Soils derived from Mancos Shale are particularly fragile and

susceptible to damage by ORVs, especially when wet. The soils undergo changes in hydration with temperature change, and this contraction and expansion acts as a powerful weathering agent (BLM, 1977c). Because of the fineness of the shale, the rate of water infiltration is so slow that most rainfall runoff carries away the fine soil particles and salts. ORV use aggravates this already poor situation by destroying existing vegetation, disturbing soils, and leaving tracks that provide additional channels for runoff to follow.

Designation of these areas as limited to existing roads and trails would help reduce the annual introduction of an estimated 12,000 to 18,000 tons of sediment and 363 to 548 tons of salt into the Colorado River drainage.

Vegetation. This action would protect vegetation.

Livestock Grazing. Forage would remain available to livestock.

Transportation. This designation would decrease the number of new roads and trails currently being established each year. The overall impact would be to decrease future road and trail building and thereby limit access to some of the more isolated areas within the GRA.

Special Designation Areas. This action would protect the scenic values of 596,234 acres which would be placed under restricted ORV use designation. The scenic values of such other potential special designation areas as Wild and Scenic Rivers would also be protected.

Visual Resources and Recreation. Protection of the vegetation would help to maintain visual quality and associated scenic recreational opportunities.

DESIGNATION OF 24,454 ACRES AS CLOSED TO OFF-ROAD VEHICLE USE

Soils and Water Quality. Closing these 24,454 acres to ORV use would reduce soil erosion and the resultant annual introduction of an estimated 100 tons of sediment into the Colorado River drainage.

Vegetation. There would be an estimated overall 5 percent increase in vegetation, and two sensitive plants, Cycladenia humilis var. jonesii and Aquilegia micrantha, would be protected from ORV traffic.

Wildlife. This closure would improve wildlife habitat by providing an area unoccupied by vehicles and free of noise. Harassment by ORVs of wildlife ungulates, especially wintering deer, would not occur. Vegetation utilized as food would increase. The degradation of riparian and aquatic areas such as Negro Bill Canyon would no longer occur. Populations of wildlife ungulates, fish, and nongame species would remain stable or increase as a result of this action.

Transportation. ORV use would be decreased and access into certain areas limited. Roads and trails would be closed, and these access routes would eventually degenerate into impassible routes. The closure would also prevent establishment of new roads and trails. The transportation network within the closed areas would be downgraded.

Special Designation Areas. This action would protect the scenic and recreational values on 24,454 acres of ORV designation areas.

Visual Resources. The protection of vegetation would help to maintain visual quality and associated scenic recreational opportunities.

Recreation. The protection of vegetation would help to maintain visual quality and associated scenic recreational opportunities. Opportunities for recreational ORV use would be decreased.

DESIGNATION OF 15,206 ACRES AS LIMITED TO DESIGNATED ROADS AND TRAILS

Soils and Water Quality. Closing duplicate roads and limiting ORV use to designated roads and trails in the Mill Creek area would allow vegetation, as well as the cryptogamic soil surface layer, to become reestablished, reducing soil erosion by approximately 200 tons per year. The subsequent reduction in sedimentation would prolong the useful life of Ken's Lake.

Vegetation. The limitation of ORV use to designated roads and trails would provide a 5 percent increase in vegetation where random ORV activity now occurs (off existing roads and trails).

Livestock Grazing. This action would result in a negligible increase in AUMs, since the vegetation is a low production site.

Transportation. Seven miles of existing roads would be closed, and new roads and trails would not be established.

Special Designation Areas. This action would protect the scenic and recreational values on 15,206 acres.

Recreation. Designation would decrease opportunities for recreational ORV use.

LANDS ACTIONS

CONSIDERATION OF 11,629 ACRES FOR DISPOSAL

Vegetation. The vegetation on these 11,629 acres would be lost to BLM management through disposal of these lands.

Livestock Grazing. Approximately 153 AUMs of forage would be lost to BLM management. Depending on the use of the land after disposal, an exchange-of-use agreement could be made to allow the livestock operator continued use of the forage.

ACQUISITION OF ACCESS EASEMENT

Transportation. Acquisition of a public access easement at the Cisco boat launch area would add 0.3 mile of road to the existing transportation network and guarantee permanent public access to this boat takeout essential for recreational river use.

Recreation. Acquisition of the easement would prevent a possible closure of this private launch facility, which would increase the Westwater float trip from 1 to 2

days between the Westwater ranger station and Fish Ford. This added time factor could decrease the number of recreation visits along this part of the river.

Special Designation Areas. Acquisition of the easement would protect recreational values that are significant to potential Wild and Scenic River designation.

UTILITY CORRIDORS

DESIGNATION OF 140 MILES OF UTILITY CORRIDORS

Wildlife. Designation of 140 miles of official utility corridors would contain future developments in the existing corridors, leaving other areas undisturbed for use by wildlife. This would allow populations of deer, elk, antelope, and bighorn sheep to remain stable.

Transportation. This action would also allow for a planned network of facilities throughout the area and reduce the amount of time required for processing right-of-way applications, since applicants would have prior knowledge of areas identified as acceptable for location of pipelines and other transportation facilities.

IDENTIFICATION OF AVOIDANCE AREAS

Wildlife. The avoidance of locating rights-of-way within 48,245 acres of critical bighorn sheep habitat (Mineral Bottom, Potash, and Westwater areas, see Figure 1-6) would help ensure habitat protection. Since bighorn sheep are sensitive to human disturbances, this action would help protect the existing populations.

Transportation. Transportation would be limited by the requirement to avoid critical bighorn sheep areas.

MINERALS

AVAILABILITY OF ENTIRE AREA FOR MINING CLAIMS, EXCEPT WHERE WITHDRAWALS EXIST

Soils and Water Quality. If the present trend continues, allowing mining claims for locatable minerals over the entire GRA, except for the 1,850 acres of scattered withdrawals, would result in soil disturbance and removal of vegetative cover on an additional 30 acres per year. Susceptibility to wind and water erosion on these 30 acres would increase significantly, because the cryptogamic layer or soil structure that protects the soil from erosion would be destroyed, and because soil compaction would modify the water infiltration patterns.

Sediment would increase in proportion to the amount of surface disturbance and erosion that takes place. It is etimated that 100 tons of soil per year would be lost onsite, and a significant portion of that soil would reach a drainageway.

Vegetation. Vegetation would decrease on the 30 additional acres that would be disturbed each year.

Livestock Grazing. Both the physical disturbance to cattle and the loss of forage through mining disturbance would impact livestock. The trend at present is a con-

tinual new disturbance to some degree as exploration takes place, but no specific loss of AUMs can be anticipated.

Wildlife. Vegetation used as wildlife forage and cover would be destroyed, and wildlife populations disturbed and displaced by exploration and mining for locatable minerals.

Mineral Resources. The volume of uranium ore produced, which is measured in pounds of yellowcake, could increase significantly, perhaps returning to the 1980 levels, although market conditions have been most stressful to the minerals industry in recent months. Mines in the vicinity of Moab could produce up to 1 million pounds of yellowcake per year for an indefinite period of time, depending on the market value in relation to the cost of mining.

Placer gold production on public lands (presently estimated at 400 to 450 ounces per year) could increase to between 500 and 550 ounces per year if market conditions further improve. Note that these figures are estimates only. Production figures are highly confidential among miners.

Mineral Rights. Maintenance of mineral withdrawals on 1,850 acres for campgrounds and scenic sites prevents the filing of mining claims on these areas. Approximately 20,000 mining claims are present in the GRA, about 500 for placer gold, and the balance for uranium. (There are no mining claims within the 1,850 acres of withdrawals.)

Transportation. Development of more mining claims would increase the need for access and require more roads. An estimated 10 to 15 miles of new roads are built each year to meet mining access needs. This action would therefore increase the overall transportation network. For those claims where 5 acres or more of land are to be disturbed, the claimant must submit a plan of operations. This allows BLM to review any new access roads to determine whether they are properly located and designed. The new roads built in response to mining would improve access to many remote areas.

Visual Resources. Locatable mineral exploration and development activities could, in cases where the mining development is very large or where extensive road development is required, temporarily change the scenic characteristics as viewed from the surrounding area. However, rehabilitation provided for in Title 43 of the code of Federal Regulations, Subpart 3809 (43 CFR 3809) would ensure that the affected area was rehabilitated over the long term. Impacts to visual quality, therefore, could be significant in some cases (depending on the extent of surface disturbance) but would always be short-term.

AVAILABILITY OF 154,600 ACRES FOR POTASH LEASING, EXPLORATION, AND PRODUCTION

Soils and Water Quality. Although several potash leases issued around 1960 are still current, no mining activity has taken place on those leases. An application has been submitted for additional leases. If these leases are fully developed, at least 720 acres would be disturbed.

Merely leasing the 150,000 acres favorable to potash would not affect soils, but any resultant mining would bring about disturbance and removal of vegetative cover, pro-

jected to occur on 100 additional acres for potash prospecting and related road development. Erosion might increase by approximately 300 to 500 tons or more per year. The resulting increase in sedimentation could be minimized by proper road construction and mitigating measures added by BLM personnel during review of the mining plan.

Vegetation. Any mining activity on the leases would cause a substantial but unquantifiable decrease in vegetation, especially if evaporation ponds are constructed.

Livestock Grazing. The impacts to livestock grazing would be the loss of an undetermined amount of forage and the physical displacement of livestock by mining activity.

Wildlife. Potash development could result in a loss of bighorn sheep habitat. Approximately 50 percent (13,567 acres) of bighorn habitat is located within existing potash lease areas or areas that have lease potential. Bighorn sheep are sensitive to human occupancy (BLM, 1981c).

Mineral Resources. Since no production has taken place on any of the leases issued around 1960, no basis exists for estimating the amount of potash that could be removed.

Transportation. Leasing might lead to an increase in road construction to meet demands for access.

Visual Resources. Potash exploration and development activities could, in cases where the development is very large (if solar evaporation ponds are constructed) or where extensive roads are required, temporarily change the visual characteristics of the surrounding area. However, mitigation required in the lease stipulations would ensure that the affected area was returned to its original visual quality over the long term. Impacts to visual quality, therefore, could be significant in some cases (depending on the extent of surface disturbance) but would always be short-term.

APPLICATION OF OIL AND GAS LEASING CATEGORIES

Category 1	Open to Leasing with Standard Stipulations	1,156,560 acres
Category 2	Open to Leasing with Special Stipulations	563,808 acres
Category 3	Open to Leasing with No Surface Occupancy	70,274 acres
Category 4	No Leasing	28,912 acres

Soils and Water Quality. Under the oil and gas category system outlined here, the acreage disturbed would be somewhat less than under current management. But more significant is the allowance for special stipulations (see Appendix R, which is reprinted in Chapter 3 of this document) for development in floodplains (19,040 acres) and areas of high geologic erosion (slopes greater than 50 percent; 414,424 acres). While it is certain that these stipulations would decrease erosion, sedimentation, and salinity, the actual reductions would depend on the development in these areas. Cumulative impacts cannot be quantified at this time.

Vegetation. Approximately 526,000 acres would receive more protection under the proposed plan than under current management; oil and gas activity would continue, and vegetation would be lost, but all this would occur on only about 300 to 450 acres per year.

Livestock Grazing. Forage would be lost on 300 to 450 acres per year. Rehabilitation of disturbed areas would allow for grazing at the current level of use.

Wildlife. On the 1.1 million acres that would be open to leasing with only standard stipulations (Category 1), oil and gas activities could affect deer and elk wintering areas, yearlong bighorn sheep habitat, and yearlong antelope habitat. The following analysis is based on known and potential oil and gas production areas.

All (200,769 acres) of the deer and elk winter range and fawning and calving areas located within Herd Unit 28-B would be protected from disturbance by oil and gas activities by Category 2 special stipulations. This would eliminate physical stress and displacement of deer and elk while they are on the winter range.

Approximately 34 percent (16,873 acres) of the desert bighorn sheep habitat within the Potash, Mineral Bottom, and Westwater areas would be protected from disturbance by oil and gas activities under the No Surface Occupancy designation of Category 3 and the No Lease designation of Category 4. Bighorn habitat would not be lost, and bighorn sheep would not be displaced or lost through stress under this leasing category application.

On the remaining 66 percent (32,920 acres) of bighorn sheep habitat that would be designated as Category 1, bighorn sheep losses through stress and displacement could occur.

All of the bighorn sheep habitat (11,420 acres) in the Rattlesnake area would be designated as Category 2. There is a potential for bighorn sheep habitat to be lost and for bighorn sheep to be displaced or lost through stress, since the special stipulations that are applied under this Category 2 designation do not protect bighorn sheep habitat requirements.

Golden eagle nest sites in the Cisco Desert would be protected on the 2,880 acres that would be designated as Category 2 and on the 960 acres that would be designated as Category 3.

Approximately 19 percent (18,391 acres) of the antelope kidding areas in the Cisco Desert would be protected from oil and gas activities by Category 2 special stipulations. A potential exists for antelope losses to occur through stress and displacement on 81 percent (76,344 acres) of the Cisco Desert antelope habitat which would be under Category 1.

On the 7,040 acres of antelope kidding areas in the Hatch Point area, losses through stress and displacement would not occur, since these areas would be under Category 2 protection.

Mineral Resources. Under the oil and gas category system, between two and five fewer new wells would be drilled than the current 150 per year. The annual production under the proposed plan (from new wells only) is estimated at 19,500 barrels of oil and 560,000 to 960,000 MCF (thousand cubic feet) of natural gas.

Transportation. This action would increase by 20,615 acres the amount of land in Categories 3 and 4, which inhibit development. This could result in a decrease in oil and gas activities and a corresponding decrease in road building from the cur-

rent 75 to 100 miles of road being established each year for oil and gas development.

Visual Resources. The oil and gas leasing category system would protect visual characteristics from disturbance by oil and gas activities within 22 areas identified as possessing exceptional scenic qualities (see Table 2-9 on page 2-60 of the draft).

Special Designation Areas. The areas where exceptional scenic qualities would be protected from oil and gas activities include 65 miles of the Colorado and Dolores river study corridors. Protecting the scenic resources and associated natural qualities would help to preserve eligibility for designation.

SALES AND FREE USE OF SAND AND GRAVEL ON 6,000 ACRES

Soils and Water Quality. Continuing to allow sales of common varieties of minerals (sand and gravel) on 6,000 acres free of mining claims would result in a slight increase in erosion on the acres involved, with a resulting small increase in sedimentation. The severity of the impact would depend on the number and size of sand and gravel sites that were actually developed.

Vegetation. It is unreasonable to think that sand and gravel sites would cover the entire 6,000 acres. There would be a slight decrease in vegetation over the entire acreage and a total loss of vegetation at each individual site. The actual surface disturbance cannot be estimated at this time, nor can probable forage loss be quantified.

Mineral Resources. This action would provide sand and gravel to Grand County and the Utah Department of Transportation for maintenance of existing roads. Smaller volumes would be available for private building needs and for drill pad construction.

Transportation. It is impossible to predict the number of miles of new roads that would be needed to access these sand and gravel sites. A secondary impact to transportation would be the availability of increased amounts of sand and gravel for road construction and maintenance.

CONTINUATION OF 250-ACRE HUMATES SALE CONTRACT

Soils and Water Quality. Soil disturbance could take place on approximately 200 acres within the 250-acre humate contract area. Mitigating measures would minimize the surface disturbing impacts and offsite erosion and provide for timely reclamation of disturbed areas. The cumulative soil loss from this action is estimated at less than 1,000 tons per year.

Vegetation. Not all of the 250 acres under contract would be affected by mining. At the end of 4 years, approximately 200 acres of pinyon-juniper vegetation would be altered. This amount represents approximately 3 percent of the total pinyon-juniper stand in the immediate area (within 5 miles).

Mineral Resources. The 250-acre site should provide an estimated 50,000 tons of

humate material per year. Total production provided for in the contract is 1,120,000 tons, but no time limit is set.

Cultural Resources. Six archaeological sites were identified in an archaeological clearance conducted on the humate sale site, however, the contract stipulates that the sites will be inventoried and impacts mitigated prior to mining.

Visual Resources. The humate sale site is located in a Class III area and adjacent to a Class IV area. No significant change in the visual quality is anticipated.

Recreation. Humate mining would create additional traffic on the Westwater access road, causing some congestion for river recreationists. The area where the road narrows and passes under a railroad trestle could present a safety hazard to recreationists using the Westwater road, but the contract stipulates that traffic control lights will be installed on both sides of the trestle, and that these lights will be activated by drivers of the humate trucks as they approach the trestle.

ADDITIONAL 1,500-ACRE HUMATES SALES AREA

Soils and Water Quality. Assuming that development may take place on 1,500 acres, soil loss is estimated to reach 8,000 tons of soil per year. Offsite sediment damage from development would be controlled by mitigating measures. The actual impact to the Colorado River system cannot be quantified at this time.

Vegetation. Existing vegetation would be altered on the 1,500 acres that could be mined under this management action. Rehabilitation of disturbed areas would take place concurrently with new activity.

Mineral Resources. The production of humates from an expanded contract site could provide as much as 100,000 tons of material per year, but this potential production would depend upon market conditions and interest in development.

RECREATION

MAINTENANCE OF TWO DEVELOPED CAMPGROUNDS, FIVE PICNIC AREAS, AND THREE SCENIC OVERLOOKS

Recreation. Maintenance of the existing recreational facilities would protect the dollar investment in these developments (see Table 3-9 on page 3-22 of the draft) and continue the current level of recreational opportunities. Many of these facilities are not being used to capacity at the present time, but the trend is toward an increase in recreational use.

CONSTRUCTION OF REST ROOMS AT SEVEN RECREATION SITES

Soils and Water Quality. Construction of sanitary facilities at heavily used recreation sites along the Colorado River would result in an obvious improvement in water quality at the sites, but would have little effect on the overall water quality of the Colorado River.

Recreation. Construction of rest rooms at heavily used recreation sites along the Colorado River would improve recreational opportunities in those areas by relieving unpleasant, unsanitary conditions. This action would also improve health and safety conditions along the river.

ISSUANCE OF RECREATION USE PERMITS

Soils and Water Quality. Continued issuance of recreation use permits for commercial horseback trips, four-wheel drive vehicle tours, commercial bear hunting camps, survival school, and other activities would allow the trend toward increasing recreational use to continue, increasing soil surface disturbance, soil compaction, and surface runoff. These factors, along with potential decreases in vegetative cover, would lead to increased erosion. The increased erosion would be followed by increases in runoff and sedimentation. The significance of the impact would depend on the severity and intensity of use.

Vegetation. The present slight loss of vegetation would continue. Many of the recreational activities (e.g., four-wheel drive tours) have no impact on vegetation, while others have a temporary impact. In most cases there would be no permanent loss of vegetation.

Transportation. New roads and trails could be established. At the very least, this action would help to maintain existing trails and roads in a condition adequate to allow continued use, serving to maintain or increase the overall transportation network.

MAINTENANCE OF 5 MILES OF DEVELOPED HIKING TRAILS

Recreation. Maintenance of developed hiking trails would protect the dollar investment in these facilities and ensure the continued availability of recreational hiking opportunities.

ISSUANCE OF PERMITS FOR ORV EVENTS

Soils and Water Quality. The severity of impacts to soils from continued ORV use (such as motorcycle and four-wheel drive activity) is directly related to the intenintensity of use (Snyder, et al., 1976). Permitting these events annually would serve to continue the downward trend in watershed condition. Onsite gully erosion would increase because runoff would be channelized in tracks and ruts. The increase in sediment and salinity would be directly proportional to the increased soil compaction, runoff, and erosion caused by such ORV disturbance.

Vegetation. The recreational events that are currently permitted would have no significant impact on vegetation, since the vegetation in the affected areas has already been disturbed. New activities might impact vegetation, depending upon the location and extent of surface use.

Livestock Grazing. No significant loss of livestock forage is anticipated at this time from any recreational event that might be permitted. Present activities are scheduled so as not to bother livestock.

MAINTENANCE OF 10 MILES OF DEVELOPED MOTORCYCLE TRAILS

Recreation. Maintaining developed motorcycle trails would protect the dollar investment in these facilities and ensure the continued availability of recreational motorcycle use opportunities.

MAINTENANCE OF 27 MILES OF DEVELOPED SCENIC ROADS

Recreation. Maintaining 27 miles of developed scenic roads would protect the dollar investment in these facilities and ensure continued access to scenic recreational opportunities.

CONTINUATION OF RIVER MANAGEMENT PROGRAM ON COLORADO AND DOLORES RIVERS

Recreation. Continuation of the present river management program would provide for visitor safety and enjoyment while protecting scenic recreational resources. This would result in increased recreational enjoyment, since the long-range trend is toward an increase in demand for recreational use of the rivers.

CONTINUATION OF RIVER MANAGEMENT UNDER WILD AND SCENIC RIVERS ACT

Wildlife. Continued management of 65 miles of study corridor along the Colorado and Dolores rivers as required by the Wild and Scenic Rivers Act would prevent human occupancy and intrusions on wildlife habitat. Populations of peregrine falcons, bald and golden eagles, and bighorn sheep would remain stable or increase as a result of this action.

Recreation. This action would also prevent any change in the character of the rivers until such time as Congress acts on the recommendation, and would help protect scenic recreational qualities from degradation that could impair future recreational enjoyment. This could result in increased recreational enjoyment, since the long-range trend is toward increased recreational use.

DESIGNATION OF 1,375-ACRE OUTSTANDING NATURAL AREA

Recreation. The designation of 1,375 acres of Negro Bill Canyon as an Outstanding Natural Area (ONA) would serve to identify it and attract attention to it. As a result, visitation and recreational use would increase, since the public would be aware of the area.

FIRE MANAGEMENT

IMPLEMENTATION OF A LIMITED SUPPRESSION POLICY ON 148 MILLION ACRES

Soils and Water Quality. Implementing a limited fire suppression policy would produce a higher short-term sediment yield and surface runoff due to a lack of ground cover. But as vegetation becomes reestablished, long-term sediment yield would decrease, and water infiltration would be improved, lowering the suspended solids in stream water. A limited suppression policy would therefore result in a long-term improvement in water quality.

Air Quality. Air quality would decrease significantly during any burning of vegetation, and the visibility of fire and smoke would decrease visual quality as well. However, this decrease in air quality and visibility would be of short duration, and the air would return to its present quality when the fire was extinguished.

Vegetation. The impact of a limited fire suppression policy on vegetation would depend on the number of fires that occur and the size of each fire. Averaged over the past 3 years (1979 through 1981), 58.6 fires have burned 808.3 acres each year.

Any fires that meet the requirement for this management action (fires that do not threaten life or property) would cause a short-term loss of vegetation, particularly pinyon-juniper and sagebrush. The immediate decrease in vegetation would last for 2 to 3 years, until a variety of forage species becomes established on the site. This would also depend on the seed source onsite at the time of the fire. The overall long-term impact on vegetation would be an increase in desirable (forage species) vegetation.

Livestock Grazing. The impact on livestock cannot be quantified at this time, because there is no way of knowing how many acres would be affected. Existing forage would be lost immediately as a result of any fires, but forage quality and quantity would be increased over the next few years. Livestock production would increase until pinyon-juniper and sagebrush begin to dominate again (within 15 to 20 years).

Wildlife. Implementation of a limited fire suppression policy on designated pinyon-juniper and sagebrush communities would increase forage for wildlife ungulates, as well as for nongame birds and mammals. Deer and elk populations would increase as a result of this action.

PRESCRIBED FIRES AND SEEDING ON 14,149 ACRES

Soils, Water Quality and Air Quality. The impacts of prescribed fire and seeding on soils, water quality, and air quality would be the same as those described under implementation of a limited fire suppression policy.

Vegetation. Since this prescription includes seeding of sites after a prescribed fire, and since the sites (Appendix T of the draft) have been selected for their potential for success, the impact would be an increase in desirable vegetation over the long term. The initial impact would be a loss of existing vegetation, but grasses and herbaceous species would dominate within 2 to 3 years. Later, as the site progresses in ecological stages, sagebrush (in 10 to 15 years) and pinyon-juniper (in 20 to 25 years) would begin to dominate.

Livestock Grazing. Because these areas are unproductive, they are not being grazed by livestock; therefore, there would be no short-term impact to livestock. The long-term effect of prescribed fires on these 12 allotments would be an increase in livestock forage of 1,282 AUMs.

Wildlife. Forage for wildlife ungulates and nongame birds and mammals would be increased by 488 AUMs, and populations of deer and elk would increase as a result of this action.

Recreation. The increase in populations of deer and elk would result in an increase in recreational hunting activities.

ECONOMIC IMPACTS OF THE PROPOSED PLAN

Economic impacts of the proposed plan are discussed below as they relate to the planning issues. The methodologies and computations that were used to estimate economic impacts were discussed in Appendix V of the draft.

ECONOMIC IMPACTS RELATED TO CRITICAL WATERSHED MANAGEMENT

Implementation of salinity control treatments, diversion and evaporaton of water from Stinking Spring, vegetation manipulation, land and watershed treatments, manipulation of livestock grazing on saline soils, and ORV restrictions would contribute to the reduction of sediment that originates in the GRA.

This reduction would increase the electrical production, flood control, recreation, and water storage values of Lake Powell and reduce the maintenance costs of small livestock reservoirs downstream from the points of erosion. Reducing the salt pick-up by water originating in the passing through the GRA's critical watershed areas would reduce the costs associated with the use of saline water in the lower Colorado River basin. There would be a loss of value whenever a management action reduces the amount of water that enters the Colorado River.

Value estimates for those management actions where significant changes in water yield, sedimentation, and salt loading could be quantified are presented in Table 2-1. Because these values would be realized by numerous water users, the management actions would have a negligible impact on any particular water user. The benefits of preserving soil productivity could not be quantified.

The proposed application of the oil and gas leasing categories would afford greater protection to local water users from water contamination. Water-based recreation along Mill Creek and Thompson, and agricultural water diversions along Floy, Diamond, Cottonwood, Nash, and Westwater washes would have greater protection from surface water contamination. Culinary water depends upon spring and well water, which at most requires chlorination. These water sources would be afforded greater protection under the proposed plan than they receive at present. Contamination of these water sources would force communities either to use more chlorine to treat the water or, if certain water quality thresholds are exceeded, to find new water sources.

ECONOMIC IMPACTS RELATED TO LIVESTOCK GRAZING

The proposed management actions for which impacts are quantifiable include continuation of present livestock management, implementation of livestock manipulation techniques, maintenance of existing land treatments, implementation of new land treatments, authorization of grazing at the level of the past 5 years' average use, changes in season of use, changes in class of livestock, manipulation of livestock grazing on saline soils, consideration of certain lands for disposal, implementation of a limited fire suppression policy, and initiation of prescribed fires and seeding.

TABLE 2-1

Salinity and Sediment Economic Benefits
of Various Proposed Watershed Management Actions (In 1981 Dollars)

Management Action	Years to Benefits	Life of Project	Annual Value From Decreased Sedimentation of Lake Powell	Annual Value From[a] Decreased Salinity	Annual Value From[b] Decreased Salinity	Annual Value Loss from Decreased Water Yield
Salinity Control Treatments	1	12	$54	$260,000	$200,000	$34,000
Stinking Spring Diversion	1	[c]--	0	157,000	120,000	13,000
Livestock Manipulation on Saline Soils	3	[c]--	11	52,000	39,000	7,000
ORV Use Restriction	10	[c]--	5 to 7	18,390 to 27,762	14,000 to 21,000	N/A

[a] Includes indirect and induced impacts as calculated by the Bureau of Reclamation.

[b] Does not include indirect and induced impacts as calculated by the Bureau of Reclamation.

[c] The life of the project would be infinite.

These quantifiable management actions would affect either the amount of forage or the time of its availability to livestock operators. This in turn could affect rancher's income, wealth, and ability to obtain loans, with some spinoff income and employment effects through the local economy.

Under the proposed plan, none of the 31 independent cattle operators would in the long run have less available forage than their existing use. In the short term, two operators would, on the average, have 30 percent more available forage, and two operators would, on the average, have 2 percent less available forage. In the long term, vegetation manipulation and land treatments would provide 19 percent more forage for 16 operators. If this forage is grazed, cattle operators would realize an added $96,250 in returns above cash cost, a 12 percent increase over what these operators now earn (see Table 2-2).

Under the proposed plan, one sheep operator would have a short-term increase of 23 percent in available forage, and three operators would have a 13 percent short-term decrease in available forage. In the long term, two operators would have 16 percent less available forage, resulting in a $25,250 decrease in revenue above cash cost, 12 percent less than what these operators now earn. In the long term, eight of the 14 sheep operators would, on the average, have 26 percent more available forage than their existing use. If the added forage is grazed, sheep operators would realize an added $31,933 in returns above cash cost, a 3 percent increase over what these operators now earn (see Table 2-3).

Changes in season of use would also affect ranchers' income. The spring (March through May) exclusions of livestock would be of particular concern to livestock operators, since they have few options with which to respond to these exclusions. Most operators can either purchase feed to replace the forage, shift forage that is normally used in other months to this period, or reduce herd size so that forage produced from the base property will last longer.

Replacing spring forage with purchased hay should represent a worst-case analysis. Feeding hay during the spring may adversely affect weight gains and reduce gross revenues. If the hay is fed on alfalfa-producing property during the spring, alfalfa yields may be affected, and bloating problems may arise. However, all of the spring exclusions in the proposed plan would extend the available use of the GRA forage during some other season. In some cases, it may be possible to shift forage normally used during these other seasons (mostly winter) to the excluded period in spring. In addition, base properties could increase alfalfa production, which is significantly less expensive than purchasing the hay. Also, reducing the herd size is usually a more economical response to spring exclusions than are hay purchases (Godfrey, 1981).

Under the proposed changes in season of use, three of the 31 cattle operators would be totally excluded from using GRA forage during some time in the spring. The cost of replacing this forage with alfalfa purchased at $75 per ton would be $1,450. Including both the spring exclusions and other grazing changes, these cattle operators could realize a loss of up to 31 percent in returns above cash costs.

Under the proposed plan, total cattle herd size could increase by 13 percent, and total sheep herd size could increase by 1 percent, which implies an aggregate in-

TABLE 2-2

Number of Cattle Operators Affected Under the Proposed Plan and Degree of Impact

	Percent Increase from Existing Use and Revenues				Percent Decrease from Existing Use and Revenues		
	5-100	11-50	1-10	Not Affected	1-10	11-50	51-100
Public Rangeland Forage	2	7	7	15	0	0	0
Total Feed Requirements	0	5	11	15	0	0	0
Operator Returns Above Cash Cost	0	7	9	15	0	0	0

Note: Changes are based on average use over the past 5 years.

TABLE 2-3

Number of Sheep Operators Affected Under the Proposed Plan and Degree of Impact

	Percent Increase from Existing Use and Revenues				Percent Decrease from Existing Use and Revenues		
	5-100	11-50	1-10	Not Affected	1-10	11-50	51-100
Public Rangeland Forage	0	7	1	4	1	1	0
Total Feed Requirements	0	4	4	4	1	1	0
Operator Returns Above Cash Cost	0	0	8	4	1	1	0

Note: Changes are based on average use over the past 5 years.

crease in ranch value. However, two sheep operators would have less available forage, resulting in an estimated 7 percent reduction in their ranch carrying capacity, which implies a reduced ranch value.

Grazing permits that do not increase a ranch's carrying capacity (i.e., permits that do not reflect available forage) may have speculative value. Under these conditions, any decrease from active preference could impact an operator's wealth. Under the proposed plan long-term grazing privileges would be reduced by 32,411 AUMs. At a market value of $60 per AUM for BLM grazing permits, total operator wealth could decline by as much as $1,944,660, a 6 percent reduction in base property value.

Lending institutions base loans on a number of factors, including the rancher's ability to repay the loan. The repayment ability is usually measured by the rancher's likely future income with the loan. Because aggregate rancher income is expected to increase under this alternative, most ranchers' ability to repay a loan should also increase. Several sheep operators would realize a long-term decrease in net revenue, and their ability to repay loans should thereby decrease.

Base properties are used as collateral for some types of loans. If lending institutions base their ranch assessments on grazing privileges that do not reflect available forage, then any reduction from active preference could have some effect on the total indebtedness allowed.

The aggregate short-term and long-term rancher impacts from changes in available forage and season of use are summarized in Table 2-4.

Under the proposed plan, the 22 independent cattle operators residing in the GRA would earn an added $97,223 (23 percent) in returns above cash costs. Increased rancher income and herd size would also have indirect and induced local employment and income effects. Long-term regional income and employment due to livestock operators in the GRA would increase by $156,785 (+3 percent) and seven jobs (+0.2 percent) (refer to Table 2-5).

ECONOMIC IMPACTS RELATED TO WILDLIFE

The economic impacts related to wildlife are described in the section on economic impacts related to recreation.

ECONOMIC IMPACTS RELATED TO OFF-ROAD VEHICLE DESIGNATIONS

ORV limitations and closures would have little impact on activities that normally require BLM authorization, since authorized activities are exempt from ORV limitations and closures. Activities that do not normally require BLM authorization (prospecting, surveying, rancher ORV use) would, however, require such authorization for ORV travel in limited and closed areas. Authorization would require greater time and planning by the BLM and those involved in the impacted activities. Significant delays could affect the economics of some activities, with resulting impacts to local sales, income, and employment. Under the proposed plan, 35 percent of the GRA would be under ORV closure or limitation. Depending upon the delay, the size of the ORV limitations and closures could significantly affect those activities requiring ORV travel that do not normally require BLM authorization.

TABLE 2-4

Summary of Short-Term and Long-Term Economic Impacts
to Livestock Operators under the Proposed Plan

Cattle Operators	Current Situation	Short Term	Long Term
Gross Revenue	$ 1,962,085	$ 1,990,472	$ 2,077,798
Total Cash Cost	1,038,598	1,042,814	1,059,511
Returns Above Cash Cost	923,487	947,658	1,015,297
Returns to Labor and Investment	482,876	505,873	569,843
Sheep Operators			
Gross Revenue	$ 2,367,988	$ 2,330,227	$ 2,389,712
Total Cash Cost	890,974	850,117	874,722
Returns Above Cash Cost	1,477,014	1,480,110	1,514,990
Returns to Labor and Investment	1,239,055	1,018,860	1,112,909

NOTE: These budgets assume that ranchers have no long-term outstanding debt and that all operating capital is borrowed. These assumptions tend to underestimate cash costs and overestimate returns above cash costs.

TABLE 2-5

Impact Area's Income and Employment Due to Livestock Operators
In the Grand Resource Area under the Proposed Plan

	Existing		Proposed	
	Employment (Jobs)	Income (Dollars)	Employment (Jobs)	Income (Dollars)
Agriculture	26	$ 537,325	31	$ 657,923
Retail and Services	9	177,043	10	200,180
Other	6	160,345	7	173,394
	41	$ 874,713	48	$1,031,497

Source: Gee, 1982; USFS, 1982.

See Economic Impacts Related to Recreation and Critical Watersheds.

ECONOMIC IMPACTS RELATED TO LANDS ACTIONS

The likely methods of disposing of public lands under the proposed plan include:

1. Sales	9,489 acres
2. Recreation and Public Purpose (R&PP) Leases	1,820 acres
3. Exchanges	320 acres

Because Grand County's payments in lieu of taxes (PILT) are constrained by its population, the public land sales could only increase county revenue. R&PP leases that go to patent would also increase county revenues.

State lands do not contribute to county revenues. Exchanges with the State would not impact county PILT if the exchange takes place within the same county, and Utah Senate Bill 61 would prevent any possible loss of PILT payments to local governments because of an exchange of public lands for State lands outside the county.

The proposed disposal would increase the amount of private land near Moab and Spanish Valley by 39 percent and near Castle Valley by 30 percent. If these lands are as suitable as the existing available private land, this increase in private land would be large enough to have a depressing effect on nearby private land market prices. Green River could also be affected, but to a lesser extent because of its larger private land base relative to the nearby acreage proposed for disposal.

Sales of isolated land tracts some distance from existing communities should not impact private land prices. If suitable private land is available, R&PP leases could have a depressing effect on land prices. However, the communities (i.e., residents) would save money by not having to purchase private land, and there is some doubt as to the availability of suitable private lands for the desired uses (pistol range, water tanks, and dump sites).

The economic impacts anticipated from acquisition of an access easement across private lands are discussed in the section on economic impacts related to recreation.

ECONOMIC IMPACTS RELATED TO UTILITY CORRIDOR DESIGNATION

The exclusions could lengthen the construction time for a major right-of-way. Added construction time would increase cost which, if significant, could deter the location of a major right-of-way. Lengthening construction time could also temporarily increase local employment and income.

The 48,245-acre avoidance area involves 2 percent of the GRA. The avoidance should have little effect on the duration of construction, or on the likelihood that a major right-of-way would be located in the GRA, and should therefore have little economic effect.

ECONOMIC IMPACTS RELATED TO MINERALS

There would be no mineral related economic impacts from leaving the entire GRA open to mining claims.

The proposed application of the oil and gas leasing categories would increase the acreage that is under the more restrictive categories.

Greater planning and coordination are required for oil and gas activities in Category 2 areas, particularly because of seasonal restrictions for wildlife and critical watersheds. Activities in Category 3 areas require directional drilling, which has technological limitations, requires more time to achieve a given depth, and uses specialized equipment and techniques which are more expensive.

The greater cost associated with leasable mineral activities in Category 3 and some Category 2 areas would deter some of these activities from taking place. However, since activities under these categories are more expensive, those that do take place would make greater contributions to local sales, income, and employment. The total exclusions under Category 4 could only decrease the local contribution made by oil and gas activities. Using the decreased oil and gas drilling estimates given earlier (refer to the analysis of environmental impacts under Mineral Resources on page 2-17), it is estimated that eventually there would be two to five fewer jobs (-0.1 percent) and $35,000 to $85,000 less wages, salaries, and proprietors' income in the GRA. Royalties from the decreased oil and gas production would give the State $70,000 less revenue.

See also Economic Impacts Related to Recreation and Critical Watersheds.

ECONOMIC IMPACTS RELATED TO RECREATION

BLM's recreation management can affect the local economy by changing (1) the number of people who visit the GRA, (2) their length of stay, and (3) the mix of recreational activities in which people participate.

Greater visitation or longer lengths of stay would increase local sales, employment, and income. Certain recreation activities (hunting, boating, and motorized recreation) are associated with greater local expenditures than are other activities. Management actions that encourage participation in these more expensive activities over other activities would also result in greater local sales, income, and employment.

The relationship of visitation by activity type to local sales, income, and employment can be quantified; however, quantifying the relationship between management actions and visitation to the GRA has not been possible for most activities. The analysis of economic impacts on recreation, therefore, consists of identifying and discussing management actions that could affect those recreational resources identified as being the most important to the local economy.

Livestock and wildlife management actions, utility corridor avoidance areas, and fire management under the proposed plan would contribute to projected big game population increases, which would result in higher hunter success rates. The distance hunters must travel and hunter success rates have been found to be the primary determinants of hunter pressure on deer herds in Utah (Wennergren, et al., 1973). Higher success rates would encourage more hunters to hunt in the GRA. Assuming that population/harvest and harvest/hunter ratios would remain constant, projected hunter

pressure and expenditures would increase local income by as much as $185,000 and employment by as many as seven jobs (USFS, 1982). To draw the greater hunter pressure, hunter success rates would have to be higher than the existing success rates. Since it was assumed that success rates would remain constant, the potential increase in local income and jobs would be somewhat lower.

Increased wildlife populations are not expected to draw more nonconsumptive wildlife use and related expenditures to the area.

The ORV restrictions and closures would reduce recreational ORV travel. However, the majority of ORV users who visit the area travel along existing roads and trails. Also, much of the restricted acreage is in areas of low recreational ORV use. These restrictions and closures would therefore have little if any recreation related local economic impact. The quality scenic, camping, and primitive nonmotorized recreation opportunities would be preserved or improved in several locally important recreation resources. The ORV restriction in Negro Bill Canyon should help preserve the existing commercial horseback use of the canyon and allow the trend toward increasing commercial use to continue.

Securing permanent public access to Westwater Canyon's existing takeout point would prevent the possible loss of local sales discussed below.

Boating use through Westwater Canyon is restricted to avoid exceeding the canyon's environmental carrying capacity. Except during high water, closure of the existing private takeout facility would add a day to the typical Westwater trip. Since most of the private users float through Westwater in a day, loss of the private takeout would increase the number of overnight trips in the canyon. In order not to exceed the canyon's carrying capacity, the number of private users would have to be further restricted. Commercial operators could either use their river allocation to take fewer passengers down for a longer trip or use motors (10 percent of the commercial users are now using motors). Overall, fewer people would be able to float Westwater, resulting in a loss of local sales, income, and employment.

Locatable mineral activities could take place with a minimum of restrictions in those public recreation areas which are of local economic importance. Such activities could affect recreation use and related local expenditures, and possibly affect the demand for commercial outfitter services.

The Colorado River corridor and the Westwater Canyon and the Behind the Rocks WSAs would be closed to leasable mineral activities under the proposed plan. The Colorado River corridor, including the Westwater WSA, is of local economic importance. The Behind the Rocks visual resources are viewed by a locally significant number of tourists and have a high potential for commercial and greater private use. Leasable mining activities would also be controlled in several other recreation areas. Preventing degradation of these recreation resources would allow the trend toward increasing recreation use to continue, benefiting commercial outfitters and other tourist related businesses. The significance of these management actions to the tourist industry cannot be quantified.

Maintaining recreation facilities would allow the trend toward increasing recreation use and related local expenditures to continue.

Designating Negro Bill Canyon as an ONA would increase public awareness of this area and could result in slightly increased recreation use and related local expenditures. Designation could also increase the demand for commercial outfitter services through the area.

ECONOMIC IMPACTS RELATED TO FIRE MANAGEMENT

The limited suppression policy would still require the existing fire crew size. The fire crew would spend less time on fires and more time working on other BLM projects. Although fire program costs are expected to decrease, the local importance of BLM activities would not change.

The prescribed fires would benefit 11 livestock operators. If the added forage is grazed, these operators would realize an estimated additional $8,000 in returns above cash costs (+1.1 percent), which would generate an added $3,636 in local indirect and induced wages, salaries, and proprietors' income.

SOCIAL IMPACTS OF THE PROPOSED PLAN

None of the management actions would affect the existing social environment of communities in the area. The plan would place greater restrictions on livestock use, ORV use, and mineral activities. Except for several livestock operators there would be few impacts to the social well-being of individuals or groups. In fact, several groups (hunters, primitive nonmotorized recreation users, commercial outfitters, and the retail service industries that cater to tourism) could benefit significantly under the proposed plan. However, this plan would probably be perceived by most residents as having a significant negative impact upon the local community.

In general, local attitudes toward BLM would probably worsen because of the increased restrictions and less local resource use and development that would be allowed. These attitudes would vary, however, by those individuals and groups who would gain and those who would lose under this plan. Refer to the Economic Impacts section for identification of losers and gainers.

UNAVOIDABLE ADVERSE IMPACTS

This section identifies adverse impacts on land uses and components of the human environment that would result from the proposed plan. These are actually residual impacts that would remain after mitigation. They are also primary impacts for analyses (or changes, as identified earlier in this chapter).

SOILS AND WATER QUALITY

Since the Environmental Consequences section describes the impacts upon a resource after mitigation, the detailed adverse impacts may be found there. Any form of surface disturbance would result in changes in vegetative cover, water infiltration patterns, increases in runoff, and subsequent increases in erosion rates. These increases in erosion often are substantial enough to affect sediment and salinity of the upper Colorado River basin. However, under the proposed plan, they would be minimized by land treatments and control of surface disturbing activities in critical watersheds.

Soil resources on 11,629 acres would be lost to BLM management through lands disposal. An additional 1,600 acres would be disturbed through the development of sand and gravel sites.

VEGETATION

Vegetation on 11,629 acres would be lost to BLM management through lands disposal. Loss of vegetation would occur on 1,600 acres of sand and gravel sites.

LIVESTOCK GRAZING

Livestock use would be reduced by 558 AUMs through manipulation of livestock grazing on highly saline soils. A total of 153 AUMs would be lost to BLM management through lands disposal.

WILDLIFE

There would be a loss of wildlife habitat productivity under continuation of present livestock management.

Wildlife habitat would be adversely affected on nine allotments (including one allotment that has riparian and aquatic habitat). Deer, elk, bighorn sheep, and antelope would continue to compete with livestock for forage and space on the affected allotments, and riparian and aquatic habitat would continue to decrease in ecological condition.

Oil and gas activities could have unavoidable impacts on wildlife (except for those areas having Category 3 and 4 designations). Bighorn sheep could be lost through stress and displacement because up to 75 percent of their yearlong habitat could be occupied by oil and gas activities.

Development of existing potash leases or additional areas with lease potential could occupy approximately 50 percent (13,567 acres) of the bighorn sheep habitat.

MINERAL RESOURCES

Under the proposed plan, the following mineral resources could be removed annually from the geologic formations and environments where they naturally occur: uranium, 1 million pounds of yellowcake; placer gold, 550 ounces per year; oil, 49,500 barrels; and natural gas, 9,560,000 to 9,960,000 MCF. The volume of potash that could potentially be removed is unquantifiable at this time.

MINERAL RIGHTS

Under the proposed plan, 1,850 acres would continue to be withdrawn from the filing of mining claims.

VISUAL RESOURCES

There would be short-term unavoidable impact to visual quality on 32,160 acres as a result of pinyon-juniper chaining.

RECREATION

The designation of 635,894 acres as limited or closed to ORV use would reduce opportunities for recreational ORV use.

ECONOMIC CONDITIONS

Season of use changes and reductions in available forage would affect livestock operators, and base property values could be reduced. Private land values could be affected.

THE RELATIONSHIP BETWEEN SHORT-TERM USES OF MAN'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

This section identifies the trade-offs between short-term use and long-term productivity of the resources involved. For this analysis, short-term refers to the period of implementation of the plan within about 5 years, and long-term refers to the period of up to 20 years or beyond in which the adverse or beneficial impacts would still occur.

SOILS

In the short term, soil loss from vegetation manipulation and mineral development would increase. Soil loss would continue under some of the livestock actions in the proposed plan. Some actions (e.g., livestock manipulation techniques, changing season of use, and manipulation of livestock grazing) would ensure long-term productivity.

Long-term productivity of the soils would decline where erosion rates continue to exceed the T value. Vegetation manipulation would help increase the long-term productivity of the soils once vegetation has been reestablished.

In the long term, increased soil loss would be expected in areas of intensive ORV use. Also in the long term, increased vegetative production and ground cover would reduce soil loss and provide long-term net improvements to the soils resource.

WATER QUALITY

Overall water quality, more specifically sediment and salinity to the Colorado River, would improve under the proposed plan. Water yield would decline because of the impounding of saline surface runoff and saline point sources, and through improved water infiltration. Water quality conditions would decline slightly in the short term because of vegetation manipulation and surface disturbing activities. However, in the long term, once vegetation has become reestablished and ground cover increased, the watershed condition should improve. Water quality may decline in some areas because of emphasis on livestock grazing and production based resource uses such as mineral development.

VEGETATION

Under the proposed plan, short-term uses of the vegetation resource would not be

lost over the long term, except through those actions that completely remove vegetation without later rehabilitation (e.g., certain mining areas that remain in productivity), or that take vegetation out of BLM management.

Other management actions, although possibly resulting in short-term loss of vegetation, would not result in a long-term loss of productivity. Mineral activity would cause a short-term loss of vegetation, but it could be recovered through rehabilitation measures in most areas.

Land treatments and prescribed fires would result in a short-term loss of vegetation. Long-term productivity would improve as a result of the treatment, and the areas could be maintained in high productivity through followup treatments. These areas would eventually return to their present ecological condition if the treatments are not maintained. Disposal of land would take vegetation out of BLM management. Livestock manipulation techniques, changes in seasons of use, etc. would help ensure long-term productivity.

LIVESTOCK GRAZING

Total livestock forage would increase over the long term by 5,060 AUMs. Specific actions that restrict livestock grazing would decrease livestock production over both the short and long terms.

WILDLIFE

Land treatments and prescribed fires would result in a short-term loss of wildlife forage, but over the long term, forage production for wildlife would be increased. Short-term mineral activities such as oil and gas exploration and mining of locatable minerals would result in a loss of forage (caused by surface disturbance) and the displacement of wildlife (caused by human occupancy). Long-term productivity would probably not be affected, because after mineral activities have been completed, the disturbed areas would be rehabilitated, and wildlife could again occupy the area.

Long-term productivity of wildlife habitat would be increased through changes in season of use, changes in class of livestock and reservation of all forage and space on Pear Park, Spring Creek, and Castle Valley for winter/spring use by deer and elk.

Long-term productivity for bighorn sheep in the Potash area would be lost if existing potash leases are developed to full potential.

CULTURAL RESOURCES

In the short term, cultural resources could benefit because the increased project work would create the need for cultural inventories and clearances on the lands to be affected by the projects. In the long term, high value sites would benefit from identification and protection.

VISUAL RESOURCES

Such short-term uses as chaining and land treatments and those associated with

energy, mining and related development would create short-term changes in visual quality; however, these uses would not significantly change visual quality over the long term. This is because the visual characteristics would essentially be returned to their original state by natural revegetation and by rehabilitation work required under the regulations.

ECONOMIC CONDITIONS

Short-term livestock production and ranchers' income would be less than long-term livestock production and ranchers' income under the proposed plan.

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

This section identifies the extent to which the proposed plan would irreversibly limit potential uses of the land and resources. Irreversible and irretrievable commitments of resources occur when future options are foreclosed.

SOILS

Due to the slow rate of soil development, subsequent soil productivity would be irretrievably committed in areas where erosion rates exceed the T value.

T Value (In Tons per Acre per Year)		Inches of Soil Loss Per Year
1	=	.0063
2	=	.0125
3	=	.0188
4	=	.0250
5	=	.0313

Areas of surface disturbance and accelerated erosion are areas where human activity has caused soil loss values to exceed the natural rate of soil development.

VEGETATION

Monies, fuels, and materials used to conduct and maintain land treatments are considered to be irretrievable.

Vegetation is a renewable resource, and any loss or use through most of the management actions is considered to be irretrievable, but not an irreversible commitment. Although it would take time in some cases, reclamation would keep initial vegetative loss from being irreversible. Vegetation on any lands that are disposed of would be irretrievably lost to BLM management.

LIVESTOCK GRAZING

Approximately 153 AUMs would be lost through lands disposal.

WILDLIFE

Oil and gas discoveries within wildlife habitat areas that become developed oil and gas fields would result in an irretrievable loss of habitat for deer, elk, bighorn sheep, and antelope. Bighorn sheep habitat would be irretrievably lost if existing potash leases are developed to full potential.

MINERAL RESOURCES

The leasing and removal of oil, gas, and potash would result in the irreversible and irretrievable loss of those resources. No estimates of potash removal volumes are feasible. Oil removal rates are estimated at 49,500 barrels per year. Production from uranium mining claims could be as high as 1 million pounds of yellowcake per year, and gold production could be as high as 550 ounces per year.

ECONOMIC CONDITIONS

Labor and much of the capital resources required to implement the proposed plan would be irretrievably committed.

CHAPTER 3

ADDITIONS AND CORRECTIONS TO THE DRAFT DOCUMENT

Significant revisions and corrections to the Draft Resource Management Plan and Environmental Impact Statement (RMP/EIS) are presented in this chapter. Typographical errors are corrected only where confusing. Errata are not presented for the Summary, the Introduction, nor for Chapter 5, Consultation and Coordination, since these sections have been updated elsewhere in this proposed RMP and final EIS.

All sections of the Draft RMP/EIS pertaining to preliminary wilderness suitability recommendations are deleted. Refer to the wilderness section of the proposed plan in Chapter 1 of this document for more information.

The page numbers that appear along the left margin throughout this chapter indicate the page of the Draft RMP/EIS on which the addition or correction would appear if the entire draft were being reprinted. Lengthy additions are keyed to the draft page on which they would begin. Changes to the text of the draft are underlined, while additions are not.

ADDITION OF SUBALTERNATIVES

Because they are additions to the Draft RMP/EIS, the subalternatives for livestock grazing are described and analyzed in this chapter.

The management actions of the subalternatives would be shown on draft page 2-5 (for Subalternative B, Graze at Preference) and page 2-6 through 2-8 (for Subalternative D, Reduced Livestock Grazing).

The descriptions of environmental, economic, and social impacts of the subalternatives would begin on draft pages 4-37 (Subalternative B) and 4-78 (Subalternative D).

CHAPTER 1, PLANNING ISSUES AND CRITERIA

Page 1- 7 Figure 1-4 is changed to show the Mill Creek municipal watershed expanded from approximately 2,900 acres to approximately 7,000 acres.

Page 1-11 Figure 1-6 is corrected to show that the road into Island in the Sky is not a four-wheel drive route.

Page 1-20 Figure 1-12 is changed to show the Lisbon Valley field (T. 30, 31, and 32 S., R. 24, 25, and 26 E.) as an oil and gas production area.

CHAPTER 2, PLAN ALTERNATIVES, INCLUDING THE PREFERRED ALTERNATIVE/ PROPOSED RESOURCE MANAGEMENT PLAN

Page 2- 1 Under ALTERNATIVES CONSIDERED BUT NOT ANALYZED both sentences are deleted. The following is added:

Page 2- 1 (cont'd.) A No Livestock Grazing alternative for the resource area as a whole was considered in the Draft RMP/EIS, but was not included in the document because livestock grazing is an established use of the public lands recognized by Congress in the Taylor Grazing Act, the Federal Land Policy and Management Act, and the Public Rangeland Improvement Act. The elimination of livestock grazing from parcels of public land is considered in the RMP/EIS on a case-by-case basis in the alternatives and subalternatives. This approach allows removal of livestock to be considered for the protection or management of a specific resource value.

Page 2- 5 The following is added after Management Action D-5:

Subalternative: Continue present management on 722,281 acres (28 allotments) to maintain and improve present medium to high ecological condition and to protect other resource values. Figure 3-1 in the proposed RMP and final EIS shows the general locations of livestock management actions under Subalternative D.

Page 2- 6 The following is added after Management Action D-6:

Subalternative: Implement livestock manipulation techniques on 282,436 acres (6 allotments).

Page 2- 7 The following is inserted after the last entry under Alternative B:

Subalternative: Authorize all grazing use at full preference levels (109,707 AUMs; 11,314 AUMs are presently available for wildlife) to maximize livestock production. Monitoring studies (see Appendix L in the draft) will show changes in condition that will determine whether stocking rates should be adjusted.

* Estimated future AUMs for this subalternative are 116,567 for livestock and 14,418 for wildlife. See the additions to Appendix K in Chapter 3 of the proposed RMP and final EIS for AUMs by allotment.

Management Action C-9, the first four lines are changed to read as follows:

Authorize all grazing use at present levels (average of past 5 years' licensed use minus the AUMs lost because of livestock management actions in this alternative equals 71,678 AUMs for livestock);

Management Action D-9, the first four lines are changed to read:

Authorize all grazing use at present levels (average of past 5 years' licensed use minus the AUMs lost because of livestock management actions is this alternative equals 70,464 AUMs for livestock).

The following is inserted immediately before Management Action D-10:

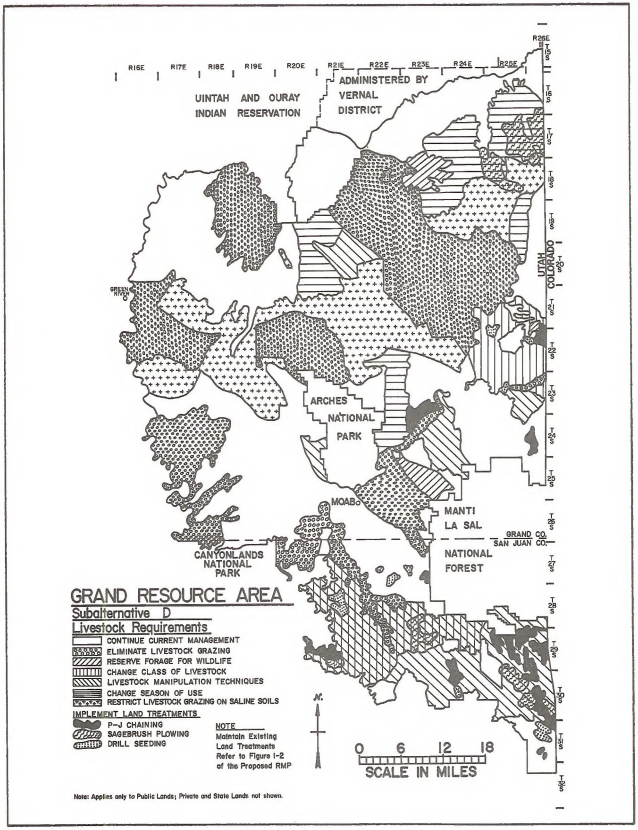


FIGURE 3-1

Management of Livestock Grazing Under Subalternative D

Page 2- 7 (Cont'd.) Subalternative: Authorize grazing use at a reduced level (average of past 5 years' licensed use minus the AUMs lost because of livestock management actions in this subalternative equals 52,255 AUMs for livestock; 11,314 AUMs are presently available for wildlife) to maintain and improve present ecologcal condition. Monitoring studies (see Appendix L in the draft) will show changes in condition that will determine whether stocking rates should be adjusted.

Estimated future AUMs for this subalternative are 55,665 for livestock and 22,242 for wildlife. See the additions to Apendix K in Chapter 3 of the proposed RMP and final EIS for AUMs by allotment.

The following is inserted after Management Action D-10:

Subalternative: Change season of use on 197,829 acres (9 allotments) to provide for growth requirements of perennial plants and to restrict use of spring forbs by livestock in critical wildlife areas.

The following is inserted after Management Action D-12:

Subalternative: Eliminate grazing on 146,245 acres (6 allotments; 1,981 AUMs) to protect riparian vegetation and eliminate forage competition with wildlife.

Page 2- 8 The following is inserted after Management Action D-13:

Subalternative: Restrict livestock grazing from 536,534 acres (portions of 15 allotments, 5,587 AUMs; and 8 entire allotments, 8,789 AUMs) to lessen impact on highly saline soils and reduce salinity in the Colorado River drainage.

The following is inserted after Management Action D-14:

Subalternative: Eliminate grazing on 20,590 acres (3 allotments; 519 AUMs) to protect riparian vegetation and a municipal watershed.

The following is inserted after Management Action D-15;

Subalternative: Eliminate livestock grazing on 1,385 acres (1 allotment; 39 AUMs) to reserve forage for deer and elk and to protect a cold water fishery.

The following is inserted after Management Action D-16:

Subalternative: Eliminate livestock grazing on 103,487 acres (6 allotments; 3,066 AUMs) to reserve forage and space for bighorn sheep.

Page 2- 9 Management Action A-6, line 1: 11,433 deer is changed to 9,735 deer and 747 elk is changed to 1,030 elk.

Page 2- 9 (Cont'd.) Management Action A-6, line 2: 229 antelope is changed to 180 antelope.

Management Action B-7, line 1: 229 antelope is changed to 180 antelope.

Management Action D-18, line 3: 1,216 bighorn is changed to 1,314 bighorn.

Page 2-11 Management Action B-9, paragraph 1, line 1: 1,790,549 acres is changed to 1,790,389 acres.

Management Action B-9, paragraph 2, line 1: 22,411 acres is changed to 22,571 acres.

Page 2-15 Management Action C-37, lines 6 and 7: Cycladenia humilis var. jonesii is deleted and replaced with Aquilegia micrantha.

Page 2-32 In the table following paragraph 2: 11,433 is changed to 9,735; 747 is changed to 1,030; 1,126 is changed to 1,314; and 229 is changed to 180.

Page 2-35 Final paragraph, line 3: 29,065 is changed to 29,165.

Page 2-36 Table 2-5: the last two lines under Alternative B are changed to read as follows:

All Isolated Tracts	8,243
	22,571

Page 2-37 Figure 2-10: Isolated Tract 1a, described as follows, is added:

T. 17 S., R. 21 E., Sec. 23: SW 1/4 (160 acres).

Page 2-46 Paragraph 3. The last line is changed to read as follows:

- Category 4: no leasing.

Page 2-58 Figure 2-24 is corrected to show that the road into Island in the Sky is not a four-wheel drive route.

Page 2-70 Table S-3 in the Summary of the proposed RMP and final EIS summarizes Table 2-11 as corrected.

CHAPTER 3, AFFECTED ENVIRONMENT

Page 3- 2 Paragraph 5, the first sentence is deleted and replaced with the following:

Water quality varies within the resource area. Typically, the headwaters of streams within the Book Cliffs meet assigned State water quality standards under Part II of the Code of Wastewater Disposal regulations.

Page 3- 3 Paragraph 6 is deleted and replaced with the following:

Air quality monitoring is not extensive throughout the GRA. The National Park Service monitors fine particulate samplers for both Canyonlands and Arches national parks. Visibility is also documented photographically, and contrast telephotometer readings are taken at Canyonlands. Some additional air quality monitoring has been done in the Ten Mile Wash area by Buttes Resources Company.

Paragraph 7: the first sentence is deleted.

Page 3- 5 Paragraph 7, line 1: Aquilegia micrantha is added to the list of sensitive species.

Page 3- 8 Paragraph 5, the second sentence should read as follows:

Estimated current population and estimated prior stable numbers (the number of animals present 15 to 20 years ago or UDWR's herd management goals) are given in tabular form for each herd unit along with the current population trend and past 5 years' average harvest (UDWR, 1981b).

After this sentence, the following is added:

The term "herd management goal" is more applicable for species that were not present 15 to 20 years ago or whose population is larger now than it was at that time.

Paragraph 6: the following is added:

These include black bear, mountain lion, bobcat, chukar partridge, mourning dove, and cottontail rabbit.

Page 3-10 Table 3-2: 749 is changed to 2,500; 4,700 is changed to 4,770; 749 is inserted in the Harvest column opposite Herd 28-B. Table 3-2, as revised is reprinted in this chapter.

Page 3-11 Table 3-3: the title is changed to Elk Herd Units, Estimated Current Populations, Herd Management Goals, and Population Trends. The column head Estimated Prior Stable Population is changed to Elk Herd Management Goal. Table 3-3, as revised, is reprinted in this chapter.

Page 3-13 Table 3-4: the title is changed to Bighorn Sheep Herd Units, Estimated Current Populations, Herd Management Goals, and Population Trends. The second column head Estimated Prior Stable Population is changed to Bighorn Sheep Herd Management Goal. Also in Table 3-4: 24 is changed to 12; 229 is changed to 179; 81 is changed to 232; and 25 is changed to 15. Table 3-4, as revised, is reprinted in this chapter.

Table 3-5: the title is changed to Antelope Herd Units, Estimated Current Populations, Herd Management Goals, and Population Trends. The

REVISED TABLE 3-2

Deer Herd Units, Estimated Current and Prior Stable Populations, Population Trends, and Harvest Data

Herd Unit Number	Herd Unit Name	Estimated Current Population	Estimated Prior Stable Population	Population Trend	1976-1981 Average Harvest
28-B	South Book Cliffs	1,500	2,500	Stable to increasing	749
30-A	La Sal Mountain	4,770	15,900 [a]	Stable to increasing	569
30-B	Dolores	3,465	3,850	Stable	[b] 107

[a]Although a declining trend is evidenced by the current and prior stable population estimates, Herd Unit 30-A is believed to be stable to slightly increasing (Smith, 1982).

[b]Most of the deer that migrate onto this unit are still in Colorado at the time of the Utah deer hunting season; Colorado harvest figures are unknown.

REVISED TABLE 3-3

Elk Herd Units, Estimated Current Populations, Herd Management Goals, and Population Trends

Herd Unit Number	Herd Unit Name	Estimated Current Population	Elk Herd Management Goal	Population Trend
20	Moab (La Sal Mountains)	480	1,200	Increasing
21	Book Cliffs	425	850	Increasing
[a]__	Dolores Triangle	125	250	Increasing

[a]The Dolores Triangle herd unit has no numerical designation.

TABLE 3-4

Bighorn Sheep Herd Units, Estimated Current Populations,
Herd Management Goals, and Population Trends

Herd Unit	Estimated Current Population	Bighorn Sheep Herd Management Goal	Population Trend
Westwater	12	[a] 79	Increasing
Confluence (Potash-Mineral Bottom)	232	1,037	Increasing
South Book Cliffs	15	98	Increasing

[a]UDWR long-range goal.

TABLE 3-5

Antelope Herd Units, Estimated Current Populations,
Herd Management Goals, and Population Trends

Herd Unit Number	Herd Unit Name	Estimated Current Population	Antelope Herd Management Goal	Population Trend
12	Hatch Point	93	[a] 309	Decreasing
13	Cisco	87	578	Stable

[a]UDWR long-range goal.

Page 3-13 (Cont'd.) second column head Estimated Prior Stable Population is changed to Antelope Herd Management Goal. Table 3-5, as revised, is reprinted in this chapter.

Page 3-14 Paragraph 1, line 1: bonytail chub is inserted before and humpback chub.

Paragraph 1, line 3: a period is placed after threatened species. The rest of the sentence is deleted.

Paragraph 2, line 4: but no nest sites have been is changed to and one nest site has been.

Paragraph 4: the first and last sentences are deleted. The following is added.

Two black-footed ferret sightings have been confirmed.

Page 3-15 Paragraph 3, line 3: the word miners is changed to mines.

Paragraph 7, line 2: 1,000,000 cubic yards is changed to 2.5 million tons.

Page 3-16 Paragraph 1, the fourth sentence is changed to read as follows:

Uranium claims are clustered in areas where host rocks are present, such as in the Salt Wash member of the Morrison Formation, in the Moss Back member of the Chinle Formation, and at the top of the Cutler Formation.

Page 3-20 The last line on the page is changed to read as follows:

Cisco Wash to Dolores River	4 miles	Recreational

Page 3-24 Paragraph 6, the third sentence is changed to read as follows:

A sensitive plant, smallflower columbine (Aquilegia micrantha), is found in the hanging gardens of Negro Bill Canyon.

Page 3-31 The following is added to Tables 3-13 and 3-14:

NOTE: These budgets assume that ranchers have no long-term outstanding debt and that all operating capital is borrowed. These assumptions tend to underestimate cash costs and overestimate returns above cash costs.

Page 3-34 Paragraph 1, the second sentence is deleted.

Paragraph 4, line 2: $325,627 is changed to $229,251; 13 percent is changed to 17 percent.

Page 3-37 Paragraph 4, line 1: $500,000 is changed to $400,000;

Paragraph 4, line 2: 45 local jobs is changed to 30 local jobs.

Paragraph 8, line 3: $500,000 is changed to $400,000.

Paragraph 8, line 4: 45 jobs is changed to 30 jobs.

CHAPTER 4, ENVIRONMENTAL CONSEQUENCES

Page 4- 2 Under ANALYSIS GUIDELINES, item (1) is changed to read as follows:

Discussion of impacts is generally limited to those that would be be significant; however, in some cases insignificant impacts are discussed to show that they were considered.

Page 4- 3 Immediately before MINERALS, the following is added:

OFF-ROAD VEHICLE USE AND MANAGEMENT

There is a lack of actual ORV use data in the GRA.

Page 4- 5 Paragraph 5, line 2: 40 allotments is changed to 38 allotments.

Paragraph 6, 21 allotments is changed to 23 allotments.

Page 4-15 Paragraph 6, line 2: 20,000 is changed to 50,000; 600,000 to 1,000,000 MCF is changed to 10,000,000 MCF.

Page 4-26 Paragraph 11, line 2: 1,320 acres is changed to 1,480 acres.

Page 4-29 Paragraph 3, line 5: the last sentence is changed to read as follows:

This could exceed the visual quality standards for the VRM class (see Visual Resources above), in both the short and long terms, depend- on the extent of oil and gas activities in these areas; such a change would be inconsistent with management goals.

Page 4-33 The following is added to Table 4-1:

NOTE: These budgets assume that ranchers have no long-term outstanding debt and that all operating capital is borrowed. These assumptions tend to underestimate cash costs and overestimate returns above cash costs.

Page 4-34 Paragraph 3, line 2; 15,679 acres is changed to 15,839 acres.

Page 4-37 Paragraph 4 is changed to read as follows:

Page 4-37 (Cont'd.)

None of the management actions would impact local communities so far as to noticeably affect their existing social environment. Alternative B would place fewer restrictions on activities taking place on public land. This alternative would be perceived by most residents as having greater beneficial impact on the local economy.

After paragraph 5, the following is added:

ENVIRONMENTAL IMPACTS OF SUBALTERNATIVE B, GRAZE AT PREFERENCE

AUTHORIZATION OF GRAZING AT FULL PREFERENCE

Soils and Water Quality. Authorization of grazing use at full reference levels would lead to an increase in surface runoff, erosion, and sedimentation. This would be caused by increased soil disturbance and soil compaction, as well as decreased vegetative cover. Ecological condition should decline. As this occurs, soil loss values and gully and rill erosion would exceed the T values, and soil productivity would decline.

Vegetation. Assuming that the livestock operators would license up to their preference numbers, ecological condition would decline throughout the resource area. Only in areas where no grazing takes place (inaccessible areas) or where grazing is now licensed at preference, would ecological condition remain as at present. Present ecological condition is due, in large part, to the past use that the area has received. An increase in use would cause a greater impact to the vegetative resource. Other proposed management actions, such as livestock manipulation techniques, would lessen the impact.

Livestock Grazing. The future AUMs shown in this management action represent the total of changes that would result from all actions under Alternative B. Impacts are analyzed in the narrative for each of these actions.

Wildlife. The authorization of grazing use at full preference levels would cause habitat concerns for wildlife ungulates on ten allotments and for riparian and aquatic habitat on four allotments.

On the Blue Hill Allotment, deer populations would remain stable or increase, and elk populations would continue to increase. The portion of the allotment within the area of concern is a wheatgrass seeding (3,043 acres) which is grazed in May. Any additional livestock numbers would not affect the critical winter-spring period.

Through an increase in livestock numbers, there is a potential for greater competition between livestock and bighorn sheep on seven allotments, primarily during the winter and early spring. These allotments are Arth's Pasture, Big Flat-Ten Mile, Kane Springs, Little Hole, Potash, Rattlesnake, and Spring Canyon Bottom. Seasons of use and species overlaps are shown in Appendix I of the draft.

Page 4-37 (Cont'd.)

Under full preference levels of grazing use, antelope populations would remain stable on the Bar-X Allotment and decrease on the Windwhistle Allotment.

The riparian and aquatic habitat would continue to decrease in ecological condition, at a faster rate, on the Cottonwood, Diamond, Granite Creek, and Showerbath Springs allotments.

Because grazing carrying capacities have not been established for the allotments within the resource area, it is not known what additional impacts would result from full preference grazing levels.

ECONOMIC IMPACTS OF SUBALTERNATIVE B, GRAZE AT PREFERENCE

ECONOMIC IMPACTS RELATED TO CRITICAL WATERSHED MANAGEMENT

Increasing the amount of sediment that originates in the GRA would reduce the electrical production, flood control, recreation, and water storage values of Lake Powell and increase the maintenance costs of small livestock reservoirs downstream from the points of erosion. Increasing the salt pickup by water originating in and passing through the GRA's critical watershed areas would increase the costs associated with the use of saline water in the lower Colorado River basin. There would be a benefit whenever a management action increases the amount of water that enters the Colorado River. Grazing at active preference would result in an unquantifiable increase in sedimentation, salt pickup, and water yield.

ECONOMIC IMPACTS RELATED TO LIVESTOCK GRAZING

Allowing grazing at active preference would provide the operators with the flexibility to increase herd sizes in response to good range and/or economic conditions. However, true forage production in many allotments is likely to be less than active preference, and grazing at this level would eventually result in decreased calf and lamb weights and increased livestock losses. Much of the increased forage represented by a move to active preference could not be utilized by existing GRA livestock operators because of a lack of forage during other times of the year.

Grazing at active preference would represent an average 42 percent increased use by cattle operators and a 92 percent increased use by sheep operators. If operators were to graze at active preference, or as close to active preference as they could, cattle operators would realize a cumulative increase in returns above cash cost of 17 percent, and sheep operators would realize a cumulative increase in returns above cash cost of 11 percent (see Table 3-1). Because in many cases forage production is expected to be less than active preference, grazing at active preference could result in short-term economic gains with long-term economic losses.

Page 4-37 (Cont'd.) Ranch values and the operators' ability to obtain loans would not be affected.

The possible short-term economic gains would have short-term indirect and induced local income and employment effects; however, there would be no long-term local indirect or induced economic effects.

TABLE 3-1

Summary of Short-Term Impacts to
Livestock Operators Under Subalternative B

Cattle Operators	Current Situation	Short Term
Gross Revenue	$1,962,085	$2,268,849
Total Cash Cost	1,038,598	1,164,757
Returns Above Cash Cost[a]	923,487	1,104,092
Returns to Labor and Investment[a]	482,876	671,635
Sheep Operators		
Gross Revenue	$2,367,988	$2,639,668
Total Cash Cost	890,974	999,647
Returns Above Cash Cost[a]	1,477,014	1,640,021
Returns to Labor and Investment[a]	1,239,055	1,383,508

[a] These budgets assume that ranchers have no long-term outstanding debt and that all operating capital is borrowed. These assumptions tend to underestimate cash costs and overestimate returns above cash costs.

ECONOMIC IMPACTS RELATED TO RECREATION

Livestock grazing at active preference would negatively affect big game populations and reduce hunter success rates. The distance hunters must travel and hunter success rates have been found to be the primary determinants of hunter pressure on deer herds in Utah (Wennergren, et al. 1973). Lower success rates would discourage hunters from hunting in the GRA. Decreased hunter pressure would reduce the $130,000 of personal income and five jobs now attributable to hunting in the GRA.

SOCIAL IMPACTS OF SUBALTERNATIVE B, GRAZE AT PREFERENCE

None of the management actions would impact local communities so far as to noticeably affect their existing social environment. Subalternative B would place the fewest restrictions on activities taking place on public land. This subalternative would be perceived by most residents as having the greatest beneficial impact on the local economy.

Page 4-37 (Cont'd.) In general, local attitudes toward BLM would improve because of the reduced restrictions and greater local resource use and development allowed. These attitudes would vary, however, by those individuals and groups who would gain and those who would lose under this alternative. See the Economic Impacts section for the identification of gainers and losers under this subalternative.

Page 4-49 Paragraph 6, line 4: the word loss is changed to lost.

Page 4-55 The following is added to Table 4-4:

NOTE: These budgets assume that ranchers have no long-term outstanding debt and that all operating capital is borrowed. These assumptions tend to underestimate cash costs and overestimate returns above cash costs.

Page 4-57 Paragraph 7, the last sentence is changed to read as follows:

Assuming that population/harvest and harvest/hunter ratios would remain constant, projected hunter pressure and expenditures could increase local income by as much as $185,000 and employment by as many as seven jobs (USFS, 1982).

Page 4-62 Paragraph 3, line 1: the word plans is changed to plants.

Page 4-64 Paragraph 9. The last line is changed to read as follows:

existing runoff, sediment, and salt yields, by allotment (Appendix D).

Page 4-75 The following is added to Table 4-8:

NOTE: These budgets assume that ranchers have no long-term outstanding debt and that all operating capital is borrowed. These assumptions tend to underestimate cash costs and overestimate returns above cash costs.

Page 4-76 Paragraph 1 is changed to read as follows:

Refer to Alternative D, Economic Impacts Related to Recreation (D-6, D-8, D-9, D-10, D-11, D-12, D-13, D-14, D-15, D-16, D-21, D-27, D-30, D-42, and D-43).

Page 4-77 After paragraph 4, the following is added:

ECONOMIC IMPACTS RELATED TO RECREATION

(D-6, D-7, D-8, D-9, D-10, D-11, D-12, D-13, D-14, D-15, D-16, D-21, D-27, D-30, D-42, D-43)

These management actions would contribute to projected big game population increases, which would result in higher hunter success rates. The

Page 4-77 (Cont'd.) distance hunters must travel and hunter success rates have been found to be the primary determinants of hunter pressure on deer herds in Utah (Wennergren, et al., 1973). Higher success rates would encourage more hunters to hunt in the GRA. Assuming that population/harvest and harvest/hunter ratios would remain constant, projected hunter pressure and expenditures could increase local income by as much as $190,000 and employment by as many as seven jobs (USFS, 1982).

Page 4-78 In the first paragraph under SOCIAL IMPACTS OF ALTERNATIVE D, PROTECTION, the first sentence is changed to read as follows:

This alternative would place greater restrictions on livestock grazing, ORV use, and mineral activities.

Immediately before UNAVOIDABLE ADVERSE IMPACTS, the following is added:

ENVIRONMENTAL IMPACTS OF SUBALTERNATIVE D, REDUCED LIVESTOCK GRAZING

CONTINUATION OF PRESENT LIVESTOCK MANAGEMENT PRACTICES

Soils and Water Quality. Continuation of present livestock management practices on 28 allotments would impact soil through surface disturbance, soil compaction, decreased water infiltration, and changes in ground cover. Since these factors influence the erosion rate and sediment yield, erosion rates and trends would continue at present levels. Maintaining the present medium to high ecological condition would allow soil loss values to remain at or below the T value. Any increase in ecological condition would increase production of vegetation. Decreases in soil erosion generally follow increased vegetation, although soil changes generally lag behind plant changes (USDA, 1976). Critical erosion in these areas is associated with slopes greater than 30 percent. These areas are usually in medium or high ecological condition, and the excessive erosion rates are geologic in nature rather than induced by human activity.

Vegetation. Continuation of current livestock management on 28 allotments (see the additions to Appendix K later in this chapter) would affect ecological condition. Much of the area that is not grazed during critical growing periods is in high or climax condition at present. These sites would continue in high or climax condition. On other sites, since present ecological condition results partly from past livestock use, present management at the level of the past 5 years' average use would maintain ecological condition in most instances. Some sites that receive substantial livestock use would decline in ecological condition as desirable forage plants are replaced by undesirables that are not components of the site in upper seral stages.

Livestock Grazing. Maintaining the present ecological condition would maintain the present forage yield and enable livestock grazing to continue at current levels.

Page 4-78 (Cont'd.)

Wildlife. Continuation of present livestock management on 28 allotments would not affect wildlife ungulates on 23 of these allotments; however, on the remaining five allotments, there would be some habitat concerns.

On the Blue Hill Allotment, the deer population is stable to increasing and the elk population is increasing. However, this allotment has been identified as an area of potential for competition with livestock. Since reproductive success and fawn or calf survival depend largely on the condition of the female animal when she leaves the winter-spring range, forage quality and quantity must be sufficient to support these herds through the winter and spring (Wallmo, 1981; Kerr, 1979). Threshold levels for livestock and elk competition problems are unknown.

There is a potential for desert and Rocky Mountain bighorn sheep to compete with domestic sheep and cattle for forage and space on the Arth's Pasture, Big Flat-Ten Mile, and Rattlesnake allotments. Specific evidence, documented by several researchers, indicates that livestock compete directly with bighorn sheep for forage, space, and water (BLM, 1981c). Bighorn populations are increasing, and they would continue to increase until threshold levels are reached.

Domestic sheep could also transmit parasites and disease to bighorn sheep on the Big Flat-Ten Mile and Rattlesnake allotments. Threshold levels for livestock and bighorn sheep competition and parasite and disease transmission are unknown.

Under current management, antelope populations would decrease on the Windwhistle Allotment. Drought, severe winter weather, and marginal or unsuitable habitat conditions have contributed to the presently decreasing population trend.

IMPLEMENTATION OF LIVESTOCK MANIPULATION TECHNIQUES

Soils and Water Quality. Livestock manipulation techniques would reduce runoff, sediment, and salt by 15 percent after 15 years (BLM, 1977c). Improving low to medium ecological condition in overuse areas would reduce sediment and potential salt loads by 15 to 45 percent. Improving overuse areas to high ecological condition would reduce sediment and potential salt loads by 30 to 65 percent. Reduction estimates were derived by comparing universal soil loss estimates for saline-alkali soils (Appendix C in the draft).

Vegetation. It is estimated that perennial forage plants would increase by 5 to 25 percent. Water developments may improve livestock distribution and thus improve ecological condition in previous heavy use areas. A plant's health and survival depend on its abilities to synthesize and store food, form vegetative structures for renewal of top growth, maintain a healthy root system, and develop reproductive organs (Stoddart, et al., 1975). Grazing, through removal of photo-

Page 4-78

synthetic leaf tissue, interferes with these processes. Systematic grazing management is designed to offset these impacts by providing rest.

Livestock Grazing. Fences, water developments, and rotation of grazing use areas would have a greater impact on cattle than on sheep, because cattle are social animals and creatures of habit. Any significant change in their habitual use patterns through concentration, change in season of use for a particular use area, or change in pasture would have a short-term impact on their well-being and productive capacity.

Concentration of livestock would reduce the opportunity for selective grazing and cause them to utilize less palatable forage plants. Their initial response to concentration in a single grazing unit would be to walk the fences, spending less time grazing; this would result in weight loss, potential reduction in calf crop percentage, lighter calves, and possibly a longer period of adjustment to the seasonal movement of livestock. However, as cattle become adjusted to the periodic pasture changes and replacement animals remain in the herd, the potential for improved production in terms of calves and pounds of beef would be enhanced because of the increased forage production as a result of grazing systems and because new areas of the allotment could be used if waters are developed.

Wildlife. This action would improve water and cover and reduce spatial competition for wildlife ungulates. Deer populations would remain stable to increasing, and elk populations would continue to increase. Antelope population trends for the Hatch Point herd (Herd Unit 12) cannot be anticipated, since this herd currently has low numbers and is in a downward trend. The decreasing trend is attributed to drought, severe winter weather, predation and marginal or unsuitable habitat conditions.

Implementation of livestock management techniques would increase yearlong forage, provide additional water, and reduce spatial competition of bighorn sheep on the Ten Mile Point allotment. Bighorn sheep populations are expected to continue to increase as a result of reduced spatial competition and increased forage availability (BLM, 1981c).

Winter/spring forage would be increased through managing for a subclimax seral stage on the following allotments for the species indicated: Hatch Point, deer, elk, antelope, and bighorn sheep; Lisbon, deer, elk, and antelope; Nash Wash, deer; Professor Valley, deer and elk; Steamboat Mesa, deer and elk.

Implementation of livestock manipulation techniques on five allotments would improve water and cover and reduce spatial competition of wildlife ungulates. The Willow Flats Allotment does not have wildlife concerns.

Page 4-78 (Cont'd.)

AUTHORIZATION OF GRAZING AT REDUCED LEVEL

Soils and Water Quality. Authorizaton of grazing at a 27 percent reduced level would lead to an overall decrease in surface disturbance and plant defoliation. Both of these factors influence the soil's susceptibility to erosion and sedimentation. Maintaining existing medium or high ecological conditon would minimize soil loss estimates and keep soil loss values below the T value. Impacts for areas where grazing would be eliminated will be analyzed under the appropriate management actions.

Vegetation. On the 616,267 acres that are in high and climax condition, no significant impact to vegetation wuld occur. On the 923,383 acres that are in low to medium condition, ecological condition would probably decline even further. This would be especially true on livestock concentration areas (around waters, bedding grounds, etc.), and these are estimated to be less than 5 percent of the resource area. Much of the acreage mentioned (808,241 acres) lies in allotments where livestock grazing would be eliminated. Impacts on these areas will be analyzed under the appropriate management actions.

Livestock Grazing. The future AUMs shown in this management action represent the total of changes that would result from all actions under Alternative D. Impacts are analyzed in the narrative for each of these actions.

Wildlife. Continued authorization of grazing use at present levels would cause some habitat concerns for wildlife ungulates on five allotments.

On the Blue Hill Allotment, deer populations would remain stable to increasing and elk populations would increase.

There is potential for competition between livestock and bighorn sheep on three allotments (Arth's Pasture, Big Flat-Ten Mile, and Rattlesnake), primarily during the winter and early spring (see Appendix I in the draft for seasons of use and species overlaps).

Antelope populations would decrease on the Windwhistle Allotment. The decreasing trend is attributed to drought, severe winter weather, predation, and marginal or unsuitable habitat condition.

CHANGES IN SEASON OF USE

Soils and Water Quality. Changing the season of use on the Barley Flat Ronzio, Bar-X, Bogart, Corral Wash, Harley Dome, Highlands, Monument Wash, San Arroyo, and Sulphur Canyon allotments would result in an anticipated reduction of 1,836 acre-feet in runoff, 106,083 tons of sediment, and 3,564 tons of salt delivered to the Colorado River in 3 years. These estimates were derived using an averaged 30 percent reduction of the existing runoff, sediment and salt yields by allotment

Page 4-78 (Cont'd.)

(see Appendix D in the draft).

Vegetation. The proposed season of use changes would improve the condition of desirable forage areawide. The start of the growing season is the most critical time for the plant. Grazing at this time, particularly on arid ranges, is detrimental to the plant (Stoddart, et al., 1975), and repeated spring grazing is damaging (Holmgren and Hutchings, 1972).

Studies conducted (Cook, 1971) in western Utah on ranges similar to those in the planning area have shown that there is an interrelationship between season of use and intensity of harvesting vegetation by grazing. These studies found, without exception, that excessive spring grazing reduced twig length in browse and number of seed stalks in grasses and caused a larger portion of the plants in each species to die. Clipping in the spring caused about 89 percent more death loss of plants and about 54 percent greater crown reduction in living plants than did harvesting in other seasons. There were no significant differences among the average death losses from fall, early winter, and late winter harvesting.

Most of the season of use changes would result in protection for the plants during the critical period beginning mid to late March. Phenology studies conducted from 1978 through 1981 show this to be the date throughout the majority of the GRA.)

A change in season of use on summer grazing allotments would allow the forage plants to begin building their carbohydrate reserves before grazing begins in June.

Livestock Grazing. Changing the season of use to restrict spring grazing on nine allotments would significantly decrease the livestock program. Spring forage provides more nutrition than forage grazed during any other season of the year (Cook, 1971), and nutritious forage is critical to gestation and lactation, which take place during the spring. The individual animals would not have access to this spring forage. (Impacts of this action are discussed further in the draft under Economic Impacts, Alternative D, Protection).

Wildlife. This action would restrict livestock use of winter/spring forage, allowing antelope and bighorn sheep populations to remain stable or increase as a result of improved habitat (BLM, 1981c; BLM, 1970). Bighorn sheep compete for forage and space on the Harley Dome Allotment. Antelope compete with livestock for spring forbs on the Bar-X, Corral Wash, Harley Dome, San Arroyo, and Sulphur Canyon allotments.

Page 4-78 (Cont'd.)

ELIMINATION OF GRAZING ON SIX ALLOTMENTS

Soils and Water Quality. Elimination of grazing on 146,245 acres to protect riparian vegetation would decrease soil disturbance and increase riparian vegetation along the streams, which would in time decrease channel bank erosion, stop minor slash and debris movement, and stabilize the channel, improving the overall water quality of the drainageways. Water temperatures should decrease slightly.

Vegetation. Most of the acreage in these allotments is not in the riparian zone. The riparian areas are where the greatest impact from livestock grazing occurs. Throughout the majority of the area (139,302 acres or 95 percent) there would be no change in ecological condition. There would be a change toward climax condition in the riparian areas. This would be a rapid change because of good ecological site potential (Dahlem, 1979).

Livestock Grazing. Elimination of grazing from these six allotments would result in the loss of 1,981 AUMs of livestock forage.

Wildlife. The elimination of livestock grazing from the Diamond, Cottonwood, Floy Canyon, North River, North Sand Flat, and Showerbath Springs allotments would restore and improve riparian and aquatic habitat that has been degraded by concentrations of livestock along these drainage bottoms.

These concentrations have also resulted in the degradation and loss of habitat for fish and nongame birds and mammals. This action would allow vegetation to become established and stream banks to stabilize. As a result of the improved habitat, populations of fish and nongame birds and mammals would increase; deer populations would remain stable, since forage is not the limiting factor. An additional 1,981 AUMs would be available for use by wildlife.

RESTRICTION OF LIVESTOCK GRAZING FROM SALINE SOILS

Soils and Water Quality. Restriction of livestock grazing on 536,534 acres of saline soils would reduce the 391,090 tons of sediment delivered annually to the Colorado River system. Assuming that 3 percent of this sediment is salt (BLM, 1977c), there would be an annual reduction of 11,733 tons of salt introduced into the Colorado River. There would also be a reduction of 1,272 acre-feet of runoff, reducing the salt load to the Colorado River by another 3,460 tons per year. The total salt reduction would be 15,193 tons.

Vegetation. Livestock grazing gives a competitive advantage to some plants by decreasing the vigor of grazed species. The vigor of these grazed plants would increase in areas of grazing restrictions. The vigor of previously ungrazed plants would be maintained or decrease. The net effect would be an improvement in ecological condition.

Page 4-78 (Cont'd.)

Although the vigor of individual forage species would increase, the increase in density would not be as high for those species that reproduce primarily by seed, since they would not receive the beneficial effect of livestock trampling.

The rate of recovery in low condition areas would be slow because of the lack of precipitation and the poor productivity of soils.

Livestock Grazing. Restriction of livestock from these areas would result in a loss of 14,376 AUMs of livestock forage.

Wildlife. Restriction and elimination of livestock grazing from these 23 allotments would increase forage, water, and cover for nongame wildlife species. Antelope populations would remain stable.

ELIMINATION OF LIVESTOCK GRAZING TO PROTECT RIPARIAN AREAS AND MUNICIPAL WATERSHED

Soils and Water Quality. Elimination of livestock grazing on the Between the Creeks, Mill Creek, and South Sand Flats allotments would decrease soil disturbance and increase riparian vegetation along the streams, which would decrease channel bank erosion, reduce minor slash and debris movement, and stabilize the channel, improving the overall water quality of these municipal watersheds. Fecal coliform levels should be maintained within State water quality standards and water temperatures should decrease slightly.

Vegetation. In the Between the Creeks and Mill Creek allotments, livestock grazing has generally been confined to the stream bottom. In these areas, ecological condition would improve rapidly (Dahlem, 1979). There would be no change in condition throughout the remainder of the two allotments. The South Sand Flats Allotment is grazed in areas apart from the stream bottom. Ecological condition would improve here as well as in the riparian areas. Any resultant increase in deer numbers could reverse the upward trend in ecological condition through increased grazing pressure.

Livestock Grazing. This action would result in the loss of 519 AUMs on three allotments.

Wildlife. The elimination of livestock grazing from Between the Creeks, Mill Creek, and South Sand Flats allotments would restore and improve riparian and aquatic habitat that has been degraded by concentrations of livestock along these drainage bottoms.

These concentrations have also resulted in the degradation and loss of habitat for fish and nongame birds and mammals. This action would allow vegetation to become established and stream banks to stabilize. As a result of the improved habitat, populations of fish and nongame birds and mammals would increase; deer and elk populations would remain stable since forage is not the limiting factor.

Page 4-78 (Cont'd.)

An additional 519 AUMs would be available for use by wildlife.

ELIMINATION OF LIVESTOCK GRAZING TO BENEFIT DEER, ELK, AND FISH

Soils and Water Quality. Elimination of livestock grazing on the Granite Creek Allotment would reduce fecal coliform levels, decrease water temperature, increase terrestrial food for cold water fisheries, and reduce sediment levels. Channel banks would become stable through the decrease in soil disturbance from the elimination of livestock and the increase in vegetation.

Vegetation. Ecological condition would improve through the elimination of livestock grazing.

Livestock Grazing. This action would result in the loss of 39 AUMs of forage to livestock grazing.

Wildlife. The elimination of livestock grazing would protect riparian and aquatic habitat on the Granite Creek Allotment. Forage for deer and elk would increase by 39 AUMs. Concentration of cattle in the drainage bottom has resulted in degradation and loss of fish and wildlife habitat. Fish populations (including trout) would increase as a result of this action (BLM, 1981c).

ELIMINATION OF LIVESTOCK GRAZING TO BENEFIT BIGHORN SHEEP

Soils and Water Quality. Elimination of livestock grazing on the Kane Springs, Little Hole, Mineral Point, Potash, Spring Canyon Bottom, and Ten Mile Point allotments would result in decreased soil disturbance and compaction of soils that are presently grazed. Runoff would decrease and water infiltration would improve. Soil loss estimates would be reduced by as much as 45 percent as a result of this action. Salinity benefits would be minor.

Vegetation. Vegetation on these 103,487 acres would improve in ecological condition. Any significant increase in bighorn sheep numbers would reverse the upward trend in vegetative condition because of their increased year-round use.

Livestock Grazing. Livestock AUMs would be reduced by 3,066.

Wildlife. The elimination of livestock grazing from six allotments would eliminate forage and spatial competition of bighorn sheep and reduce the potential of disease transmission to bighorn sheep from domestic sheep. Forage for bighorn would increase by 3,066 AUMs. The bighorn sheep population would increase as a result of this action.

ECONOMIC IMPACTS OF SUBALTERNATIVE D, REDUCED LIVESTOCK GRAZING

ECONOMIC IMPACTS RELATED TO CRITICAL WATERSHED MANAGEMENT

Restriction of livestock grazing from 536,534 acres to lessen the impacts on highly saline soils and reduce salinity in the Colorado River drainage would reduce the amount of sediment that originates in the GRA. This would benefit the electrical production, flood control, recreation, and water storage values of Lake Powell and reduce the maintenance costs of small livestock reservoirs downstream from the points of erosion. Reducing the salt pickup by water originating in and passing through the GRA's critical watershed areas would reduce the costs associated with the use of saline water in the lower Colorado River basin. There would be a loss of value whenever a management action reduces the amount of water that enters the Colorado River.

The benefits of preserving soil productivity could not be quantified. The decrease in sedimentation of Lake Powell would result in an estimated annual benefit of $2,000 within 3 years. The benefit from decreased salinity, including indirect and induced impacts as calculated by the Bureau of Reclamation, is estimated at $760,000 per year within 3 years after implementation of the subalternative. The annual benefit from decreased salinity alone is estimated at $580,000, and the annual value loss from decreased water yield would be approximately $127,200.

ECONOMIC IMPACTS RELATED TO LIVESTOCK GRAZING

The quantifiable management actions in this subalternative include implementation of livestock manipulation techniques, changes in season of use, and restriction and elimination of livestock grazing. Other management actions from Alternative D, which are not replaced with a subalternative, include consideration of certain lands for disposal, restrictions on ORV use, and implementation of a limited fire suppression policy. These actions would affect either the amount of forage or the seasons when public rangeland forage would be available to livestock operators. This in turn could affect ranchers' income, wealth, and ability to obtain loans, with some spinoff income and employment effects through the local economy.

Two cattle operators would have a short-term increase of 35 percent in available forage. Nineteen operators would have an average 61 percent short-term loss of GRA forage, resulting in a decrease of $139,000 in returns above cash cost, 31 percent less than what these operators now earn.

In the long term, five of the cattle operators would, on the average, have 26 percent more available forage than their existing use. If the added forage is grazed, these cattle operators would realize an added $10,000 in returns above cash cost, a 4 percent increase over what they now earn. In the long term, 19 operators would have an average 40

Page 4-78
(Cont'd.)

percent loss of GRA forage, resulting in a $139,000 decrease in returns above cash cost, 31 percent less than what they now earn (Table 3-2). These figures nearly obscure the fact that eight of these operators would be totally excluded from using forage in the GRA, and that their returns above cash cost would decrease an estimated 73 percent. All of the eight operators have herds of fewer than 100 head of cattle.

Twelve sheep operators would have an average 54 percent short-term loss of GRA forage, resulting in a decrease of $483,804 in returns above cash cost, 38 percent less than what these operators now earn.

In the long term, three of the 15 sheep operators would, on the average have 14 percent more available forage than their existing use. If some of the added forage is grazed, these sheep operators would realize an added $6,200 in returns above cash cost, a 2 percent increase over what they now earn (Table 3-3).

Ten sheep operators would have an average 51 percent long-term loss of GRA forage, resulting in a decrease of $372,070 in returns above cash cost, 35 percent less than what they now earn. These figures nearly obscure the fact that four of these operators would be totally excluded from grazing in the GRA, and that their returns above cash cost would decrease an estimated 70 percent.

Changes in season of use would also affect ranchers' incomes. The spring (March through May) exclusions of livestock would be of particular concern to livestock operators, since they have few options with which to respond to these exclusions.

The spring exclusions would also force sheep operators who had been lambing on public land to lamb on their base property. Most operators can either purchase feed to replace the lost forage, shift forage that is normally used in other months to this period, or reduce herd size so that forage produced from the base property will last longer.

Replacing lost forage with purchased hay should represent a worst-case analysis. Feeding hay during the spring may adversely affect weight gains and reduce gross revenues. If the hay is fed on alfalfa producing property during the spring, alfalfa yields may be affected, and bloating problems may arise. However, many of the spring exclusions in Subalternative D extend the available use of the GRA forage during some other season. In some cases, it may be possible to shift forage normally used during these other seasons (mostly winter) to the excluded period in the spring. In addition, base properties could increase alfalfa production, which is significantly less expensive than purchasing the hay. Also, reducing the herd size is usually a more economical response to spring exclusions than are hay purchases (Godfrey, 1981).

TABLE 3-2

Number of Cattle Operators Affected
and Degree of Impact, Subalternative D

	Percentage Increase			Not	Percentage Decrease		
	51-100	11-50	1-10	Affected	1-10	11-50	51-100
Change In Available Public Rangeland Forage	1	3	1	7	2	4	13
Change In Total Available Forage	0	3	2	7	5	10	4
Change In Returns Above Cash Cost	0	0	5	7	4	3	12

Note: Changes are based on average use over the past 5 years.

TABLE 3-3

Number of Sheep Operators Affected
and Degree of Impact, Subalternative D

	Percentage Increase			Not	Percentage Decrease		
	51-100	11-50	1-10	Affected	1-10	11-50	51-100
Change In Available Public Rangeland Forage	0	2	1	1	1	4	5
Change In Total Available Forage	0	0	3	1	4	6	0
Changes In Returns Above Cash Cost	0	0	3	1	2	4	4

Note: Changes are based on average use over the past 5 years.

Page 4-78 (Cont'd.)

The elimination of livestock use and changes in season of use would totally exclude the use of public rangeland forage in the GRA by two cattle operators during some time in the spring. The cost of replacing this forage with alfalfa purchased at $75 per ton, would be $5,450. The spring exclusions would decrease these operators' returns above cash cost by 17 percent. Including both the spring exclusions and other reductions, the two operators would realize an estimated 96 percent decrease in returns above cash cost.

Sheep operators would be affected by spring exclusions to a much greater extent. Six of the 14 sheep operators would receive significant spring exclusions. The cost of replacing this forage with alfalfa purchased at $75 per ton would be $87,200. The spring exclusions use would decrease these operators' returns above cash cost by 14 percent. Including both the spring exclusions and other grazing changes, the six operators would realize an estimated 30 percent decrease in returns above cash cost.

The aggregate short-term and long-term impacts from changes in both available forage and season of use are summarized in Tables 3-4 and 3-5. The figures in Table 3-4 represent a worst-case analysis. The overestimate of negative income impacts should be most noticeable for the sheep group, as cattle operators would not be significantly affected by changes in season of use.

Under Subalternative D, total available cattle forage would decrease 6 percent, and available sheep forage would decrease 50 percent, which implies an aggregate decrease in ranch values. However, twelve operators would have more available forage, and their ranch values should increase.

Grazing permits that do not increase a ranch's carrying capacity (i.e., permits that do not reflect available forage) may have speculative value. Under these conditions, any decrease from active preference could impact an operator's wealth. Under Subalternative D, long-term grazing privileges would be reduced by 53,877 AUMs. At a market value of $60 per AUM for BLM grazing permits, total operator wealth could decline by as much as $3,232,620, an 8 percent reduction in base property value.

Lending institutions base loans on a number of factors, including the rancher's ability to repay the loan. The repayment ability is usually measured by the rancher's likely future income with the loan. Because rancher income is expected to decrease for 29 of the 45 operators under Subalternative D, their ability to repay loans should also decrease. Twelve operators would realize a long-term increase in net revenues, and their ability to repay loans should thereby increase.

Base properties are used as collateral for some types of loans. If lending institutions base their ranch assessments on grazing privileges that do not reflect available forage, then any reduction from active

TABLE 3-4

Summary of Short-Term and Long-Term
Impacts to Livestock Operators Under Subalternative D

Cattle Operators	Current Situation	Short Term	Long Term
Gross Revenue	$1,962,085	$1,750,105	$1,883,561
Total Cash Cost	1,038,598	959,106	1,023,888
Returns above Cash Cost [a]	923,487	790,999	859,673
Returns to Labor and Investment[a]	482,876	358,583	401,382
Sheep Operators			
Gross Revenue	2,367,988	1,883,195	2,044,967
Total Cash Cost	890,974	784,517	828,355
Returns above Cash Cost [a]	1,477,014	1,098,678	1,216,612
Returns to Labor and Investment[a]	1,239,055	852,610	1,075,352

[a] These budgets assume that ranchers have no long-term outstanding debt and that all operating capital is borrowed. These assumptions tend to underestimate cash costs and overestimate returns above cash costs.

TABLE 3-5

Impact Area's Income and Employment due to Livestock Operators
In the Grand Resource Area, Subalternative D

Economic Sector	Existing Employment (Jobs)	Existing Personal Income (dollars)	Subalternative D Employment (Jobs)	Subalternative D Personal Income (dollars)
Agriculture	26	537,325	22	454,660
Retail-Services	9	117,043	8	157,372
Other	6	160,345	5	133,620
TOTAL	41	874,713	35	745,652

Page 4-78 (Cont'd.)

preference could have some effect on the total indebtedness allowed.

A number of operators live outside the impact area, and their operations contribute little to the local economy. Under Subalternative D, aggregate income and herd size of the 22 independent livestock operators in the impact area would decline. Decreased rancher income and herd size would have indirect and induced local employment and income effects. Under Subalternative D, long-term regional income and employment due to livestock operators in the GRA would decrease by $129,061 (-15 percent) shown in Table 3-4.

ECONOMIC IMPACTS RELATED TO RECREATION

Implementation of livestock manipulation techniques, changes in season of use, and restriction and elimination of livestock grazing would contribute to projected big game population increases, which would result in higher hunter success rates. The distance hunters must travel and hunter success rates have been found to be the primary determinants of hunter pressure on deer herds in Utah (Wennergren, et al., 1973). Higher success rates would encourage more hunters to hunt in the GRA. Assuming that population/harvest and harvest/hunter ratios would remain constant, projected hunter pressure and expenditures could increase local income by as much as $190,000 and employment by as many as seven jobs (USFS, 1982. The probability that hunter pressure and expenditures would increase to these levels is greater than under Alternative D.

SOCIAL IMPACTS OF ALTERNATIVE D, REDUCED LIVESTOCK GRAZING

This alternative would place the greatest restrictions on livestock grazing, ORV use, and mineral activities. A number of livestock operators would be significantly impacted, and their social well-being affected. Several operators may be forced to seek a second job, and operators who are forced to sell their operations would have to change their way of life entirely. For those who do not have the training and skills to enter the job market, the impact on their social well-being would be significant. The mineral restrictions would not affect ongoing operations; however, the restrictions on mineral activities would have a significant impact on future developments. Hunters, primitive nonmotorized recreation users, commercial outfitters, and retail service industries catering to tourism would be the primary beneficiaries under Subalternative D.

There would be some loss to the mining sector and some gain to the recreation sector, with an accompanying change in type of employment, wage scales, and associated lifestyle values. These shifts would be relatively small, and there would be little noticeable effect on the existing social environment.

In general, local attitudes toward BLM would worsen because of the increased restrictions, less local resource use and development that

Page 4-78 (Cont'd.) would be allowed, and the perceived significant negative impacts on the local economy under this alternative. These attitudes would vary, however, by those individuals and groups who would gain and those who would lose under this alternative. Refer to the Economic Impacts section for identification of losers and gainers under this subalternative.

APPENDIXES

Page A-9 Appendix D in the draft is expanded to include several more allotments. The entire appendix is not reprinted; the additions are printed later in this chapter.

Page A-31 Cisco Mesa allotment, line 1, 3,180 Sheep is changed to 2,650 Sheep.

Page A-45 Appendix K in the draft is expanded to include the breakdown by allotment of livestock management actions proposed under Subalternative B, Graze at Preference and Subalternative D, Reduced Livestock Grazing. The entire appendix is not reprinted; the additions are printed later in this chapter.

Page A-47 Line 15, Cisco Springs Wash allotment: The future AUMs for sheep and cattle under Alternatives B, C, and D are changed to read as follows:

Alternative B		Alternative C		Alternative D	
Sheep	823	Sheep	755	Sheep	756
Cattle	939	Cattle	867	Cattle	868

Page A-56 The following is added after footnote c:

[d]Increase in AUMs includes the prescribed fire management action (B-29, C-39).

Page A-67 After Item No. 1, the following is added:

1a. T. 17 S., R. 21 E., Sec. 23: SW 1/4 160 acres.

Page A-75 Appendix R is revised and reprinted in this chapter.

GLOSSARY

Page G-3 After the definition of Ecological condition, the following is added:

Where ratings are based on three classes.

low = 0 to 33 percent of climax;
medium = 34 to 66 percent of climax; and
high = 67 to 100 percent of climax.

Where ratings are based on four classes,

low = 0 to 25 percent of climax;
medium = 26 to 50 percent of climax;
high = 51 to 75 percent of climax; and
climax = 76 to 100 percent of climax.

Page G-6 After the definition of Linear programming, the following is added:

Livestock manipulation techniques. Methods of controlling livestock use; may include development of new waters, controlling use periods of water sources, fencing, herding, other measures, or a combination of these measures.

Page G-10 After the definition of Utilities, the following is added:

Vegetation manipulation. See Land treatment.

LIST OF REFERENCES

Page R-2 After BLM, 1981a, the following is added:

BLM. 1981b. Recreational Vehicle Management Plan Recommendations. U.S. Department of the Interior, Bureau of Land Management. Moab, Utah. (Unpublished; available for public review at the Grand Resource Area office.)

Page R-1 The following are added to the List of References:

BLM. 1981d. A Cultural Resource Summary of the East Central Portion of the Moab District, 1980. Pierson, Lloyd M. Cultural Resource Series No. 10. U.S. Departmenr of the Interior. Bureau of Land Management, Utah State Office. Salt Lake City.

CEQ. 1981. "Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations." March 23, 1981. Federal Register Vol. 46 No. 55, page 18026. Council on Environmental Quality, Executive Office of the President.

DOE. 1982. Mineral-Resource Evaluation of Wilderness Study Areas Administered by the Bureau of Land Management, Moab District, Utah. Prepared by Science applications, Inc., Oak Ridge, Tennessee. Prepared for U.S. Department of Energy and U.S. Department of the Interior, Bureau of Land Management. Salt Lake City, Utah.

On the pages that follow, two appendixes from the draft document are expanded to show information used in analysis of the Graze at Preference and Reduced Livestock Grazing subalternatives.

The additions to Appendix D include information on existing runoff, sediment, and salt yields from allotments where soils and water quality would be affected by livestock management actions under the subalternatives.

Similarly, the additions to Appendix K show the allotments on which specific livestock management actions would be applied under the Graze at Preference and Reduced Livestock Grazing subalternatives, and the appropriate initial and future animal unit months (AUMs) of forage for livestock and wildlife on each allotment.

Appendix R, Oil and Gas Category Stipulations, has been revised to reflect the management changes resulting from the recent merger of BLM and the Minerals Management Service of the U. S. Geological Survey. The entire appendix is reprinted in this chapter. No changes have been made in the stipulations applied under any of the four leasing categories.

Existing Runoff, Sediment, and Salt Yields on Allotments Affected Under the Subalternatives

Allotment Name	Vegetative Type	Annual precip. (inches)	Percent Runoff Factor	Concentration of salt in Runoff TDS (Mg/l)	Sediment yield (tons/acre)	Percent salt in Sediment	TOTAL Runoff (ac/ft)	TOTAL Sediment (Tons)	SALT YIELD (TONS) Runoff	Sed.	Total
Agate	Salt desert shrub (Mancos)	7	1.4	2,000	2.3	3.0	42	11,967	114	359	473
	Salt desert shrub	7	1.4	1,000	0.75	1.0	42	3,902	114	39	153
	TOTAL						84	15,869	228	398	626
Athena	Salt desert shrub (Mancos)	7	1.4	2,000	2.3	3.0	185	52,226	503	1,567	2,070
	Salt desert shrub	7	1.4	1,000	0.75	1.0	91	8,388	124	84	208
	TOTAL						276	60,614	627	1,651	2,278
Big Flat - Ten Mile	Salt desert shrub (Mancos)	7	1.4	2,000	2.3	3.0	448	126,107	1,219	3,783	5,002
	Salt desert shrub	7	1.4	1,000	0.75	1.0	586	53,776	797	538	1,335
	Big sagebrush	12	3.5	600	1.0	0.5	74	2,109	60	11	71
	Pinyon Juniper	12	2.8	600	1.0	0.5	1,063	37,959	867	190	1,057
	TOTAL						2,171	219,951	2,943	4,522	7,465
Crescent Canyon	Salt desert shrub (Mancos)	7	1.4	2,000	2.3	3.0	50	14,175	136	425	561
	Salt desert shrub	7	1.4	1,000	0.75	1.0	43	3,962	58	40	88
	Big Sagebrush	12	3.5	600	1.0	0.5	39	1,100	32	6	38
	Pinyon juniper	12	2.8	600	1.0	0.5	259	9,245	211	46	257
	TOTAL						391	29,436	437	517	954

Crescent Junction	Salt desert shrub (Mancos)	7	1.4	2,000	2.3	3.0	72	20,293	196	609	805
	Salt desert shrub	7	1.4	1,000	0.75	1.0	18	1,697	24	17	41
	Rock										
	TOTAL						90	21,990	220	626	846
Elgin	Salt desert shrub (Mancos)	7	1.4	2,000	2.3	3.0	16	4,549	43	136	846
	Salt desert shrub	7	1.4	1,000	0.75	1.0	7	606	10	6	16
	TOTAL						23	5,155	53	142	195
Horse Canyon	Salt desert shrub (Mancos)	7	1.4	2,000	2.3	3.0	132	37,200	359	1,116	1,475
	Salt desert shrub	7	1.4	1,000	0.75	1.0	65	5,924	88	59	147
	Pinyon Juniper	12	2.8	600	1.0	0.5	358	12,789	292	64	356
	Rock										
	TOTAL						555	55,913	739	1,239	1,978

continued

Allotment Name	Vegetative Type	Annual precip. (inches)	Percent Runoff Factor	Concentration of salt in Runoff TDS (Mg/l)	Sediment yield (tons/acre)	Percent salt in Sediment	TOTAL Runoff (ac/ft)	TOTAL Sediment (Tons)	SALT YIELD (TONS) Runoff	Sed.	Total
Nash Wash	Salt desert shrub (Mancos)	7	1.4	2,000	2.3	3.0	127	35,901	345	1,077	1,422
	Salt desert shrub	7	1.4	1,000	0.75	1.0	115	10,565	156	106	262
	Big Sagebrush	12	3.5	600	1.0	0.5	80	2,284	65	11	76
	Pinyon Juniper	12	2.8	600	1.0	0.5	160	5,711	130	29	159
	Douglas Fir	17	17.0	100	1.2	0.1	91	457	12	---	12
	TOTAL						573	54,918	708	1,223	1,931
Ruby Ranch	Salt desert shrub (Mancos)	7	1.4	2,000	2.3	3.0	27	7,631	73	229	302
	Salt desert shrub	7	1.4	1,000	0.75	1.0	126	11,535	171	115	286
	Rock										
	TOTAL						153	19,166	244	344	588
Thompson Canyon	Big Sagebrush	12	3.5	600	1.0	0.5	26	737	21	4	25
	Pinyon Juniper	12	2.8	600	1.0	0.5	223	7,982	182	40	222
	Douglas Fir	17	17.0	100	1.2	0.1	562	2,800	76	3	79
	Rock										
	TOTAL						811	11,519	279	47	326

Breakdown by Allotment of Livestock Management Actions; Initial and Future Animal Unit Months Under the Subalternatives

3-35

Allot. Number	Allotment Name	Subalternative B Graze at Preference: Initial AUMs	Subalternative B: Management Actions	Subalternative B: Future AUMs	Subalternative D Reduced Livestock Grazing: Initial AUMs	Subalternative D: Management Actions	Subalternative D: Future AUMs
5821	Adobe Mesa[d]	C= 176	Present Management	416	C= 152	Present Management	152
		D= 19		79	D= 19		19
		E= 53		113	E= 53		53
5853	Agate[e]	S= 623	Livestock Manipulation techniques	620	S= 351	Eliminate Grazing	0
		D= 19		19	D= 19		19
5861	Arth's Pasture[a]	C= 657	Present Management	657	C= 524	Present Management	514
		D= 19		19	D= 19		19
		B= 32		32	B= 32		32
5809	Athena[e]	C= 1,135	Present Management	1,133	C= 452	Eliminate Grazing	0
		D= 31		31	D= 31		31
5804	Barley Flat-Ronzio	S= 2,394	Livestock Manipulation techniques	2,394	S= 873	Change season of use (11-1 to 3-31)	608
		D= 67		67	D= 67		67
		E= 13		13	E= 13		13
						Restrict grazing on saline soils (22,121 acres)	
5808	Bar X	S= 2,241	Present Management	2,509	S= 407	Land Treatment	539
		D= 18		18	D= 18	(3,200 acres,	18
		E= 5	Land treatment	5	E= 5	plowing)	5
		A= 50	(3,200 acres, plowing)	182	A= 50		318
						Change season of use 10-15 to 3-15	

continued

Allot. Number	Allotment Name	Subalternative B Graze at Preference: Initial AUMs	Management Actions	Future AUMs	Subalternative D Reduced Livestock Grazing: Initial AUMs	Management Actions	Future AUMs
5864	Between the Creeks	C= 221 D= 21	Present Management	221 21	C= 88 D= 21	Eliminate Grazing	0 109
5827	Big Flat-Ten Mile[a]	S= 4,634 C= 5,500 D= 166 B= 43	Present Management	4,399 5,265 166 43	S= 2,930 C= 5,500 D= 166 B= 43	Present Management Restrict grazing on saline soils (55,731 acres)	2,484 5,054 166 43
5872	Big Triangle	C= 127 D= 194	Present Management	127 194	C= 127 D= 194	Present Management	127 194
5817	Blue Hill[e]	C= 2,700 D= 314 E= 132	Present Management Land treatment (320 acres chaining; 980 acres drill seeding) Maintain land treatments (2,883 acres chaining)	2,777 341 159	C= 1,842 D= 314 E= 132	Present Management Land Treatment (320 acres chaining; 980 acres drill seeding) Maintain land treatments 2,883 acres chaining)	1,896 368 187
5815	Bogart[e]	C= 209 D= 397 E= 310	Present Management	229 397 310	C= 208 D= 397 E= 310	Change season of use 6-15 to 10-15	208 397 310

5863	Buckhorn[b,c,d]	S= 2,994 C= 2,743 D= 1,904 E= 263	Present Management	3,315 3,064 2,062 421	S= 1,497 C= 2,743 D= 1,904 E= 263	Present Management Land treatment (2,140 acres chaining; 1,715 acres drill seeding) Maintain land treatments (2,470 acres chaining) Change class of livestock, sheep to cattle	0 4,402 2,173 532
5810	Cisco Mesa[e]	S= 3,180 D= 500 A= 13	Livestock Manipulation techniques	3,170 500 13	S= 2,267 D= 500 A= 13	Eliminate Grazing	0 500 13
5805	Cisco Srings Wash[e]	S= 1,416 C= 1,147 D= 79 A= 13	Livestock manipulation techniques	822 940 79 13	S= 826 C= 943 D= 79 A= 13	Eliminate Grazing	0 0 79 13
5865	Coal Canyon	C= 401 D= 6	Present Management	401 6	C= 159 D= 6	Present Management	159 6

continued

Allot. Number	Allotment Name	Subalternative B Graze at Preference: Initial AUMs	Management Actions	Future AUMs	Subalternative D Reduced Livestock Grazing: Initial AUMs	Management Actions	Future AUMs
5862	Corral Wash	S= 3,300	Livestock Manipu-	3,860	S= 1,406	Land treatment,	1,829
		D= 132	lation techniques	132	D= 132	(4,480 acres plowing)	132
		E= 3		3	E= 3		3
		A= 18	Land treatment, (4,480 acres plowing)	18	A= 18		18
						Change season of use 10-15 to 3-15 Restrict grazing on saline soils (8,240 acres)	
5816	Cottonwood[b,d]	C= 900	Present Management	958	C= 450	Eliminate Grazing	0
		D= 154		168	D= 154		379
		E= 132		146	E= 132		357
5856	Crescent Canyon	S= 998	Present Management	998	S= 811	Present Management	539
		D= 34		34	D= 34		34
		E= 13		13	E= 13	Restrict grazing on saline soils (7,990 acres)	13
5826	Crescent Junction	S= 208	Livestock manipu-	208	S= 173	Eliminate Grazing	0
		D= 10	lation techniques	10	D= 10		10
5842	Diamond[d]	C= 588	Present Management	614	C= 390	Eliminate Grazing	0
		D= 102		109	D= 102	Land treatment (90 acres	308
		E= 79	Land treatment (90 acres drill seeding)	85	E= 79	drill seeding)	278

5386	East Coyote	C= 910 D= 29	Present Management Maintain land treatments (3,023 acres chaining; 3,279 acres plowing)	910 29	C= 884 D= 29	Present Management Maintain land treatments (3,023 acres chaining; 3,279 acres plowing)	884 29
5838	Elgin[e]	C= 48 D= 17	Present Management	24 17	C= 48 D= 17	Eliminate Grazing	0 17
5874	Floy Canyon[d]	C= 750 D= 78 E= 116	Present Management	799 90 128	C= 255 D= 78 E= 116	Eliminate Grazing	0 205 243
5801	Floy Creek[e]	S= 1,208 D= 40	Present Management	1,208 40	S= 1,208 D= 40	Present Management Restrict grazing on saline soils (9,751 acres)	947 40
5851	Granite Creek	C= 76 D= 71 E= 13	Present Management	76 71 13	C= 39 D= 71 E= 13	Eliminate grazing	0 104 19
5803	Green River Flats[e]	S= 9 C= 64 D= 20	Present Management	8 55 20	S= 9 C= 32 D= 20	Present Management	7 24 20

continued

Allot. Number	Allotment Name	Subalternative B Graze at Preference: Initial AUMs	Management Actions	Future AUMs	Subalternative D Reduced Livestock Grazing: Initial AUMs	Management Actions	Future AUMs
5825	Harley Dome[e]	S= 1,470 D= 53 A= 56 B= 4	Livestock manipulation techniques	1,460 53 56 4	S= 861 D= 53 A= 56 B= 4	Change season of use 11-15 to 3-15 Restrict grazing on saline soils (20,608 acres)	399 53 56 4
5389	Hatch Point[d,e]	S= 2,877 C= 8,436 D= 350 E= 92 A= 73 B= 21	Livestock manipulation techniques Land treatment (4,430 acres chaining; 1,280 acres plowing; 1,920 acres drill seeding) Maintain land treatments (2,903 acres chaining; 2,961 acres plowing; 1,025 acres spraying)	3,281 8,840 350 92 477 21	S= 2,877 C= 7,490 D= 350 E= 92 A= 73 B= 21	Livestock manipulation techniques Land treatment (4,430 acres chaining; 1,280 acres plowing; 1,920 acres drill seeding) Maintain land treatments (2,903 acres chaining; 1,205 acres spraying) Change class; sheep to cattle	0 10,685 350 92 706 21
5812	Highlands[b,e]	S= 1,200 D= 17	Livestock manipulation techniques Land treatment (3,560 acres chaining)	1,604 52	S= 600 D= 17	Land Treatment (3,560 acres chaining) Change season of use 10-15 to 3-31 Restrict grazing on saline soils (5,900 acres)	1,004 52

5877	Horse Canyon	C= 1,008 D= 77	Livestock manipulation techniques	1,008 77	S= 410 D= 77	Present Management Restrict grazing on saline soils (24,769 acres)	4 77
5850	Hotel Mesa	C= 172 D= 6	Present Management	172 6	C= 129 D= 6	Present Management	129 6
5818	Ida Gulch	C= 111 D= 19	Present Managemment	111 19	C= 84 D= 19	Present Management	84 19
5847	Kane Springs	C= 300 D= 17 B= 64	Present Management	300 17 64	C= 287 D= 17 B= 64	Eliminate grazing	0 17 351
5388	Lisbon[d]	C= 8,687 D= 656 E= 132 A= 6	Livestock Manipulation techniques Maintain land treatment (7,568 acres chaining; 12,126 acres acres plowing) Land treatment (14,600 acres chaining; 8,320 acres plowing)	10,740 1,668 132 6	C= 7,758 D= 656 E= 132 A= 6	Livestock manipulation techniques Maintain land treatment (7,560 acres chaining; 12,126 acres plowing) Land treatment (14,600 acres chaining, 8,320 acres plowing)	8,702 2,577 132 6

continued

Allot. Number	Allotment Name	Subalternative B Graze at Preference: Initial AUMs	Management Actions	Future AUMs	Subalternative D Reduced Livestock Grazing: Initial AUMs	Management Actions	Future AUMs
5883	Little Hole[d]	S= 990 D= 12 B= 21	Present Management	1,293 12 21	S= 642 D= 12 B= 21	Eliminate Grazing	0 12 663
5837	Lone Cone	C= 210 D= 16	Present Management	210 16	C= 210 D= 16	Present Management	120 16
5387	Lower Lisbon	C= 790 D= 27	Present Management Land treatment (350 acres chaining; 200 acres plowing; 1,600 acres drill seeding) Maintain land treatments (1,111 acres chaining; 2,788 acres plowing)	970 116	C= 787 D= 27	Present Management Land treatment (350 acres chaining; 200 acres plowing; 1,600 acres drill seeding) Maintain land treatments (1,111 acres chaining; 2,788 acres plowing)	876 207
5879	Main Canyon[d]	C= 450 D= 72 E= 26	Present Management	533 93 47	C= 210 D= 72 E= 26	Present Management	210 72 26
5871	Middle Canyon[d]	C= 500 D= 262 E= 132	Present Management	584 283 153	C= 264 D= 262 E= 132	Present Management	264 262 132

5844	Mill Creek	C= 138 D= 28 E= 13	Present Management	138 28 13	C= 48 D= 28 E= 13	Eliminate Grazing	0 76 13
5852	Mineral Point	C= 320 D= 10 B= 64	Livestock manipulation techniques	320 10 64	C= 162 D= 10 B= 64	Eliminate Grazing	0 10 226
5811	Monument Wash	S= 1,915 S= 2,160 D= 27	Livestock Manipulation techniques Land treatments (640 acres chaining)	1,941 2,186 54	S= 958 S= 1,397 D= 27	Land treatments (640 acres chaining) Change season of use 10-1 to 2-15 Restrict grazing on saline solid (29,490 acres)	765 1,203 81
5814	Nash Wash	C= 2,994 D= 413	Livestock manipulation techniques	2,994 413	C= 1,978 D= 413	Livestock manipulation techniques Restrict grazing on saline soils (30,138 acres)	1,170 413
5819	North River	C= 200 D= 10	Present Management	200 10	C= 166 D= 10	Eliminate Grazing	0 176

continued

Allot. Number	Allotment Name	Subalternative B Graze at Preference: Initial AUMs	Management Actions	Future AUMs	Subalternative D Reduced Livestock Grazing: Initial AUMs	Management Actions	Future AUMs
5860	North Sand Flats	C= 798 D= 53 E= 5	Present Management	798 53 5	C= 240 D= 53 E= 5	Eliminate Grazing	0 293 5
5822	Pipeline	S= 1,000 D= 29 A= 19	Livestock manipulation techniques	1,000 29 19	S= 797 D= 29 A= 19	Eliminate Grazing	0 29 19
5869	Potash[e]	C= 351 D= 21 B= 161	Present Management	344 21 161	C= 212 D= 21 B= 161	Eliminate Grazing	0 21 373
5820	Professor Valley[e]	C= 500 D= 126 E= 39	Livestock Manipulation techniques Maintain land treatments (1,247 acres chaining)	500 126 39	C= 424 D= 126 E= 39	Livestock Manipulation techniques Maintain land treatments (1,247 acres chaining)	422 126 39
5802	Rattlesnake[e] (Grand County)	S= 3,853 C= 90 D= 72 E= 239 B= 32	Present Management	3,852 90 72 239 32	S= 344 C= 90 D= 72 E= 239 B= 32	Present Management	344 90 72 239 32

5385	Rattlesnake (San Juan Co.)	C= 210 D= 9	Present Management	210 9	C= 210 D= 9	Present Management	210 9
			Maintain land treatments (1,753 acres plowing)			Maintain land treatments (1,753 acres plowing)	
5876	River	C= 11 D= 2	Present Management	11 2	C= 11 D= 2	Present Management	11 2
5823	Ruby Ranch	C= 665 D= 21	Present Management	665 21	C= 561 D= 21	Present Management	0 21
						Restrict grazing on saline soils (19,890 acres)	
5845	San Arroyo	S= 4,255 D= 101 E= 11 A= 63	Livestock Manipulation techniques	5,220 101 11	S= 2,180 D= 101 E= 11	Land treatments (11,520 acres plowing)	2,253 101 11
			Land treatment (11,520 acres plowing)	538	A= 63	Change season of use 10-15 to 3-15	1,028
						Restrict grazing on saline soils (19,683 acres)	
5849	Scarf Mesa	C= 48 D= 65 E= 39	Present Management	48 65 39	C= 48 D= 65 E= 39	Present Management	48 65 39

continued

Allot. Number	Allotment Name	Subalternative B Graze at Preference: Initial AUMs	Management Actions	Future AUMs	Subalternative D Reduced Livestock Grazing: Initial AUMs	Management Actions	Future AUMs
5836	Showerbath Springs[d]	C= 601	Present Management	622	C= 480	Eliminate Grazing	0
		D= 230		236	D= 230		470
		E= 206		212	E= 206		445
5813	South Sand Flats[a,c,e]	C= 592	Present Management	587	C= 383	Eliminate Grazing	0
		D= 76		76	D= 76		267
		E= 11		11	E= 11		202
5846	Spring Canyon[b] Bottom	C= 200	Present Management	200	C= 100	Eliminate Grazing	0
		D= 36		36	D= 36		36
		B= 64		64	B= 64		164
5843	Steamboat Mesa	C= 932	Livestock manipulation techniques	1,961	S= 897	Livestock Manipulation techniques	453
		D= 192		192	D= 192		192
		E= 79		79	E= 79		79
			Maintain land treatments (1,647 acres chaining)			Maintain land treatments (1,647 acres chaining)	
5857	Sulphur Canyon	S= 1,961	Livestock manipulation techniques	1,961	S= 897	Change season of use 11-1 to 3-31	638
		D= 47		47	D= 47		47
		A= 25		25	A= 25		25
						Restrict grazing on saline soils (12,934 acres)	

5882	Taylor	C= 8,320 D= 296 E= 5	Present Management Land treatment (6,120 acres chaining) Maintain land treatments (2,914 acres chaining; 466 acres plowing)	8,833 546 7	C= 3,744 D= 296 E= 5	Present Management Land treatment (6,120 acres chaining) Restrict grazing on saline soils (18,193 acres) Maintain land treatments (2,913 acres chaining; 466 acres plowing)	3,716 808 7
5824	Ten Mile Point	C= 1,833 D= 35 B= 47	Livestock Manipulation techniques	1,833 35 47	C= 1,663 D= 35 B= 47	Eliminate Grazing	0 35 1,710
5873	Thompson Canyon	C= 500 D= 41 E= 39	Present Management	500 41 39	C= 379 D= 41 E= 39	Present Management Restrict grazing on saline soils (500 acres)	364 41 39
5878	Tusher Wash	C= 944 D= 23	Present Management	944 23	C= 257 D= 23	Present Management	257 23
5830	Whipsaw Flat	S= 4,497 D= 27	Livestock manipulation techniques	4,497 27	S= 2,932 D= 27	Eliminate Grazing	0 27

continued

Allot. Number	Allotment Name	Subalternative B Graze at Preference: Initial AUMs	Management Actions	Future AUMs	Subalternative D Reduced Livestock Grazing: Initial AUMs	Management Actions	Future AUMs
5875	Willow Flats[e]	C= 153 D= 17	Livestock Manipulation techniques	143 17	C= 153 D= 17	Livestock Manipulation techniques	143 17
5384	Windwhistle	C= 632 D= 158 A= 25	Present Management Maintain land treatments (1,825 acres plowing)	632 158 25	C= 608 D= 158 A= 25	Present Management Maintain land treatments (1,825 acres plowing)	608 158 25
5854	Winter Camp	S= 266 D= 10	Present Management Land treatment (640 acres plowing)	319 37	S= 248 D= 10	Present Management Land treatment (640 acres plowing)	275 63

NOTE: S = Sheep, C = Cattle, B = Bighorn Sheep, E = Elk, A = Antelope, D= Deer.

[a] Average licensed use shown is the average use that the current permittee has taken.

[b] Since licensed use has been complete nonuse, allowable use would initially be 50 percent of active preference.

[c] New operators' initial AUMs would be the same as active preference.

[d] Increase in AUMs include the prescribed fire management action (B-29).

[e] All or part of decrease is due to land disposal (Management Action B-9 or D-23) and/or construction of evaporation pond (Management Action D-3).

REVISED APPENDIX R

Oil and Gas Category Stipulations

Category 1

The following standard stipulations apply to oil and gas activities in designated Category 1 areas. These appear on all oil and gas leases issued and also apply as standard stipulations to leases in Category 2 and 3 areas.

1. Notwithstanding any provision of this lease to the contrary, any drilling, construction, or other operation on the leased lands that will disturb the surface thereof or otherwise affect the environment, hereinafter called "surface disturbing operation," conducted by lessee shall be subject, as set forth in this stipulation, to prior approval of such operation by the District Manager of the Bureau of Land Management (BLM) in consultation with appropriate surface management agency and to such reasonable conditions, not inconsistent with the purposes for which this lease is issued, as the District Manager may require to protect the surface of the leased lands and the environment.

2. Prior to entry upon the land or the disturbance of the surface thereof for drilling or other purposes, lessee shall submit for approval two (2) copies of a map and explanation of the nature of the anticipated activity and surface disturbance to the BLM District Manager and will also furnish the appropriate surface management agency, named above, with a copy of such map and explanation.

   An environmental analysis will be made by the BLM in consultation with the appropriate surface management agency for the purpose of assuring proper protection of the surface, the natural resources, the environment, existing improvements, and for assuring timely reclamation of disturbed lands.

3. Upon completion of said environmental analysis, the District Manager shall notify lessee of the conditions, if any, to which the proposed surface disturbing operations will be subject.

   Said conditions may relate to any of the following:

   (a) Location of drilling or other exploratory or developmental operations or the manner in which they are to be conducted;

   (b) Types of vehicles that may be used and areas in which they may be used; and

   (c) Manner or location in which improvements such as roads, buildings, pipelines, or other improvements are to be constructed.

The following are special stipulations for the protection of cultural resources. They also apply to Category 2 leases.

The Federal surface management agency is responsible for assuring that the leased lands are examined to determine if cultural resources are present and to specify mitigation measures. Prior to undertaking any surface disturbing activities on the lands covered by this lease, the lessee or operator, unless notified to the contrary by the authorized officer of the surface management agency or BLM, as appropriate, shall:

1. Contact the appropriate BLM office on lands managed by BLM, or the appropriate surface management agency on lands where the surface is administered by such agency, to determine if a site-specific cultural resource inventory is required. If a survey is required, then

2. Engage the services of a qualified cultural resource specialist acceptable to the Federal surface management agency to conduct an intensive inventory for evidence of cultural resource values;

3. Submit a report acceptable to the authorized officer of the surface management agency.

4. Implement mitigation measures required by the surface management agency to preserve or avoid destruction of cultural resource values. Mitigation may include relocation of proposed facilities, testing and salvage, or other protective measures. Where impacts cannot be mitigated to the satisfaction of the surface management agency, surface occupancy on that area must be prohibited.

The lessee or operator shall immediately bring to the attention of the BLM or the authorized officer of the Federal surface management agency any cultural resources or any other object of scientific interest discovered as a result of surface operations under this lease, and not disturb such discoveries until directed to proceed by the BLM.

Category 2

The following is a list of stipulations that may be applied in whole or in part to individual leases for the protection of specific resources in specific locations.

1. In order to minimize watershed damage, exploration, drilling, and other development activity will be allowed only during the period from April 30 to November 1. This limitation does not apply to maintenance and operation of producing wells. Exceptions to this limitation in any year may be specifically authorized in writing by the BLM District Manager, with the concurrence of the authorized officer of the Federal surface management agency.

2. The lessee is informed that the floodplain portions of the lease area require special attention to prevent damage to surface resources and contamination to the Colorado River system. Any surface use within such areas will be strictly controlled or restricted where not essential for operations. Appropriate modifications to imposed restrictions will be made for maintenance and operations of producing oil and gas wells.

3. Construction of access roads and drill pads on slopes in excess of 30 percent will require special design standards to minimize watershed damage. Drilling operations and any associated construction activities on slopes in excess of 50 percent may require directional drilling to prevent damage to the watershed. Exceptions to these limitations may be specifically authorized in writing by the District Manager with concurrence of the authorized officer of the Federal surface management agency.

4. In order to protect elk winter range, exploration, drilling, and other development activity will be allowed only from May 16 to October 31. This limitation does not apply to maintenance and operation of producing wells. Exceptions to this limitation in any year may be specifically authorized in writing by the District Manager with the concurrence of the authorized officer of the Federal surface management agency.

5. In order to protect deer winter range, exploration, drilling, and other development activity will be allowed only from May 16 to October 31. This limitation does not apply to maintenance and operation of producing wells. Exceptions to this limitation in any year may be specifically authorized in writing by the District Manager with the concurrence of the authorized officer of the Federal surface management agency.

6. In order to protect antelope fawning grounds, exploration, drilling, and other development activity will be allowed only from June 16 to May 14. This limitation does not apply to maintenance and operation of producing wells. Exceptions to this limitation in any year may be specifically authorized in writing by the District Manager with the concurrence of the authorized officer of the Federal surface management agency.

7. No occupancy or other surface disturbance will be allowed within 330 feet of the channel centerline of (Bitter Creek, Westwater Creek, Cottonwood Wash, Cisco Wash, Nash Wash, Sagers Wash, Thompson Wash, Grand Wash, Floy Wash, Salt Wash, Spring Canyon, Hell Roaring Canyon, Mineral Canyon, Bull Canyon, Dry Fork, Sevenmile Canyon, Springs Canyon, Pole Canyon, West Coyote Creek, East Coyote Creek, Castle Creek, Professor Creek, Onion Creek, Granite Creek, Ryan Creek, or Coates Creek). This distance may be modified when specifically approved in writing by the District Manager with the concurrence of the authorized officer of the Federal surface management agency.

8. No occupancy or other surface disturbance will be allowed within one-quarter mile of the channel centerline of the Colorado River. This distance may be modified when specifically approved in writing by the District Manager with the concurrence of the authorized officer of the Federal surface management agency.

9. The lessee is informed that the lease is within a sensitive, high use recreation area, and will require special attention to prevent undue damage to the scenic and recreational values. Measures such as natural or artificial screening, painting of all production facilities to blend with the landscape, special rehabilitation requirements, or other similar practices will be required as necessary by the District Manager with the concurrence of the authorized officer of the Federal surface management agency.

Category 3

The following stipulation applies to all leases in Category 3 areas:

> No occupancy or other activity on the surface of (legal subdivision) is allowed under this lease.

Category 4

No leases are issued in Category 4 areas.

CHAPTER 4

CONSULTATION AND COORDINATION

INTERAGENCY CONSULTATION

The Grand Resource Area (GRA) Resource Management Plan and Environmental Impact Statement (RMP/EIS) was prepared by GRA and Moab District staff specialists with expertise in watershed, range management, wildlife, lands, geology, recreation, wilderness, and economics. The list of preparers appears at the end of this chapter.

Writing of the RMP/EIS began in April 1982; however, a complex process over a 3-year period preceded the writing phase. This process included resource inventory, coordination with the public and other agencies, and establishment of goals and objectives. Consultation and coordination with agencies, organizations, and individuals occurred in a variety of ways throughout the preparation process. Public land users and other interested groups and individuals were notified through planning system updates in the form of public meetings.

During preparation of the RMP/EIS, the following Federal, State, county, and local agencies were contacted. An asterisk (*) indicates those agencies that commented on the draft.

FEDERAL GOVERNMENT

ADVISORY COUNCIL ON HISTORIC PRESERVATION

U.S. DEPARTMENT OF AGRICULTURE

* Forest Service (USFS)
Soil Conservation Service (SCS)

U.S. DEPARTMENT OF ENERGY

* U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)

U.S. DEPARTMENT OF THE INTERIOR

* Bureau of Indian Affairs
* Bureau of Reclamation
* Fish and Wildlife Service (FWS)
Geological Survey (USGS)
Minerals Management Service (MMS)
* National Park Service

STATE OF UTAH

A-95 Clearing House
Department of Agriculture
* Department of Health
* Department of Natural Resources
  * Division of State History (State Historic Preservation Officer)
  Division of Lands and Forestry
  Division of Oil, Gas, and Mining
  Division of Water Rights
  Division of Wildlife Resources (UDWR)

Utah State University Extension Service
State Planning Coordinator
State Land Board
Southeastern Utah Association of Governments
Environmental Coordination Committee

COUNTIES, CITIES, AND TOWNS

City of Moab
Grand County Commission
Grand County Economic Development Commission
Grand County Planning Commission
Grand County Travel Council
San Juan County Commission
San Juan County Planning Commission
San Juan County Travel Council
Southeastern Utah Association of Governments

PUBLIC INVOLVEMENT

Public meetings were initiated in 1979 to gather additional information related to the issues and to examine possible new issues.

All livestock operators were contacted prior to and during the preparation of the draft. Prior to implementation of this plan, close coordination and cooperation with the affected livestock operators and other affected interests will be necessary.

Informal consultation took place with FWS regarding threatened and endangered species in the GRA. The UDWR was also involved in periodic consultation for needed expertise.

Many local individuals were interviewed, and their ideas, suggestions, and concerns were considered in the plan as well.

Informing and involving the public included notices in the Federal Register and news releases which were sent to broadcasting stations and newspapers. These releases ranged in subject matter from general announcements at the beginning of the planning process to dates and places of specific meetings and requests for public comments. These public participation efforts are listed chronologically below.

August 14, 1979	A news release to area media announced the start of the planning effort.
August 23 through August 31, 1979	Letters were sent to key user groups announcing the start of planning and requesting comments on problems and potential planning issues. These groups were the GRA grazing permittees, commercial river outfitters, the Moab Chamber of Commerce, Utah State Land Board, Southeastern Utah Association of Governments, energy companies having rights-of-way in the GRA, Utah Power and Light, and Continental Telephone Company.
September 7, 1979	A Federal Register notice announced initiation of the Pre-planning Analysis.
February 4, 1980	A Federal Register notice announced revision of the multiple land use plan for the GRA.
February 28, 1980	A news release announced a public workshop to be held March 17 for the purpose of identifying problems and potential planning issues.
March 17, 1980	The public workshop was attended by 12 persons. Many concerns raised at the meeting were not appropriate as planning issues because they could be handled administratively. Potential issues discussed were delineated on a map, and the comments were later considered and analyzed by the RMP team. The following concerns were discussed: legal mandates for multiple use and sustained yield; forage resources; land treatments; off-road vehicle use; utility corridors; land withdrawals, disposal, trespass actions, and rights-of-way; minerals; nuclear waste and tailings; forestry and woodlands; watershed and water; recreation; fire management; and wilderness.
May 7, 1980	A planning workshop for 15 local officials was attended by three persons. No new concerns appropriate for the planning process were raised.
August 14, 1980	The Grand Resource Area Manager briefly summarized the planning effort at a meeting of the Moab District Multiple Use Advisory Council. The Council's Land and Water Use Evaluation committee undertook a study of the issues and planning criteria that had been developed for the RMP.
October 3, 1980	After a formal presentation on the GRA planning effort, the Multiple Use Advisory Council accepted the recommendation of the Land and Water Use Evaluation committee that the Council support the GRA planning effort as developed to date.

October 29, 1980	A brochure explaining the planning issues and criteria was sent to 300 individuals and groups who had indicated interest in land use planning information. This brochure contained a public comment form, and 18 of these were returned. These comments were analyzed by the RMP team.
January 8, 1981	The Advisory Council's Land and Water Use Evaluation committee discussed the RMP planning criteria and subsequently reported to the Advisory Council on January 16. No changes in the criteria were suggested.
May 27, 1982	A Federal Register notice announced the availability of the revised planning issues and criteria and invited public comments on those revisions and participation in the scoping of the Management Situation Analysis (MSA). It also announced two public meetings for this purpose to be held on June 30.
June 4, 1982	A news release to local media announced a public workshop to be held June 30 to discuss the future management of the GRA. It summarized the issues and invited comments.
	Letters were sent to approximately 350 persons and groups who had expressed interest in land use planning information, announcing the availability of a brochure describing the revised planning issues and criteria. Copies of the brochure and letters announcing the June 30 public meeting were sent to all who requested copies and to key user groups and city, county, and State government agencies with land management responsibility.
June 30, 1982	A public meeting was held for the purpose of obtaining comments on the revised issues and criteria and on scoping the management situation analysis. This meeting was attended by 14 persons.
February 14, 1983	A Federal Register notice announced availability of the Draft RMP/EIS and provided addresses for obtaining copies and for submitting written comments. It stated that the public comment period would begin March 11 and end on June 10, 1983, and also announced an open house to be held April 21, 1983 for the purpose of receiving oral and written comments.
March 3, 1983	A Federal Register notice announced a shift in the public comment period to begin March 16 and end June 13, 1983.
April 12, 1983	A news release to local media announced the time and location of the open house to be held April 21, listed the planning issues, and confirmed the deadline for public comments to be considered in the proposed RMP and final EIS.
April 21, 1983	The open house was attended by 17 persons. Members of the team were available to answer questions and discuss concerns. Attendees were invited to submit written comments.

Efforts to maintain contact with and supply information to the various elements of the public were continued into the writing of the RMP/EIS. Such contacts were primarily oriented toward those individuals, groups, and agencies that would be directly concerned with the proposal, including stockmen, recreationists, wildlife concerns, mineral interests, the academic community, and the four Utah Congressional delegates. Representatives from many of the previously mentioned individuals, groups, and agencies were contacted for specific information. Comments on the development of the RMP/EIS have been received from the following interest groups:

American Mining Congress
AMOCO Production Company
Atlantic Richfield Company
Atlas Minerals
Bowers Oil and Gas Exploration, Inc.
Buttes Resources
Chevron U.S.A., Inc.
Conoco, Inc.
Dead Horse Point State Park
Energy Fuels
Fortune Oil Company
Four Corners Wilderness Workshop
GRA Livestock Operators
Gulf Oil Exploration and Prod. Co.
Humane Society of Utah
Husky Oil Company
Minerals Exploration Coalition
Moab District Grazing Advisory Board
Moab Ready Mix
National Parks Conservation Association
Natural Resources Defense Council
Noranda Exploration, Inc.
Northwest Pipeline Corporation
Outlaw River Expeditions
Phillips Uranium Corporation
Red Rock 4-Wheelers
Rio Algom Corporation
Rocky Mountain Oil and Gas Association
Shell Oil Company
Sierra Club, Utah Chapter
Slickrock Outdoor Society
Standard Oil Company of Indiana
Space River Rats
Tenneco Oil
Texas Gulf Sulphur, Inc.
Texas Oil and Gas Company
TXO Production Corporation
Union Carbide Corporation
Union 76
Utah Native Plant Society
Utah Power and Light Company
Utah Wilderness Association
Utah Wool Growers
Wexpro Company

Copies of this proposed RMP and final EIS will be sent to all who have commented; extra copies may be requested by contacting Colin P. Christensen, Area Manager, Bureau of Land Management, Grand Resource Area, P. O. Box M, Moab, Utah 84532 (801-259-8193).

CONSISTENCY REVIEW

During the preparation of the Draft RMP/EIS, consistency reviews were completed with UDWR, the State Resources Development Coordinating Committee, Ute Tribal Council Chairman (Fort Duchesne), the Grand County Commission, and the San Juan County Commission. Prior to approval of the proposed RMP, the State Director will submit the plan to the Governor of Utah and identify any known inconsistencies with State or local plans, policies or programs. The Governor will have 60 days in which to identify inconsistencies and provide recommendations in writing to the State Director. The consistency of the plan with the resource related plans and policies of other Federal Agencies, State and local government and Indian tribes will be evaluated in the future as part of the formal monitoring reviews of the plan.

RECORD OF DECISION

The Grand RMP will be approved no earlier than 30 days after publication of the proposed RMP and final EIS by the EPA in the Federal Register. The approval of the plan will be documented in a record of decision which will be available for public review. Approval will be withheld on any portion of the plan protested until final action has been completed on such protest.

PROTEST PROCEDURES

Any person who participated in the planning process and has an interest that is or may be adversely affected by approval of the proposed RMP may file a written protest with the Director of the BLM within 30 days of the date the EPA publishes the notice of receipt of the proposed RMP and final EIS in the Federal Register.

The protest shall contain the name, mailing address, telephone number, and interest of the person filing the protest; a statement of the issues being protested (raising only those issues that were submitted for the record during the planning process); a statement of the parts of the plan being protested; copies of all documents addressing the issues submitted during the planning process by the protesting party, or an indication of the date the issues were discussed for the record; and a concise statement explaining why the State Director's decision is believed to be wrong.

The Director shall render a prompt written decision on the protest, setting forth the reasons for the decision. The decision shall be sent to the protesting party by certified mail and shall be the final decision of the Department of the Interior.

COMMENT ANALYSIS

After publication of the draft, 39 written comments were received, of which 5 originated within the Moab District, 14 came from other parts of Utah, and 17 came from other states. Of the 39 written comments, 3 came from State government, 6 from other Federal agencies, 14 from industry, 5 from environmental and conservation groups, 4 from other types of groups, and 7 from individuals.

All letters were reviewed to determine whether they met the required criteria for response (i.e., discussion of the adequacy of the draft document). Substantive comments that presented new data or questioned facts or analyses were fully evaluated and given responses which are printed later in this chapter.

Changes or additions to the draft arising from public comments are included in Chapter 3 of this Final RMP/EIS, Additions and Corrections to the Draft Document.

The letters received concerning the Draft RMP/EIS are reprinted in the following section. In three cases, not all of the material received was reprinted, as it did not pertain directly to the Draft RMP/EIS. Explanatory notations are included with the responses to these letters.

Each separate comment pertaining to the adequacy of the Draft RMP/EIS has been identified with a code number (i.e., 21-6). The portion of the code number to the left of the hyphen is the number of the letter, and that to the right of the hyphen is the number of the comment. The code number above should be read as Letter 21, comment 6. The BLM's responses follow each letter and are keyed to the code numbers.

LETTER 1

SCOTT M. MATHESON
GOVERNOR

STATE OF UTAH
DEPARTMENT OF COMMUNITY AND
ECONOMIC DEVELOPMENT

Division of
State History
(Utah State Historical Society)

MELVIN T. SMITH, DIRECTOR
300 RIO GRANDE
SALT LAKE CITY, UTAH 84101-1182
TELEPHONE 801-533-5755

March 22, 1983

Colin P. Christensen
Area Manager
Bureau of Land Management
Grand Resource Area
P. O. Box M
Moab, Utah 84532

RE: Grand Resource Area Management Plan

Dear Mr. Christensen:

The Utah Preservation Office has received for consideration a copy of the draft memorandum of agreement for the Grand Resource Area Management Plan. After review of the statement, our office has the following comments that may be utilized by the Bureau of Land Management at their convenience.

The plan has no provisions for cultural resources beyond recording them when found in the course of other projects. This procedure is typical of requirements for cultural resource surveys before certain types of projects are permitted. It

1-1 would seem appropriate in a management plan such as this, that standards for survey and nomination strategies, which are federal responsibilities, should be explained as part of the management plan.

1-2 Also, consideration should be given to how the agency is going to carry out federally mandated projects under its own cultural resource requirements, the Advisory Council on Historic Preservation regulations, and other pertinent regulations pertaining to the 1966 Historic Preservation Act as amended.

We feel that the document is written in the style of an impact statement rather than a management plan, and that may be some of the source of confusion. But if it is to be called a plan, planning should be considered for cultural resources.

4-8

The above is provided on request as information or assistance. We make no regulatory requirement, since that responsibility rests with the federal agency official. However, if you have questions or need additional assistance, please let us know. Contact Jim Dykman at 533-7039.

Sincerely,

Melvin T. Smith
Director and
State Historic Preservation Officer

JLD:jr:F946/582lc

Response to Letter 1 from the Utah Division of State History, Melvin T. Smith, Director.

1-1 When the planning issues were being identified, it was determined that cultural resources within the GRA could be managed following normal BLM administrative procedures. Routine methods for protecting cultural resources from development are described on page 3-17 of the Draft RMP/EIS. Nominations to the National Register of Historic Places may be made at any time. Standards for survey and nomination and other actions are described in such documents as the Bureau Manual, the Code of Federal Regulations, and the Utah BLM's procedures for cultural resource professionals. As the BLM is required to follow this guidance, it was not included in the RMP.

1-2 Projects implemented as a result of RMP decisions will follow the procedures described on pages 2-64 and 3-17 of the Draft RMP/EIS.

LETTER 2

E. Fred Birdsall
Public Lands Coordinator

Conoco Inc.
565 17th Street
Denver, CO 80202
(303) 575 6122

March 29, 1983

Colin Christensen, Area Manager
BLM - Grand R.A.
P. O. Box M
Moab, Utah 84532

Dear Mr. Christensen:

The Grand RMP/DEIS Preferred Alternative recommends "drop" for the following WSAs, based on known oil and gas production plus fairly high mineral values, manageability problems, and adverse economic effects were it designated wilderness:

UT 060-100B	Flume Canyon
UT 060-100C	Spruce Canyon
UT 060-100C	Coal Canyon

I agree with your recommendation for the reasons cited.

Negro Bill (60-138) is recommended for an Outstanding Natural Area and I agree with that for your cited reasons.

2-1 I specifically and emphatically disagree with the recommendation to include Desolation Canyon (60-068A) as Wilderness. Just across the river, the Price River R.A. gives Desolation Canyon a top grade energy/minerals rating. In Price River, all or part of four federal oil and gas units exist, the area is almost entirely leased, it contains known geologic structures certified by the USGS, it has outstanding coal reserves, and actual current production from within the WSA. The NW-SE trending Uncompahgre Uplift crosses the river into the Desolation Canyon WSA of the Grand R.A., and the same geologic conditions can be projected southeast along the Uplift.

The GRA Desolation Canyon WSA is without question highly prospective oil country. Wilderness foreclosure would be irresponsible management. Non-designation would afford the opportunity for hydrocarbon development if and when the nation's natural circumstances so indicate. The rugged riverside topography already affords natural protection to the area, and the river itself is already protected by WHL guidelines. Wilderness designation is not therefore required for protection.

There are at least a couple dozen state or private sections in the GRA Desolation Canyon presenting unresolved manageability problems. Because of the unfortunate inclusion of Desolation Canyon in your preferred Alternative C, I cannot support that recommendation.

Alternative A appears to be a reasonable comprimise and the one for which I vote.

Yours very truly,

E. Fred Birdsall

jil
cc:
Debbie Rousek, RMOGA

Response to Letter 2 from Conoco, Inc., Denver, Colorado, E. Fred Birdsall, Public Lands Coordinator

2-1 The Desolation Canyon Wilderness Study Area (WSA) is shown as having hydrocarbon potential in Figure 1-12 in the Draft RMP/EIS. This potential was considered during the development of alternatives.

LETTER 3

con co

E. Fred Birdsall
Public Lands Coordinator

Conoco Inc.
555 17th Street
Denver, CO 80202
(303) 575-6123

March 29, 1983

Mr. Colin Christensen
Area Manager
BLM - Grand R. A.
P. O. Box M
Moab, Utah 84532

Dear Mr. Christensen:

I have received a copy of the Grand RMP/DEIS and I want to commend you and the BLM for the thorough effort that it represents. I have by separate cover sent you my comments on the DEIS for your consideration. The purpose of this letter is somewhat different.

As a member of a public lands action group in the Rocky Mountain Oil and Gas Association it is my assignment to review the BLM's EIS material from Utah and provide a synopsis to other RMOGA members highlighting what I believe to be pertinent considerations insofar as oil and gas are concerned. A sort of a book report to our membership in case any of them are interested and want to respond.

In my letter to RMOGA on the GRA DEIS, I noted the following:

> "Oil and gas production data make no allowance for future discoveries. The current production of 10 million MCF gas plus 50,000 BOPY appears to be projected as a constant, diminished only by the restrictions which would be imposed on current production by each alternative. Undiscovered petroleum production losses resulting from stipulations or withdrawals are not estimated or conjectured, making dollar tradeoff decisions impossible."

Upon careful re-reading of the GRA DEIS I see that you have in fact not only estimated the decrease in production but also (p. 4-77) translated that into state and county royalty losses resulting from decreased federal revenue sharing. Incidentally yours is the first DEIS I have read which makes this important translation.

It is possible that you may receive response from one or more who have accepted my error as fact and write you accordingly. I regret any confusion that may result.

Yours very truly,

E. Fred Birdsall

E. Fred Birdsall

jil

LETTER 4

Chevron U.S.A. Inc.
700 South Colorado Blvd., P. O. Box 599, Denver, CO 80201

March 31, 1983

Richard T. Hughes
Staff Analyst
Legislative and Regulatory Affairs

Draft RMP/EIS
Grand Resource Area

Mr. Colin Christensen
Bureau of Land Management
P.O. Box M
Moab, Utah 84532

Dear Mr. Christeosen:

Thank you for this opportunity to review and comment on the Draft RMP/EIS for the Grand Resource Area. The planniog analysis appears reasonably comprehensive, but in its treatment of oil and gas resources we do not believe the analysis supports a move from the current situation (Alternative A) to a more restrictive situation (Alternative C - Preferred). Our specific concerns about the treatment of oil and gas in the RMP/EIS are as follows:

4-1 1) As far as it goes, we do not quarrel with the accuracy of the assessment of oil and gas potential as displayed in Figure 5. While the areas indicated as having oil and gas potential are probably the most prospective, the display implies that other areas are not at all prospective. This is inaccurate. Virtually all of the Grand Resource Area is coosidered to have oil and gas potential and the display of potential would be more meaningful if it showed degrees of potential (high, medium, low) rather than potential or no potential.

4-2 2) The areas identified for more restrictive management under Alternative C closely coincide with the areas identified as having oil and gas potential in Figure 5. The decisions in favor of more restrictive management appear to have been based solely on surface values and without regard to oil and gas values. Because the degree of restriction is not tied to the oil and gas potential, it is difficult to determine what resource trade-off decisions have been made. The Draft RMP/EIS would more clearly demonstrate these trade-offs if minerals potential and access restrictions were displayed concurrently in some manner.

Again, thank you for the opportunity to participate in your planning process. We hope our comments are helpful.

Sincerely,

RTH/cgf

4-11

Response to Letter 4 from Chevron U.S.A., Inc., Denver, Colorado, Richard T. Hughes, Staff Analyst for Legislative and Regulatory Affairs

4-1 There is potential for hydrocarbon production in areas other than those shown in Figure 1-12 in the draft RMP/EIS. The areas shown on the map are based on geologic inferences and evidence from prospecting and/or production.

4-2 Oil and gas values and other resources were considered concurrently in the development of the alternatives. Values considered are shown on the issue maps in Chapter 1 of the draft.

LETTER 5

April 8, 1983

Mr. Colin P. Christensen
BLM Grand Resource Area
PO Box M
Moab, Utah 84532

RE: Grand Resource Management Plan

Dear Mr. Christensen;

5-1 I am deeply concerned with the treatment of cultural resources in the draft land use plan for the Grand Resource Area. Aoparently, comments from Mr. Lloyd Pierson, an archaeologist who is professionally respected in the area, regarding these resources were ignored.

As a Utahn who is concerned about the cultural resources of the state and as a professional archaeologist who recognizes the unique and important cultural resources in the Grand Resource Area, I am hopeful that these valuable resources will receive the attention to which they are entitled in the Grand Resource Management Plan.

Please send me a copy of the plan so that I may comment more specifically. Thank you very much.

Sincerely,

Diana Christensen
2834 South Holbrook
Bountiful, Utah 84010

Response to Letter 5 from Diana Christensen, Bountiful, Utah

5-1 Potential impacts on cultural resources are considered through the environmental analysis process for site-specific projects prior to implementation. If the survey of a site indicates the presence of cultural resources, management may (1) alter the project so that cultural resources are not impacted, (2) abandon the project, or (3) proceed with the project after salvaging the cultural resources present. Sites meeting the criteria for inclusion on the National Register of Historic Places may be nominated for such status outside of the RMP process. The BLM is mandated by law to protect cultural resources found upon the public land.

LETTER 6

United States Department of the Interior

FISH AND WILDLIFE SERVICE
AREA OFFICE, COLORADO-UTAH
5311 FEDERAL BUILDING
125 SOUTH STATE STREET
SALT LAKE CITY, UTAH 84138

IN REPLY REFER TO

April 7, 1983

MEMORANDUM

TO: District Manager
Bureau of Land Management
Moab, Utah

FROM: Field Supervisor, Ecological Services
U.S. Fish and Wildlife Service
Salt Lake City, Utah

SUBJECT: Grand Resource Area Management Plan Draft EIS

This memorandum is the U.S. Fish and Wildlife Service (FWS), response to the Grand Resource Area Management Plan draft EIS.

From the data presented in the management plan, it appears that four programs; lands, minerals, livestock grazing, and recreation present the greatest potential conflicts with wildlife resources in the Grand Resource Area (GRA). Some of the conflicts would be resolved by implementing Alternative C or D (Limited Protection or Protection Plans), while others are not resolvable given any of the alternatives listed.

Lands

6-1 None of the alternatives adequately address what the projected or proposed land sales would mean to wildlife using those tracts. Land use changes could have significant impacts on wildlife use at those areas.

Analyzing the impacts of land disposal actions on a case by case basis tends to minimize the significance of the lands program. Projects "Sold" or "Assets" could result in land use or management changes for several thousands of acres in the GRA that would significantly impact wildlife.

In other federal management programs (i.e. coal, oil shale, oil and gas leasing, grazing) an environmental analysis is made of the entire regional program as well as site-specific assessments of each individual action or project. Although an identified tract may not be leased, it is, nevertheless, considered in the regional assessment of the entire program. Similarly, lands have been identified for possible disposal or exchange. Even though every parcel may not be sold or exchanged, we believe they should be considered in a regional assessment.

A regional assessment of lands proposals would afford the public the opportunity to analyze the cumulative effects of the program rather than the relatively few impacts from a single land action.

Minerals

6-2 According to the maps in the management plan, most of the wildlife-mineral conflicts appear to be in the oil and gas production and potential areas. Season of use stipulations should be included on oil and gas exploratory permits where activities would impact big game on critical winter range, antelope at fawning areas, bighorn sheep range and golden eagles at eyries. Avoiding sustained use of these areas during critical life periods is recommended. Oilfield and gasfield development plans should reflect the concern for protection of critical habitats and seasonal avoidance areas.

Livestock Grazing

6-3 The major conflicts with wildlife and livestock grazing appear to be; degradation of riparian habitat, big game critical range and bighorn sheep range.

The FWS has considerable concern with the continued environmental degradation of riparian habitat and perennial water quality. Riparian habitat is rare in the arid west and should be managed as such.

Wherever riparian habitat on federal lands can be restored or losses avoided by changing or eliminating livestock use, the opportunity should be strongly considered. In the FWS Mitigation Policy (Fed. Reg. Jan. 23, 1981) riparian habitat protection is the number one priority. Net loss of riparian habitat is not acceptable in the plan. Furthermore, Executive Order 11990 requires that each federal agency "... take action to minimize destruction, loss or degradation of wetlands...".

Where livestock use or the class of livestock is negatively affecting critical big game winter range or bighorn sheep range, remedial action should be taken to correct those losses and improve the range condition. The big game populations estimates used in the plan were two to three time their current levels. Removing livestock, reducing herds, changing the class of livestock or changing the season of use on some allotments may be necessary to approach these earlier populations levels.

Recreation

Off-road-vehicle (ORV) use has significant impacts to wildlife at critical big game winter ranges and raptor nesting areas. Unmanaged ORV use can lead to the wanton harrassment of wildlife. Because of these and other ORV problems, we recommend that the BLM management plan for ORV use be applied to all activities on federal lands. Lease and permit agreements should have stipulations to control and direct ORV use. Also, recreational ORV activities should be restricted to low-impact areas (lands that can withstand a high use with few biological or physical consequences) and should require permits to monitor ORV use for management purposes. Some critical habitat areas should have seasonal restrictions of ORV use to prevent harassment or stress to wildlife.

Conclusions

Of the four alternatives offered in the plan, the FWS favors Alternative D followed by C (the BLM preferred alternative) as a second choice. The Protection Plan (Alternate D) affords wildlife and wildlife habitat greater protection by reducing competition for forage on critical ranges, protection and enhancement of more riparian acreage, and more restricted areas for oil and gas exploration and development. More riparian areas would be protected, more AUMs allocated to wildlife, more wildlife areas restricted from mineral developments, and more ORV restrictions than in Alternatives A, B or C. From the information given for Alternative D, mineral production would only be slightly less than Alternative C, livestock production would drop slightly and more areas would change the class of livestock they support. However, reducing the acreage of proposed lands sales in Alternative D would retain an additional 66 AUM's to compensate for some of the lost production.

The Protection Plan (Alternate D) affords wildlife and wildlife habitat greater protection by reducing competition for forage on critical ranges, protection and enhancement of more riparian acreage, and more restricted areas for oil and gas exploration and development.

Nowhere in the plan is a reference made to Areas of Critical Environmental Concern (ACEC). In the ACEC policy and procedures guidelines (BLM, 1980) identification and designation of ACECs is recognized as an important part of the planning process. In the ACEC policy document, the Resource Management Plan (RMP) definition states "Identification of potential ACECs is normally done through the planning process (RMP)".

ACECs include a broad range of resources including critical or important fish and wildlife habitats, cultural or scenic values and resources, natural systems and natural hazards. ACEC designation allows special management attention to be given to these types of resources. The omission of this important part of the planning process is of concern to the FWS. We feel there are lands within the Grand Resources Area that need special management.

We appreciate the opportunity to comment on this draft EIS. If you have any questions regarding our response, please contact us.

cc: BLM, SLC, UT
DWR, SLC, UT

Response to Letter 6 from the U.S. Fish and Wildlife Service, Salt Lake City, Utah, Robert Jacobson, Field Supervisor

6-1 The BLM land disposal program would not cause significant changes to existing wildlife values. All of the isolated tracts identified for possible disposal were evaluated in the Draft RMP/EIS. The two tracts along the Colorado River near Westwater, the tracts in the Book Cliffs, and the tract near Dead Horse Point were found to have important wildlife values. These values would be carefully analyzed prior to considering disposal of the tracts.

The sales portion of the land disposal program is, by design, a local program. Most of the action is carried out at the field office level, to assure that local concerns are addressed.

6-2 This comment does not specify which alternatives present a problem. Alternative A (present management) provides considerable site-specific protection. Wildlife is one of the factors considered in determining areas that would be placed in the more restrictive leasing categories (Categories, 2, 3, and 4), as the comment suggested. Alternatives C and D would, if adopted, provide even more protection on a site-specific basis, placing a greater proportion of the GRA under Categories 2, 3, and 4. The oil and gas leasing categories (page 2-46 of the draft) were applied as described in Alternative A, based on a 1975 environmental assessment (EA), to designate the least amount of restriction that would protect the resource values present in any given area. The leasing category application proposed under Alternative C is based on a 1981 amendment of the 1975 EA, and the application proposed under Alternative D is based on a technical report prepared in 1982. Alternative B is, by definition, the Production Alternative.

6-3 All of the possibilities mentioned in the last paragraph of this comment have been considered. Removing livestock, changing class of livestock and changing season of use are all discussed and analyzed in the draft. On those allotments where these management actions are not proposed, the conflict does not warrant such action.

Protective management actions for riparian habitat are proposed in the various alternatives, but only for areas where present management is considered detrimental.

LETTER 7

United States Department of the Interior

BUREAU OF RECLAMATION
UPPER COLORADO REGIONAL OFFICE
P.O. BOX 11568
SALT LAKE CITY, UTAH 84147

IN REPLY REFER TO: UC-150

APR 22 1983

770.

Memorandum

To: Area Manager, Bureau of Land Management, Grand Resource Area, P. O. Box M, Moab, Utah 84532

From: Regional Director
Acting Bureau of Reclamation

Subject: Review of Draft Environmental Impact Statement - Grand Resource Area Management Plan (DES 83/7)

We have reviewed the above document and determined that none of the alternatives described would have any impact upon any program under the jurisdiction of the Bureau's Upper Colorado Region.

The Price-San Rafael salinity control project area is located about 30 miles west of the Green River. This location is on the opposite side of the river from the site of the proposed management plan; thus, there would be no relationship. In addition, the impact the proposal could have on the salinity of the Green and Colorado Rivers would be very small and immeasurable.

If you have any questions concerning these comments, please call Mr. Harold Sersland (Phone FTS 588-5580).

W.W. Taylor

LETTER 8

4613 South 4000 West
P.O. Box 20222
Salt Lake City, Utah 84120
Phone 968-3548

April 18, 1983

Mr. Kenneth Rhea,
Associate Moab District Manager
P. O. Box 970
Moab, Utah 84532

Dear Mr. Rhea,

While reading and examining the RMP/EIS for later comment, I came across the following apparent errors that you may wish to address in subsequent errata sheets:

	Page	
8-1	S-1	Livestock Requirements - NOTE* Concern #2 is missing
	S-11	Alternative D, Line 8 "an increase", not "decrease"
	S-12	Alternative B, 2nd Para, Line 3 "Treatments and (?) 3rd Para, Line 16-17 "would prevent improvements" (duplication)
	S-12	Alternative D, 3rd Para, Line 9 "humate sales area" (duplication)
	S-13	Alternative C, 1st Para, last lines ";maintenance of existing watershed improvements would prevent improvement of vegetation in these areas."
		Alternative B, 3rd Para. "(13,507 acres), add last paren.
	S-14	Alternative A, 1st line, omit "the" (duplication)
		Alternative C, Line 4-5, "Avoidance"
		Alternative D, Para 2, NOTE* Number of wells/year omitted.
	S-16	Alternative A, Para 2 (conflict in 2 GRV scenic loss values)
		Alternative B, Para 2 (conflict in 2 GRV scenic loss values)
		Alternative A, Para 2, Line 9 omit "and 50 miles of stream" (duplication)
		Alternative B, Para 2, Line 9 omit "and 50 miles of stream" (duplication)
		Alternative B, C & D, 3rd Para, NOTE* belongs on S-17 under the heading RECREATION (duplication)
	S-19	Alternative B, last line, "loss" to "lose"
	2-74	Alternative D, Line 28, Part of 2 sentences omitted when compared with Alternative C.
		Alternative C, Line 3rd up from bottom "Seatle" to "Castle".
	2-79	Alternative C, Line 7, "areas" to "acres".
	2-81	Alternative B, 2nd line from bottom, "loss" to "lose".

DEDICATED TO THE ELIMINATION OF FEAR, PAIN AND SUFFERING OF ALL ANIMALS

April 18, 1983
Mr. Kenneth Rhea
Page 2

4-39	Paragraph 4, last line "ungulates and"(?)
4-49	Paragraph 6, line 4 "displaced or lost"
4-82	Paragraph 1, line 4 "grazing)", add closing paren.

I hope that this information will prove useful to you. We plan to respond in writing to the body of the document within the comment period. Thank you for making this material available to us.

Sincerely,

John Paul Fox
Chief Investigator

Response to Letter 8 from the Humane Society of Utah, John Paul Fox, Chief Investigator

---

8-1 The corrections suggested in this comment have been included in the revised Summary appearing at the front of this proposed RMP and final EIS and in the list of revisions and corrections in Chapter 3. Typographical errors are listed only where confusing to the reader.

THE HUMANE SOCIETY OF UTAH

4613 South 4000 West
P.O. Box 20222
Salt Lake City, Utah 84120
Phone 968-3548

LETTER 9

June 6, 1983

Mr. Kenneth Rhea
Associate Moab District Manager
P.O. Box 970
Moab, Utah 84532

Dear Mr. Rhea,

Thank you for the opportunity to comment on the draft E.I.S. for the Grand Resource Management Plan.

I will address the alternatives one at a time. The Humane Society of Utah is mainly concerned with the quality of essential environment needed to support animal life.

Alternative A:
This alternative would cause a decrease in non-game wildlife due to degredation of environment by lifestock grazing. The disposal of land will decrease grazing AUM's, and thereby affect small mammals, birds, and reptiles due to land use.

Alternative B:
Decrease of riparian areas is the major concern with this alternative. It would cause a large loss of life among small mammals, reptiles, birds, and raptors due to habitat losses. The proposed limited fire suppression will cause similar losses. There would be a loss of kidding areas, which would decrease populations or displace them. The associated mining would cause loss of life due to stress and displacement. There would be substantial loss of aquatic life due to mining leases along the Colorado River.

Alternative C:
The increase of vegetation with this alternative would increase wildlife habitat. However, this would give wildlife eight allotments for habitat, and only one allotment for riparian and aquatic habitat. This could decrease population of the three endangered species of fish and decrease or displace raptors and other predatory animals. It proposes to use fencing as a way of separating land allotments and streams. This fencing could be very hazardous to wildlife in the area, unless design precautions were included.

June 6, 1983
Mr. Kenneth Rhea
Page 2

Alternative D:

This would be our recommendation. The long term effects for livestock and wildlife would increase and thus the resource area's usefulness. The loss of AUM's may have short term effects to livestock operators, but due to improved environment management the vegetation would increase and improve AUM's. This management would decrease erosion and loss of habitat, and decrease salinity of the rivers and loss of aquatic habitat. As in Alternative C, fencing of areas could cause wildlife injury or death. This alternative allows for the retention of eight Wilderness Study Areas which would increase wildlife habitat.

9-1 This RMP is not specific as to which non-game species of animals would be affected. The primary species of concern was big game. More information is needed on the non-game species to determine the impact to their environment.

I appreciate the opportunity to comment on the Grand Resources Management Plan.

Sincerely,

Helen D. Robison
Senior Investigator

Response to Letter 9 from the Humane Society of Utah, Helen D. Robison, Senior Investigator

9-1 The impacts to the nongame species that would result from the recommended management actions cannot be quantified. Some losses to these species would occur as a result of the management actions under consideration. These losses would not be significant.

LETTER 10

Scott M. Matheson
Governor

STATE OF UTAH
DEPARTMENT OF HEALTH
DIVISION OF ENVIRONMENTAL HEALTH
150 West North Temple, P.O. Box 2500, Salt Lake City, Utah 84110-2500

Mark H. Mitsell, Ph.D., Acting Director
Room 474 801-533-6121

James O. Mason, M.D., Dr P.H.
Executive Director
801-533-6111

DIVISIONS
Community Health Services
Environmental Health
Family Health Services
Health Care Financing

OFFICES
Administrative Services
Community Health Nursing
Management Planning
Medical Examiner
State Health Laboratory

April 29, 1983

Bureau of Land Management
Moab District
P. O. Box 970
Moab, Utah 84532

Re: Grand Resource Area Management Plan
Environmental Impact Statement

Gentlemen:

We have reviewed the EIS for the Grand Resource Area Management Plan and have the following comments to make.

10-1 Under Water Quality, page 3-2. fourth paragraph, a reference is made to the headwaters of streams in the Book Cliffs meet State Class "C" water quality standards. Streams in the Book Cliffs are classified by the State as 1C, 2B, 3B, and 4.

We recommend that this and any future water quality assessments be made relative to the current State Water Quality Standards contained in Part II of the Code of Wastewater Disposal, copy enclosed.

Sincerely,

Dennis R. Dalley
Assistant Director

cc: Southeastern Dist. Health Dept.

Response to Letter 10 from the Utah Department of Health, Division of Environmental Health, Dennis R. Dalley, Assistant Director

10-1 The water quality designations have been changed in this proposed RMP and final EIS as suggested in the comment. Water quality assessments, as identified under Part II of the Code of Wastewater Disposal, are used as standards for waters located in the GRA.

NOTE: Respondent also submitted a copy of the Utah Wastewater Disposal Regulations: Part I, Definitions and General Requirements and Part II, Standards of Quality for Waters of the State, with Appendixes A through D, and a copy of the Utah Water Pollution Control Act. The volume of this material precluded reprinting it in this document.

LETTER 11

Union Oil Company of California
Post Office Box 760, Moab, Utah 84532
Telephone (801) 686-2236

UNION 76

May 4, 1983

Bureau of Land Management
Moab District
Grand Resource Area
P.O. Box M
Moab, Utah 84532

Attn: Colin P. Christensen
Area Manager

GRAND RESOURCE AREA
MANAGEMENT PLAN

Dear Mr. Christensen:

After reviewing the "Grand Resource Area Management Wilderness Plan", I would like to make a few comments.

11-1 OIL & GAS PRODUCING AREAS
Your Resource Management Plan included a map of the Grand Resource Area showing oil and gas production areas and potential production areas. The southeast corner of the map should be included as a production area. This area includes the Lisbon Unit and numerous outlying oil and gas wells. (Map attached).

11-2 WILDERNESS & NO LEASE AREAS
In the American Petroleum Institute's booklet entitled "Energy Security for the United States," it is estimated that federal lands hold huge energy resources including 85% of the nation's undiscovered oil, 40% of its undiscovered natural gas, 35% of the remaining coal deposits, 80% of the shale resource, 85% of the tar sand resource, 40% of the uranium and 50% of geothermal resources. If these figures are correct, government lands must be kept open for exploration for the United States to attain energy independence.

Sensible land use policies will preserve scenic beauty and gain needed supplies of energy and other resources. It is understood that areas of unique historic or aesthetic value should be wholly protected but areas of special scenic value could be explored and then carefully restored to their original condition. Although I

have not inspected all category 3 and 4 acreage, I know there is some acreage in both alternatives C and D that should be left open to exploration.

ECONOMIC IMPACT RELATED TO MINERALS

I think that your research into the local economic impacts of protection verses production is an excellent approach to fair and reasonable federal land management.

It is easy to see how your estimates of economic impact are reasonable and accurate when you are dealing with surface resources. In this area you can observe and estimate a resources potential. Thus allowing a dollar value, or job value to be placed on the subsequent production or protection of the resource. This method undoubtedly works well when applied to range management, off road vehicle use, and recreation. However, the same method applied to unknown resources like oil, gas and minerals can be very misleading.

As you point out in your draft, the Grand Resource Area has many unexplored structures that could some day represent major oil or gas finds. The key word is unexplored. The oil and gas industry has done very little exploration in much of the Grand Resource Area.

An article in the March 21, 1983 issue of the Oil and Gas Journal has this to say about our Paradox basin (article attached).

> "Geologists feel that there are still some big ones out there somewhere to be found. The variety of structural and stratigrahic traps, the thick and attractive sedimentary section, and the size of the unexplored area offer the chance for finding more major oil and gas fields in the Paradox basin."

11-3 The extent of oil and gas reserves in the Grand Resource Area are for the most part unknown. It is this unknown that invalidates your economic impact estimate as it relates to the application of oil and gas categories three and four.

The only way to properly estimate economic potential of oil and gas in the Grand Resource Area is through exploration.

A good production-protection balance cannot be obtained by excluding land from future oil and gas exploration. A better approach to management would be to concentrate on exploration site rehabilitation. Land under oil and gas categories three and four could require special attention in the rehab phase that could assure that the land would be returned to its natural state. In this approach the full mineral potential of the land could be achieved while still preserving the land.

Bureau of Land Mana(ment
Management Plan
May 4, 1983
Page 2

If you have any questions, please give me a call.

Sincerely,

B.R. Govreau
Area Supt.

BRG:aj

Attachments

cc: LLR

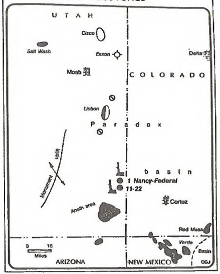
FIGURE 1-12

Oil and Gas, Sand and Gravel, and Humates Issue Areas

4-21

EXPLORATION

Pennsylvanian finds, dry hole make news in Paradox basin



New Paradox discoveries

Two new Pennsylvanian discoveries and a deep dry hole have made news in the Paradox basin in recent weeks.

Tricentrol Resources 11-22 Nancy-Federal, SE NW 11-38s-25e, southeastern San Juan County, flowed 930 b/d of oil and 1 MMcfd of gas on tests of the upper Ismay zone at 5,422-32 ft on a 20/64 in. choke.

This success follows the upper Ismay discovery 1½ miles southeast at Tricentrol 1 Nancy-Federal in NE NW 3-38s-25e, San Juan County. That well flowed 140 b/d of oil and 175 Mcfd of gas and some water from the upper Ismay at 5,542-52 ft. Location is about 2 miles east of Ismay oil and gas at Patterson Canyon field.

The dry hole, a deep one at 18,885 ft in Grand County, belonged to Exxon Corp. The 1 Onion Creek-Federal, SW NW 18-24s-25e, southeastern Grand County, bottomed in the Mississippian. There are few details on this interesting test which lies 20 miles northeast of Moab and 17 miles southeast of the Greater Cisco area, a Cretaceous and Jurassic producing sector. The dry hole also is located 36 miles north-northeast famous Lisbon field, a multipay reservoir with zones in the Pennsylvanian, Mississippian, and Devonian.

The Exxon hole is the third duster to be put down on the Onion Creek site. Phillips Petroleum Co. and Richfield Oil Co. both had dry holes at 14,311 and 13,922 ft, back in the 1960s, according to Petroleum Information, Denver publication records.

Chandler & Associates of Denver have a remote Ismay Pennsylvanian oil strike 4 miles north-northwest of Blanding at 6-33 Johnson Creek Federal, SE NW 33-35s-22e, central San Juan County. The well pumped 6 b/d of oil from 6,020-24 ft.

This new discovery is 9 miles northwest of Skyline Oil's Ismay gas/condensate discovery in 27-36s-23e and 22 miles northwest of Patterson Canyon which is an Ismay oil pool.

Needed discoveries. There has been a lack of notable discoveries in the Paradox basin in the past few years.

The reason is no doubt the paucity of exploratory holes. But despite the scattered exploratory activity in the Four Corners in recent years, there have been some important oil and gas finds made. More are needed. The answer is more exploratory work in an area far from being over the hill. Just a look at the map of this vast area of the Southwest illustrates this point.

In 1981 and 1982 there was a smattering of exploration in several parts of the basin, mostly in the Utah and Colorado portion. This spate of drilling activity turned up some good oil strikes.

Superior Oil Co. for one had a good one at Sentinel Peak in SW NE 27-41s-26e in 1981. This Paradox basin success flowed 552 b/d of oil and 138 b/d of water plus 423 Mcfd of gas on tests. Location was in southeastern Utah's San Juan County.

This Superior find was one of the best of its class in the region in some time, lying just west of the Colorado line. Pay was the Pennsylvanian lower Ismay formation at 5,787-98 ft and 5,801-22 ft. Flowing tubing pressure was 520 psi. Gravity was 42°.

Superior tested in the Desert Creek and in the Mississippian at 5,942-47 and 7,270-7,310 ft, finding nothing. The company also had a CO_2 discovery at this time 14 miles north-northwest in NW SE 14-39s-25e. It flowed 4,732 Mcfd of CO_2 gas. This was to be used in enhanced recovery projects in nearby Greater Aneth field, the giant of the Paradox basin.

Last summer there was another discovery of note in the basin at Damson Oil Co. 1-19 Federal in SW SW 19-39n-19w, southwestern Dolores County, southwestern Colorado. This well tested 390 b/d of oil and 1.2 MMcfd of gas on 32/64 in. choke from the Pennsylvanian Desert Creek pay at 6,250-56 ft. Flowing tubing pressure was 460 psi.

Location was 3 miles east of the Utah state line and 11 miles southwest of Dove Creek.

In the Four Corners. Though successful oil exploration began in the Paradox basin way back in 1907 at Mexican Hat Pennsylvanian oil field, the real boom didn't hit the area until the 1950s when Aneth was discovered.

With the discovery of Pennsylvanian Paradox oil at Aneth in 1956, a sweeping program of development and exploration moved across the Four Corners region.

After the Pennsylvanian discovery at Aneth and at nearby fields in southeastern Utah came the news of oil and gas at Lisbon to the north. This multipay field discovery set off a flurry of wildcatting in the northern part of the big basin.

In the years that followed the Lisbon and Aneth plays, other fields were found in the Four Corners basin, but nothing as important came along. Geologists feel that there are still some big ones out there somewhere to be found. The variety of structural and stratigrahic traps, the thick and attractive sedimentary section, and the size of the unexplored area offer the chance for finding more major oil and gas fields in the Paradox basin.

There is plenty of room to explore for hydrocarbons in the western basin. A huge area of practically untouched land exists between the San Rafael swell to the Kaiparowits basin.

Stratigraphic traps have provided most of the present reserves in the Paradox region and can be expected to provide even more oil and gas in the future.

It seems that most recent drilling in the area has been in southeastern Utah. Needed are more wildcats in southeastern Colorado, northeastern Arizona, and northwestern New Mexico. Also, the Lisbon region and on north to the Cisco area should also be luring wildcat objectives.

John C. McCaslin
Exploration Editor

ARKANSAS

Reentry at an Arkansas well came up with a dual producer in the Jurassic Cotton Valley and Smackover formations.

The new producer is Anadarko Production Co. 1-16 Goode "A", NW NW 16-18s-19w, Atlanta field, Columbia County. The well had previously been a producer in the Smackover.

Operator drilled out and perforated in the Cotton Valley at 7,284-7,367 ft. Swabbing and flowing got 894 bo/d.

Pump got 20 b/d of oil from the Smackover at 8,256-61 ft.

COLORADO

There's a new Codell well in the Denver basin.

Location is in the spaced area of big Wattenberg field, northeastern Colorado.

The 6-1 Dinner, SW SW 6v-4n-64w, flowed 113 b/d of oil and 500 Mcfd of gas on a 10/64 in. choke at 7,070-89 ft in the Codell of Cretaceous age.

Flowing tubing pressure was 1,683 psi.

This new well is in Weld County, 6 miles southeast of Greeley and 1 mile east of nearest Codell production in this part of the Denver basin.

IDAHO

There's new wildcat action slated for Idaho.

This new activity is on the Snake River Plain. R&T Exploration of Boise will drill two 2,500 ft tests in undrilled townships of southwestern Idaho. The 1 John Stringer is 45 miles northwest of Boise in northwestern Payette County in NE 9-9n-4w.

And, 60 miles southeast of Boise, the 1 Joe Elliott will drill in SE NW 34-5s-8e, southern Elmore County.

Amoco Production Co. has the only other active spot in Idaho at this writing, the 19-1 Milford in NW SW 19-15n-27e, a 12,700 ft wildcat in southeastern Lemhi County. Rig is at the site.

KANSAS

Mesa Petroleum Co. has a new field in Clark County, southern Kansas, at 1-6 Cunningham, NE NW SE 6-34s-23w.

Flow was 1.3 MMcfd of gas from the Pennsylvanian Marmaton at 5,088-93 ft. Nearest production is 2 miles northeast in McMillion Lansing field.

In Snake Creek field, same county, Rine Drilling Co. completed 6-23 Barby in NW SE NW 23-34s-21w pumping 122 b/d of 40° gravity oil.

In Pratt County, Imperial Oil extended A&W field 1 mile east at 1-8 Dorgan in 8-28s-15w. Flow was 120 b/d of oil and 338 Mcfd of gas from the Mississippian at 6,405-11 ft.

LOUISIANA

Arkana field in Bossier Parish, northwest Louisiana, continues to expand.

Flow was 2,900 Mcfd of gas and 187 b/d of condensate at Crystal Oil & Land Co., Shreveport, 3-Alt Barnett in SE SE 1-23n-13w. Production is from the Jurassic Haynesville at 10,551-10,701 ft on a 22/64 in. choke.

Crystal also has a good well at 1 Barnett C in NE SW 8-23n-12w, a Cretaceous Pettet well. Flow was 396 b/d of 36.1° gravity oil on a 20/64 in. choke from perforations at 6,063-6,309 ft.

In Lincoln Parish, Tremont field, Conquest Exploration Co. of Houston completed 1 Norris in NE NW 15-18n-1w. Production was 2,350 Mcfd of dry gas on a 12/64 in. choke from perforations in the Cretaceous Hosston at 8,505-15 ft with tubing pressure 2,650 psi.

Response to Letter 11 from Union Oil Company, Moab, Utah, B.R. Govreau, Area Superintendent

11-1 The Lisbon Valley field should have been included in Figure 1-12. This is noted in Chapter 3 of the proposed RMP and final EIS.

11-2 The figures referred to in this comment are for the entire United States, including Alaska. Particular locations within the GRA have widely varying potentials.

The bases for applications of the oil and gas leasing categories under the various alternatives are explained in the response to Letter 6 from the U.S. Fish and Wildlife Service. In both alternatives (C and D), Category 3 and 4 lands have been selected because lease stipulations alone would be inadequate to protect certain resource values. These values may include extreme topography, river corridors, floodplains, and sensitive wildlife species. Category 3 and 4 areas usually have several of the above values represented.

11-3 The goal of Alternative C in the Draft RMP was to balance conflicts between renewable and nonrenewable resources, incorporating the necessary constraints for resource protection. The guidance for developing an oil and gas leasing category system for Alternative C was to put areas in the least restrictive category that would still protect the area's resource values. The resource values of areas that were proposed to be in either Category 3 or Category 4 could not be satisfactorily protected if hydrocarbons were developed using today's technology.

The mineral related economic analysis was based on mineral exploration and production projections for the GRA. These projections were based on the level of recent exploration and production, the number of acres placed under each of the four leasing categories, and the mineral potential of those areas. Because of the uncertainty over future finds, economic conditions, and technology, these projections should be viewed as having a fairly wide confidence interval. However, the projections should give managers an idea of the relative impacts that this management action would have on the local economy.

Due to a lack of data, the economic impact estimates could not be based on a true economic assessment of the oil and gas potential.

LETTER 12

Shell Oil Company

P.O. Box 831
Houston, Texas 77001

April 29, 1983

Colin Christensen, Area Manager
BLM - Grand R. A.
P. O. Box M
Moab, UT 84532

Gentlemen:

PUBLIC COMMENTS
RESOURCE MANAGEMENT PLAN (RMP)
GRAND RESOURCE AREA
MOAB DISTRICT, UTAH

Reference is hereby made to your recent request for comments to the subject matter before the final Environmental Impact Statement is drafted.

Two of the areas listed in the area (Desolation Canyon - UT-060-068A and Behind the Rocks - UT-060-14DA) are of high long range interest to Shell and the Industry. The areas are known to contain reserves of coal and tar sands and therefore appear to have high potential for hydrocarbon accumulation. These general locations have traditionally been considered active exploration targets. Our current regional studies suggest that these areas will continue to be of interest in our exploration effort, although we are not prepared, at this time, to be more specific in delineating prospective areas or formations.

Shell Oil Company is one of the major wildcat exploration companies exploring domestic prospects within the United States today. Therefore, Shell Oil feels a strong need to have as much undeveloped land as reasonably possible remain open for hydrocarbon exploration and production. We would like to ask the Resource Team drafting the RMP to interject this need into the RMP.

We appreciate this opportunity to express our concerns and views in this matter. Also we wish to be updated on your progress in the drafting of the RMP. Please place Shell Oil Company on your mailing list for all communications and notices pertinent this subject.

Very truly yours,

Larry G. Svab
Land Department
Rocky Mountain Division

LGS:lbh

LETTER 13

OIL COMPANY
Fortune
50 South Main Street
Suite 1570
Salt Lake City, Utah 84144
Phone: (801) 532-7797

May 9, 1983

Bureau of Land Management
Grand Resource Area
P. O. Box M
Moab, Utah 84532

Attention: Mr. Colin Christensen
Area Manager

Gentlemen:

We are familiar with your proposed planning program for the Grand Resource Area located in Grand County, Utah. We have carefully reviewed the defined alternatives proposed for each of the study areas set forth in your letter of March 20, 1983.

As you have correctly stated this general area contains valuable reserves of oil and gas. Not only do known oil and gas fields cover approximately 32% of the resource area, but prospective producing formations underlie the entire study area. The portion of this area which lies south of the Bookcliffs is part of the Paradox Salt Basin. A great thickness of sedimentary rocks, possibly up to 20,000 feet, underlies the Salt section. These same sedimentary rocks are productive of oil and gas further south in San Juan County, Utah. One must assume that some geologic prospects within the study area should produce oil and gas from these deeper formations. Therefore, the entire study area should be considered valuable for oil and gas production.

Your Preferred Alternative to drop all areas from wilderness consideration except for Desolation Canyon, Westwater Canyon and Behind the Rocks is agreeable with us except that we believe that most of the Desolation Canyon area should also be dropped from wilderness consideration. Most of this area lacks wilderness characteristics, except for that portion near the Green River. Gulf Oil Corporation has a new natural gas discovery in this study area. The entire area has always been considered a prime prospective area for gas production from Cretaceous rocks. This recent gas discovery is proof that the Desolation Canyon study area is a very prospective area.

Sincerely yours,

FORTUNE OIL COMPANY

BY: G. W. Anderson
G. W. Anderson
Vice President

4-23

LETTER 14

May 9, 1983
Moab, Utah

Grand Resource Area
Bureau of Land Management
P.O. Box 970
Moab, Utah 84532

The Moab District Grazing Advisory Board would like to make the following comments regarding the Grand area Draft R.M.P./E.I.S.

1. We agree with your recommendation of alternative A (no action) for livestock grazing. This will allow five years of monitoring to establish range trend and proper stocking rate. The only thing we do not like about alternative A is that it appears to disregard long standing preference in favor of the average of the last 5 years actual use.

14-1 | Due to the need for flexibility we need the difference between actual use and preference to compensate for weather, financial, and other unforseen events. Actual use changes annually.

2. We agree with your selection of alternative C as your preferred alternative. Our concern with this alternative is the curtailment of Spring grazing in about 25% of the allotments. Your principle reason for this curtailment is to protect wildlife (some of which have been introduced).

14-2 | While we realize that Spring grazing is critical to range plants, it is also the most critical time of the year for livestock. The animals have to nurse their young and be in good physical condition to breed.

We further disagree with total closure of some areas

14-3 | to livestock to protect game animals. The figures for estimated big game numbers on pages 3-10 and 3-11 are questionable. Deer numbers are down from their previous highs while Elk are much more numerous than they have ever been. While we have no opinion on numbers, past or present for Bighorn Sheep, we are concerned that two allotments are scheduled for curtailment of Spring livestock grazing even though population trend for Bighorns is up. We also doubt the prior stable estimates for altelope as shown on table 3-5.

3. We are concerned about changes of seasons of use or

14-4 | excessive curtailment of grazing on saline lands to reduce salt content of the Colorado River. We don't think that livestock grazing increases salt run-off as much as the B.L.M./E.I.S. draft would indicate.

14-5 4. We would like to point out that the financial figures on table 3-13 reflect a profit from Sheep and Cattle that does not exist. The costs recognized in the table don't include interest on capital, depreciation, and taxes. When all legitimate costs of running a ranch are included, Gee's 1980 study shows a loss of $410.00 per head. Even without a land charge there is still a loss of $50.00 per head.

These erroneous figures would tend to show that Ranchers could easily afford cuts in their grazing time or numbers.

14-6 5. We find many things in this U.M.P./E.I.S. which we like better than others we have seen. The Bureau recognizes that cuts in Spring use would be hard to absorb without adversely affecting the year-long balance of the ranch. We would hope that these cuts would be handled on an individual basis for each permitee. Some operations would have alternate feed to use or perhaps additional spring feed could be developed. With some fencing, spring use could be alternated. With sheep, no fences would be needed to give areas of the range alternate years of rest. For this reason we were particularly concerned with the proposed curtailment of spring use on most of the sheep allotments on the Cisco Desert.

We hope these comments will help in formulation of the final plan.

D. L. Taylor

Chairman, Moab District Grazing
Advisory Board

Response to Letter 14 from the Moab District Grazing Advisory Board, D.L. Taylor, Chairman

14-1 The past 5 years' average use is the initial starting point. Different levels of use could be allowed in the future, depending on the results of the monitoring studies.

14-2 The concerns expressed regarding this management action are well-founded and were addressed in the draft document on pages 4-43, 4-53, 4-65, and 4-73. Forage must be provided for wildlife species where they now occur, even if they are not native to the particular area. Another reason for considering this action is to protect critical watersheds. Removal of livestock in the spring from the areas shown in Figure 1-2 (page 1-5 of the draft) would reduce erosion on these highly saline soils. Spring use is the most critical to these areas.

14-3 The estimated prior stable populations shown on pages 3-10, 3-11, and 3-13 of the draft were obtained from UDWR. The estimated current populations were determined by BLM with the concurrence of UDWR. The term "estimated prior stable population" applies best to areas where the species has occurred in well established herd size in past years. The term represents an average for the herd size 15 to 20 years ago. This term can be misleading for elk, antelope, and bighorn sheep, because populations of these species either were not established in areas where they now occur, or are larger now than they were 15 to 20 years ago. The term "herd management goal" could be used more appropriately for elk, antelope, and bighorn sheep. This term represents the population level which UDWR considers as being the potential herd size for the unit. Table 3-3 has been revised in Chapter 3 of this proposed RMP and final EIS to apply this more appropriate term.

14-4 Livestock grazing impacts on runoff and salinity, and the estimates used in the Draft RMP/EIS, were derived from existing research data collected at Badger Wash, Colorado, an area with watersheds similar to those in the GRA's Cisco Desert. Subsequent reports by George Lusby were used in the estimates of runoff and the impacts of livestock grazing. Data collections and monitoring took place during two distinct study periods. 1953 through 1965 and 1966 through 1973. See Letter 39 for a review of the Environmental Protection Agency's concerns regarding this issue.

14-5 The budgets prepared by Gee present both accounting and opportunity costs. Accounting costs are those for which the operator must make a payment. Opportunity costs, on the other hand, are the net revenues foregone, had the operator's resources been put to some other use. Therefore, opportunity costs do not reflect actual payments by the operator.

The $50 and $410 loss per head figures mentioned in the comment include both cash costs and opportunity costs. Therefore, these figures do not represent actual cash losses.

The estimated returns to labor and investment in Table 3-13 include interest on operating capital, taxes, and depreciation. One of the cost categories not accurately reflected in Gee's budgets is interest payments on outstanding debts. The interest on operating capital assumes that all operating capital is borrowed for a 6-month period.

Inasmuch as some of this is not borrowed, these interest costs will be overestimated. Because the long-term outstanding debt of operators is confidential to producers and lending institutions and is extremely difficult to estimate, Gee did not include interest payments for outstanding long-term debt. Despite the overestimate of short-term interest payments, the lack of accounting for long-term interest payments in the ranch budgets will generally lead to an underestimate of true cash cost and an overestimate of returns above cash costs.

Accurate data on total indebtedness are unavailable. Federal Land Bank records show that the average debt/asset ratio of farmers in Utah, Nevada, Arizona, and California is 31 percent. To illustrate how much interest on indebtedness changes the ranch budgets, an abbreviated ranch budget was constructed, using the Federal Land Bank debt/asset ratio, Federal Land Bank interest rates, and data from Gee's budgets.

Ranch Budget Comparison

	Original Budget for Beef Herd of 717 Cows BLM Grand Resource Area	Adjusted Budget for Beef Herd of 717 Cows BLM Grand Resource Area
Gross Revenue	$176,229	$176,229
Cash Cost	87,802	160,037
Returns Above Cash Costs	88,427	16,192
Returns to Labor and Investment	52,784	-19,451

14-5 cont'd. As shown in the abbreviated budget, total indebtedness is one of the more important determinants of whether operators' gross revenues exceed their short- or long-term costs. In this example, the typical ranch can cover short-term costs, but not long-term costs. Total indebtedness varies greatly among operators. Gee's original budget may reflect operators who own their land outright and have mostly operating capital debt. Gee's budgets do not accurately reflect operators who are heavily in debt. It should be noted that most ranch budgets do not accurately account for interest-payments on total indebtedness.

14-6 After the RMP is approved, actions to be implemented within each allotment will be listed in a rangeland program summary. Adjusted season of use in some areas may differ by only a few days from current management; in other areas the season of use may be adjusted so that it is the same for all operators within an allotment or on adjoining allotments.

Range improvement packages, possibly including such actions as seeding or pasture fencing, will be developed for all allotments in the GRA. Some allotments (e.g., those in the M and C categories) may have few or no projects identified. Consultations with ranchers will continue throughout this process.

LETTER 15

Amoco Production Company (USA)
Denver Region
Amoco Building
17th & Broadway
Denver, Colorado 80202
303-830-4274

Roberta Andersen
Land Services Coordinator

May 25, 1983

Mr. Colin Christensen
BLM Area Manager
P. O. Box M
Moab, Utah 84532

Dear Mr. Christensen:

Amoco Production Company is a wholly-owned subsidiary of Standard Oil Company (Indiana). Our principal job is exploring for and producing oil and gas throughout the United States. Thank you for the opportunity to comment on the Draft Management Plan and Environmental Impact Statement for the Grande Resource Area in the Moab District of Utah.

By your own assessment, this resource area is rich in energy and minerals. Almost all of the resource area can be considered prospectively valuable for oil and gas; and, in fact, known oil and gas fields cover some 32% of the area. We, therefore, propose continuing area-wide leasing for oil and gas subject only to regulations which are reasonably necessary to protect the environment. The current action alternative, or Alternative B, will provide both the production and protection needed by the area to conform with good multiple-use management guidelines.

There are many protection mechanisms for surface resources, and the oil and gas industry has indicated its willingness to conform to these protective measures so that no irreparable environmental damage occurs as a result of oil and gas activity.

Thank you for considering our views.

Sincerely,

Roberta Andersen

RA:ww

LETTER 16

Box 621, Moab, Utah 84532
June 6, 1983

Mr. Pete Christensen, Area Manager
BLM, Grand Resource Area
P.O. Box M
Moab, Utah 84532

Dear Pete:

I wish to comment on the management plan and EIS statement recently issued for Grand Resource Area.

16-1 General. I can only hope it wasn't your idea to use this format to try and solve some of your problems. Mixing an EIS and a Management Plan may be someones cute idea of how to obfuscate the poor public but in my book you are doing everyone a disservice. I read the original EIS that got BLM sued and cost us taxpayers millions of dollars in EIS publications. Frankly I suspect you may get sued again if this is the answer to the range EIS programmatic for you neither comply with the letter or the intent of the Environmental Policy Act.

16-2 You say that the management plan is the result of the public's requests and your staffs analysis. This is not planning this is fighting brush fires just like the BLM used to do 20 years ago. You ignored one of your publics request, namely my letter of Feb. 7, 1982 in which I outlined some of your needs in cultural resource management. You had no one really qualified in cultural resource management on the staff writing the management plan even though these people are available within the district. I suspect you really don't care about cultural resources because dozens of people aren't banging on your door. This is retrograde to the type of land management the BLM was doing 20 years ago when the local "advisory" boards ran the show.

Specifics

The management plan for cultural resources seems to be to let those of us who do clearance work for developments take care of the
16-3 problem, us and the almighty threat of the law. Unfortunately there is more to cultural resource management than just protection and even protection management falls down. Two examples: I did a ROW clearance for Davis Oil through Arths Pasture. The road I cleared was not the one improved and your records show no clearance was made on the improved road. Similarly gas developers placed a pipeline and a pumping station and destroyed part of the railroad narrow gauge (historic) right of way at old Cisco. No clearance is indicated in the records here either. Old Cisco should be on the National Register of Historic Places (see my letter of Feb. 2, 1982) as should many other places to give them added protection because of their special significance. The State Historic Preservation Officer says it is your job to do this. So does Executive Order 11593 to which Grand Resource has never complied. The cultural resources are disappearing through lack of awareness and protection with your let George do it attitude. BLM must do some of the identification and protection work and research and interpretation. Go get yourself an archeologist.

Sincerely,

cc. Gene Hodine

Lloyd M. Pierson

Response to Letter 16 from Lloyd Pierson, Moab, Utah

16-1 The combined Draft RMP/EIS was prepared in accordance with BLM Planning Regulations found in Title 43 of the Code of Federal Regulations, Subpart 1601 (43 CFR 1601.0-6), which states, "The environmental analysis of alternatives and the proposed plan shall be accomplished as part of the resource management planning process, and wherever possible, the proposed plan and related environmental impact statement shall be published in a single document."

16-2 The letter of February 7, 1982 suggested a list of cultural resource sites that could benefit from National Register nomination or the development of management plans. Protection of these resources can be considered outside the planning process. See the response to Letter 1, comments 1 and 2.

16-3 The BLM's cultural clearance procedures are designed to minimize problems of the type mentioned. Regrettably, mistakes are sometimes made.

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE
Manti-LaSal National Forest
599 West Price River Drive
Price, Utah 84501

2600

LETTER 17

June 6, 1983

Colin P. Christensen, Area Manager
Bureau of Land Management
Grand Resource Area
P.O. Box X
Moab, Utah 84532

Dear Pete:

We have reviewed the "Draft Resource Management Plan and Environmental Impact Statement for the Grand Resource Area, Moab District, Utah" and have some specific concerns on the plan's content which I would like to bring to your attention.

17-1 Our major concern is with the number of elk for the Herd Unit 20 - Moab (LaSal Mountains) of Table 3-3 (pages 3-11), in the column titled "Estimated Prior Stable Population." Elk were first sighted on the LaSal Mountains in the early 1940's and the current population contains the largest number of animals to ever inhabit the area. Table 3-3 shows the prior stable population as being 2.5 times the estimated current population, which is clearly not the case.

Personnel on the Moab Ranger District recently contacted Joe Cresto concerning this problem. Joe informed them that the Utah Division of Wildlife Resources provided him with that information in 1980. Joe also felt that the numbers in the "Estimated Prior Stable Population" column was actually a management goal which the UDWR hoped to achieve with this area's elk herds. If so, we would like to see the title of that column changed to reflect the true situation. A brief narrative on the techniques used by the UDWR to arrive at those numbers would also be very informative.

17-2 My second concern is with the number given for the current population of elk on pages 2-32. I am assuming that this number, 747, is the sum of the "Estimated Current Population" of the Moab, Book Cliffs, and Dolores Triangle herds. This current population estimate does not correspond with the estimate in Table 3-3, (pages 3-11) which is 1,030 elk.

As mentioned earlier, our major concern is using the column heading "Estimated Prior Stable Populations." This title is inaccurate and should be changed to reflect that the numbers given are UDWR management goals. A section in the narrative would be very helpful in understanding how the UDWR arrived at these numbers.

Sincerely,

REED C. CHRISTENSEN
Forest Supervisor

Response to Letter 17 from the U.S. Department of Agriculture, Forest Service, Price, Utah, Reed C. Christensen, Forest Supervisor

17-1 The term "estimated prior stable population" was explained in the response to Letter 14 (comment 3) from the Moab District Grazing Advisory Board. Table 3-3 has been changed as suggested and is reprinted in Chapter 3 of this proposed RMP and final EIS.

17-2 The current population of elk shown on page 2-32 of the draft should be the same as that shown on page 3-11 (1,030 elk). This change is listed in Chapter 3 of this document.

LETTER 18

COMMENT SHEET

DRAFT GRAND RESOURCE MANAGEMENT PLAN AND ENVIRONMENTAL IMPACT STATEMENT

Name: Bill Cunningham

Address: 2605 Kelley Drive Grand Jct, Colo. 81501

Representing: Myself - District Advisory Board

COMMENTS

18-1 I do not agree with the Proposals on the Salinity and Soil erosion on Flats on the Cisco Desert, That Livestock Use is a high Contributor to this erosion. As now operated The Livestock are gone for 5 to 6 or 7 months. Does not need any Futher reduction in time or numbers.

Cannot agree with reduction in sheep numbers to accomodate an Antelope Plant. IF the Plant occours I don't think Sheep numbers or time is necessary at this time.

I agree to the monitoring of the ranges for the next 5 years. IF done Correctly and with the Permitee.

18-2 Spring use & wildlife use are a concern. It looks like there is Plenty of Forage for both wildlife & the Livestock that is Permitted, in the resource area.

I have other Concerns but I think they have been Covered in other meetings.

I appreciate the opportunity to Comment to the Grand Eis.

Bill Cunningham

Please Mail to:

Bureau of Land Management
Grand Resource Area
P.O. Box M
Moab, Utah 84532

Response to Letter 18 from Bill Cunningham, Grand Junction, Colorado

18-1 All proposals, benefits to salinity and watershed values, and livestock contribution estimates were calculated using existing research results and studies in this area or in areas with similar soils, vegetation, and climatic factors. Livestock are absent for 5 to 6 months; however, their presence on the range during a critical time period results in soil disturbance.

18-2 Changing the season of use would reduce competition between domestic sheep and antelope on eight allotments. Spring use by livestock is a concern because of (1) the growth requirements of the vegetation and (2) competition with antelope for forbs and early grasses. Monitoring studies will determine vegetative trend.

LETTER 19 COMMENT SHEET

DRAFT GRAND RESOURCE MANAGEMENT PLAN AND ENVIRONMENTAL IMPACT STATEMENT

Name: Marilyn & John Bicking

Address: 317 Demarest Avenue

Oradell, New Jersey 07649

Representing: Self

COMMENTS

19-1 We recommend that the approximately 50 acres already excluded from WSA 139-A (between-the-creeks) below the cliff line (4,800-foot elevation); and all additional land below the cliff line in Sections 13, 14 and 24 of T-26-S, R-22-E, SBL&M; be offered for sale to contiguous land owners at fair market value.

Please Mail to:

Bureau of Land Management
Grand Resource Area
P.O. Box M
Moab, Utah 84532

Response to Letter 19 from Mr. and Mrs. John Bicking, Oradell, New Jersey

19-1 Public lands to be offered for sale must meet specific criteria established by law. The identified parcels do not meet the requirements for sale for the following reasons:

The 50 acres already excluded from WSA UT-060-139A are part of the Mill Creek drainage and possess significant public values. These include dispersed recreation opportunities and wildlife habitat. Sale of this tract would be inconsistent with Section 203 of the Federal Land Policy and Management Act of 1976 (FLPMA).

The land below the cliffline in Sections 13, 14, and 24 of T. 26 S., R. 22 E., SLB&M was remanded to BLM for inclusion within a WSA in a decision by the Interior Board of Land Appeals in a suit brought by the Utah Wilderness Association, et al. (IBLA 81-648). Sale of this land would conflict with 43 CFR 2710.

LETTER 20

Gulf Oil Exploration and Production Company

D. H. Messer
District Land Manager

June 10, 1983

P. O. Box 1150
Midland, TX 79702

Re: Draft Resource Management
Plan and Evironmental
Impact Statement for the
Grand Resource Area,
Moab District, Utah

Mr. Colin P. Christensen
Area Manager
Bureau of Land Management
Grand Resource Area
P. O. Box M
Moab, Utah 84532

Dear Mr. Christensen:

In reference to the four alternatives developed for resolving the ten planning issues identified for the captioned resource area, Gulf Oil Corporation recommends adopting Alternative A. Our recommendation applies only to the minerals planning issue, particularly oil and gas operations. We believe oil and gas lease stipulations described in Appendix R of the Grand Resource Management Plan draft provide adequate environmental protection in connection with oil and gas operations. To continue the present level of mineral resource use may result in additional oil and gas discoveries.

Thank you for the opportunity to comment on the Grand Resource Management Plan draft.

Yours very truly,

D. H. MESSER

SHM:spb

Gulf

LETTER 21

P.O. Box 1015
Monticello, Utah 84535
June 9, 1983

Mr. Colin Christensen
BLM Area Manager
Grand Resource Area
P.O. Box M
Moab, Utah 84532

Dear Mr. Christensen,

I would like to submit the following comments on the Draft Resource Management Plan and Environmental Impact Statement for the Grand Resource Area.

21-1 The Draft RMP completely ignores Cultural Resource issues. The rapid destruction of archaeological sites on BLM land is an issue that the BLM cannot ignore any longer. What does the BLM plan to do to protect these cultural resources? The secondary impacts from energy development in the Book Cliffs has resulted in the destruction of Rock Art panels in the Sego Canyon and Westwater Canyon areas and extensive pot hunting in other previously remote areas. All over the Southwestern United States archaeological sites are being destroyed because Federal Agencies such as the BLM won't make an effort to save these irreplaceable treasures. The low priority given to cultural resources by the BLM is evident by the lack of an archaeologist on the planning team. You can't make the problems go away by pretending that Cultural Resources aren't an issue that needs to be addressed in the RMP. The RMP should be rewritten to include the following Cultural Resource issues:

21-2 1) How does the BLM plan to actively protect Cultural Resources?

21-3 2) What actions are planned to stop pot hunting in archaeological sites?

21-4 3) How does the BLM plan to salvage the archaeological sites that have been vandalized?

21-5 4) What actions are planned to prevent the deterioration of Cultural Resource sites caused by too much visitation and other human erosion factors?

21-6 5) How will the BLM reduce the 'secondary impacts' caused by energy and mineral development?

21-7 6) How does the BLM plan to enforce the antiquities laws?

21-8 7) How does the BLM plan to accelerate the recording of archaeological sites on BLM land by using avocational archaeologists and para-professional archaeologists?

Other issues that should be addressed in the RMP are:

1) No chaining ("land treatment") should be allowed on VRM Class II or Class III areas.
2) Wilderness Study Areas that are dropped from further study or are not designated Wilderness Areas by Congress should be designated and managed as Outstanding Natural Areas.

I hope the BLM will revise the RMP to include Cultural Resource issues as a valid part of the planning process instead of ignoring them as it has done in the past.

Sincerely,

Owen Severance

Response to Letter 21 from Owen Severance, Monticello, Utah

21-1 Please see the response to Letter 1, comment 1.

21-2 Please see the response to Letter 1, comment 2.

21-3 A limited number of patrols are conducted by recreation and surface protection personnel. Persons caught vandalizing cultural resources will be prosecuted under existing laws.

21-4 When, in the course of a cultural clearance, it is discovered that a significant site has been vandalized, the site is backfilled to avoid further disturbance.

21-5 Two historic structures have recently been stabilized. Additional projects will be undertaken in the future as problems are identified.

21-6 Vandalism to cultural resources resulting indirectly from roads constructed for energy and mineral development is a bureauwide concern. The nature and causes of such impacts are the subject of a current BLM sponsored study. Information from this study will be used to develop methods of reducing future impacts.

The BLM will use any and all statutory and regulatory authority available to prevent secondary impacts. Strict stipulations are and will continue to be applied to all development related permits, and a strict compliance program will continue to be enforced.

21-7 Please see 21-3 above.

21-8 The development of a survey program using volunteers is currently being considered by the BLM, the Forest Service, the Utah Historic Preservation Office, and the Utah Professional Archaeological Council.

LETTER 22

R.R. 1
Camp Douglas, WI 54618
Sunday, 29 May 1983

Grand Resource Area Manager
Bureau of Land Management
P.O. Box M
Moab, UT 84532

Colin P. Christensen, Area Manager:

I urge BLM to maintain and implement Alternative C of the draft Grand Resource Management Plan. Alternative C, BLM's preferred alternative, is a significant improvement over present management in several aspects: 1) increased ORV restrictions (there essentially no restrictions at present), 2) limited proposals for land disposal, 3) increased closures to mineral entry, 4) long overdue increases in oil/gas lease restrictions, and 5) a proposal for a Negro Bill Canyon ONA.

The RMP's format is also commendable. Considering the difficulties of organizing a huge body of data and the requirements of NEPA, Moab BLM has put together a logically organized, well-illustrated account of the planning alternatives. The generous offering of maps is particularly appreciated. I suggest, though, that Table 2-2 and Chapter 4 be more prominently cross-referenced--either at the top of each page in these sections or in the discussion of each management action.

22-1

22-2 The weakest part of the plan is the one on grazing. As long as BLM will not propose any changes until after the five-year monitoring period, why not wait to issue a grazing EIS then? I think that the recommendations in Alternative C for grazing are sound even without the monitoring period data. Why not begin implementing them now?

The proposed ORV limitations and closures are huge steps forward for resource management in your district. The full closure of Negro Bill Canyon and the strict limitations in Mill Canyon are especially important. These canyons provide fantastic wilderness experiences with plentiful water in desert environments. Motorized protection and wilderness recreation needs require that these canyons be closed to motorized recreation.

The proposed oil/gas leasing restrictions are excellent. I urge you to match them with closures to mineral entry--especially in the ACECs. Above all, I urge BLM to maintain its strong resource protection stance in the Grand RMP.

Rodney Greene

Response to Letter 22 from Rodney Greeno, Camp Douglas, Wisconsin

22-1 Additional cross-referencing within the Draft RMP/EIS would help clarify the relationships among the various sections of the draft. Publication of the proposed RMP and final EIS in an abbreviated format precludes this action.

22-2 The management actions discussed in the alternatives would be implemented after the RMP is approved. Implementation would not be delayed until the end of the monitoring period. This period is necessary only to determine the appropriateness of stocking rates and the results of implemented management actions.

LETTER 23

RED ROCK 4 - WHEELERS
P.O. Box 1471
Moab, Utah 84532-1471
Phone (801) 259-8402 or 686-2300

June 10, 1983

Pete Christensen, Area Manager
Bureau of Land Management
Grand Resource Area
P.O. Box M
Moab Utah 84532

Re: Draft GRA RMP/EIS Public Comments

Dear Pete:

After reviewing your Draft RMP/EIS for the Grand Resource Area, we offer the following comments.

23-1 The Red Rock 4-Wheelers have been active in providing imput to the BLM concerning the public lands for several years. In light of this we were disappointed that our organization was not listed in your EIS as receiving a copy.

The alternative that we prefer for off-road vehicle use and management is Alternative "B" which would designate the entire GRA as open for ORVs. It does not cost the BLM anything to allow ORV use on public land. The roads and trails that are used have been constructed over the years by private companies: oil and gas, mining, grazing, etc. These trails are also maintained by private companies so there is no tax money involved. On the other hand large expenditures of tax money will be required to police citizens off these public lands. The lone Technician identified in the Support section of your EIS will not be nearly enough to provide the police action necessary to enforce your preferred alternative restrictions on 635,894 acres throughout your GRA.

Additionally ORV closures and limitations will further hamper the exploration and development of energy and mineral resources on the public lands. Under the 43 CFR 3809 regulations - titled Surface Management of Public Lands Under the US Mining Laws, Subpart 3809-1.4 - a lengthy and costly plan of operations must be approved before any mining exploration or development activity can take place on areas designated as "closed" or "limited" to ORV use as defined in 43 CFR 8340 regulations. As the BLM classifies more and more land as either "limited" or "closed" to ORV use it also further restricts America's ability to find and develop its resources because of restrictive, burdensome regulations promulgated by single-use oriented individuals within the Department of the Interior.

We would like to address several items where we see problems, discrepancies, or obscurities within the document itself.

We feel that the overall tone of the BLMs discussion of this issue represents the BLMs attitude towards ORVs and the ORV resource, and that is negative. The issue of ORV use is consistently treated with great negativism within the EIS. Nowhere does the EIS address what GRA is going to do for the ORV user, or to enhance the ORV resource. This is directly counter to your own instructions. Item 4 of the ORV planning criteria on p. 1-10 specifically states the RMP/EIS will identify current and potential recreational ORV use areas. This has not been done. ORV "impacts" are consistently described in a negative tone: the underlying assumption appears to be that ORV use

23-2 | is somehow "bad." For example, on p. 3-39 the EIS talks of "the" littering, vandalism, and damage identified by survey respondants. Does BLM agree with these observations, or recognize them as merely perceptions of the respondants?

23-3 | The Map of ORV use areas, Fig. 1-6, is misleading. Only a small percentage of the actual ORV routes are shown. This map appears to be limited to major recreational ORV routes, such as past and present Jeep Safari Routes, and if this is the case should be re-titled. Many side routes branch off of these and many areas show no ORV routes: for example old seismic lines in the Cisco Desert, the oil and gas exploration routes in the Book Cliffs, or the "excessive" roads in the Mill Creek area.

23-4 | The EIS does not state what the public is being asked to respond on. The cover letter, which is not bound in the EIS and therefore cannot be considered part of the document, is the only place that the dates of the public comment period, or even the existence of a comment period, are mentioned. The cover letter merely asks the reader to review and evaluate the quality of the EIS. The quality is uneven and the general evaluation is, in a word, confusing.

23-5 | The confusion lies with an obscure organization of the EIS. There is a lack of cross-referencing among issues. To follow one issue throughout the EIS, such as ORV use, and be sure you have gleaned it all is almost impossible for the average reader. Each issue states, to a degree, the other issues that impact it, but not which other issues it impacts. To follow the ORV issue, for example, it is not enough to look on page 2-32. The discussion of the ORV issue does not list a conflict with livestock, but p. 2-24 and Table 2-3 both mention this. On p. 2-32 it is stated that there is a conflict between ORV use and minerals, but that is not mentioned in the minerals issue starting on p. 2-45. We could not find further mention of the alledged conflict in the entire EIS. The planning criteria 2 on p. 1-10 mentions conflicts among ORV users, but this is not mentioned again. Nowhere is the ORV use issue summarized; the Table 2-11 leaves out this issue altogether. Why?

23-6 | The ORV discussion is scattered between the ORV issue and the Recreation issue. Items A-18 and A-19, Table 2-2 and elsewhere in the EIS, should be under ORV, not Recreation. Likewise, the Recreation Map, Figure 2-24, shows ORV areas and items not shown on the ORV map, Fig. 1-6. All items pertaining to ORVs should be shown on the ORV map.

The discussion of the Affected Environment does not include a discussion of the ORV resource, but the BLM is able to map the resource (Fig. 1-6 and 2-24) and is able to describe it in other documents such as the wilderness Site Specific Analyses for the Grand Resource Area. Bits and pieces of the ORV affected environment, however, are discussed under other issues where alledged "conflicts" exist. Nowhere is the discussion brought together into an understandable passage.

23-7 | The EIS is full of data discrepancies as they relate to ORV use. The EIS states on p. 3-33 that the total local importance of recreational ORV use cannot be estimated; and on p. 3.24 that "exact use figures to substantiate this observation (of increased use) are unavailable." The BLM had over one year set aside in the total RMP process in which to do inventory and gather missing data, p. 1-2. Why was no effort made to walk down Main Street once a day and count the number of out-of-town recreational ORVs parked at motels and restaurants? The BLM or Chamber of Commerce could have conducted an informal survey of motel operators as to ORV recreationists coming to the area, similar to the No-Nuke Survey conducted by Pete Parry and Governor Matheson at Canyonlands National Park. Or BLM could have asked organizations such as the Red Rock 4-Wheelers for our estimates.

Instead the BLM "Counts Vehicle Tracks" to estimate changes in use. Why was this method selected? Where were the tracks counted? How often? What season of the year? Where are the raw data? Was it done by someone who could tell the difference between a car track and a truck tire? Going on, what is meant by "general evidence of use?" Where was this data collected? When? The BLM has access to traffic counters - why weren't these used, for example on one of the "excessive" roads in the Mill Creek area, or the well-known Moab Rim Trail? We have seen local kids ride BMX bicycles up the Moab Rim and other trails - was this type of use considered? How was use on slickrock areas monitored - counting wheel tracks? Why isn't use data on the Slickrock Bike Trail given? The BLM used to monitor it. Why doesn't BLM count the number of ORV recreationists headed for the Slickrock Bike Trail, who must pass right by the Grand Resource Area Office, as often as it monitors other types of recreational use or as often as it collects the garbage at the Westwater Ranger Station?

In spite of the above assertations that use numbers and values are unknown, no mention is made of this lapse under Data Gaps on p. 4-3. However, apparently the BLM knows enough about use figures to state, on p. 3-34, that the use of horses is "still the most prevalent mode of access" to range improvements, rather than ORVs. How was this determined? Who made the inventory? What type of range improvements, and where? Why do the ranchers all drive 4x trucks if they ride their horses over their spreads? BLM knows enough about use to state in Table 2-11 that closing 7 miles of "excessive" roads would decrease the total ORV use by only 1%. How was this figure determined if no data are available? Did BLM ask commercial outfitters about ORV use when they asked about horse trips or river trips? On p. 3-37 the EIS states that outfitters use "a number of ORV trails" but neglects to state what number, which trails, and the amount of use. Don't the outfitters keep track of this type of use? Consistently the BLM refers to the "increasing use" such as on p. 4-10, A-7. How does BLM derive so many impacts if it doesn't have any data? And does the BLM count its own use? BLM and other agency personnel contribute to ORV use, especially non-recreational, whether in the pursuit of legitimate official duties or looking for places to put more eagle perches. Surely the BLM keeps track of how many miles it drives on ORV roads per year.

23-8 Oddly, on p. 4-11 under the recreation section of A-7 suddenly we have data to estimate from. Figures are given for registration of dirt bikes and dune buggies. Why is this information omitted in this section? Why is it limited to registration of this type of vehicle? It would be just as easy to figure the number of registrations of Jeeps vs. Toyotas as Kawasakis vs. Harley-Davidsons. This information is largely irrelevant. The proportion of these vehicles purchased in the GRA area bears little correlation to local use. The vehicles purchased on the Wasatch Front are not used there anyway. They are brought to southern Utah and used in places such as GRA. The total use in GRA, then, would be far greater than the ORV registration in the GRA area. This would indicate that more areas, not less, should be made available to this vast body of users.

The RMP/EIS consistently confuses ORV use with the number of ORV trails. On p. 4-11, A-7, Transportation, an increase in ORV use is correlated to an increase in the number of roads and trails. This is not correct. Recreational ORV users, no matter how many of them are out there on a given day, do not build roads. Neither do commercial outfitters driving ORVs build roads. Minerals operators and livestock operators build roads. The minerals operators are required by BLM to close and reclaim "excessive" roads. Therefore the established roads and trails may get more use, but there is no correlation between the number of users and the number of roads. On p. 4-12, A-10 the EIS states mining roads would increase access to remote areas. Using BLM logic, this would have resulted in an increase in the number of ORV users, which is not mentioned. Both are irrelevant because under the 3809 regulations these new roads would not remain open but would be reclaimed.

The Red Rock 4-Wheelers are especially interested in the BLM's determination of "excessive" roads. In Table 2-2, item C-18, the EIS states that the BLMs preferred alternative is to "eliminate excessive roads." What does the BLM define as an excessive road? What other types of recreational values does the BLM define as

23-9 "excessive"? Does the BLM go into a study of "excessive" hiking trails or "excessive" camping spots or "excessive" boat launching spots? How is the BLM proposing to close "excessive" roads without impinging on mining and grazing uses? What criteria did the BLM use to determine that these roads are "excessive?" GRA's own wilderness studies stated that these roads were excluded from wilderness consideration because they were cut by bladed equipment and would not revegetate or reclaim naturally. What is BLM going to do with these "excessive" roads once they are closed? Is GRA going to reclaim these "excessive" roads at the taxpayers expense? This is not listed in the Support section of the EIS. Is the BLM going to identify other areas with "excessive" roads in the future? What criteria will be used? What studies are planned? If the BLM has no use figures, how was it determined that the "excessive roads" are not consistently used?

23-10 The EIS is misleading in the explanation of the Executive Order covering ORV designations, on p. 2-32. The discussion of the designation of "limited" is deceptive. Under the 43 CFR 8340 regulations the "limited" classification can include limiting type of vehicle, number of vehicles, or season of use. The EIS apparently does not consider these other applications of the "limited" classification in determining potential mitigation measures for alledged "conflicts". This should be done. For example, if the problem on Mancos soils is apparent when soils are wet, as stated on p. 4-46, C-16, why didn't the EIS consider the lesser limiting measure of restricting use when soils are wet, rather than the more impacting (to ORV use) limitation of keeping to existing roads and trails? The EIS consistently slights the ORV use in considering only one aspect of the "limited" classification.

Within the EIS, impacts are treated shallowly, without reference to any supportive data or studies. The reader is apparently supposed to believe, on faith, that the BLM does not lie. It is not enough for the EIS to state that there will or will not be an "impact" or "conflict." The EIS must present facts to document the type and extent of the impact, and should indicate a source of reference. Although in later sections of the EIS references are given, this is not done at all in the earlier sections and is not done consistently.

Some examples:

23-11 p. 2-18 "The major activities impacting watersheds and causing conflicts are ... ORVs..." What is the impact to the watershed? What is the acreage?

Which watersheds: all of them? The information shown on Fig. 1-3 and 1-4 of critical erosion areas and critical watersheds shows poor correlation with the ORV areas on Fig. 1-6 - what is the problem? Who came up with these "facts" - "best professional knowledge"? Ch. p. 2-10, item C-18 states that ORVs produce 200 tons of soil erosion. How was this number determined, and to what accuracy?

23-12 | p. 2-19 "a major conflict ... is loss of forage through ... ORV activities." How was this determined? Were these the rancher's own ORV activities, or recreational ORV activities? The EIS map (Fig. 1-6) indicated most ORV use takes place on established roads and trails; in these areas forage was already removed by road construction prior to recreational ORV use taking place. Personal experience of Club Members indicates a high percentage of true ORV use off-road takes place on blow sand or slickrock, neither being highly vegetated. What is the acreage involved of forage loss, and what type and quality of plant material? How many AUMs are affected? Who says? Why is this identified as a problem for cows but not for wildlife? What is the beneficial impact to range use from ORVs?

23-13 | p. 2-24 "ORV use would be a conflict in portions of seven allotments." This section of the EIS is supposed to be a discussion of the Alternatives: why is a discussion of impacts mixed in here instead of being in Chapter 4? Is the entire acreage of each of the seven allotments affected? How? Where is the documentation? How many AUMs are involved? According to the Behind the Rocks wilderness Site Specific Analysis, the portion of the Blue Hills Allotment which is traversed by the popular Pritchett Arch and Moab Rim Jeep Safari Trails is not being grazed due to "poor feed" and the fact that "grazing capacity is quite low." (Draft SSA, p. 18) How, then, is there an impact?

p. 2-32 "Conflicts between ORV use and critical watersheds, minerals, and non-motorized recreation activities can be mitigated ..." What conflicts? Acreages? Amount of non-motorized recreational use affected? Sources of information or documentation? Why is the mitigation on the side of the other activity? Why is not the conflict resolved in favor of the ORV use?

23-14 | How was the "degree of conflict" determined? What is it? What acres have a higher degree, and what acres and areas have a lower degree? Is the "degree of conflict

resolution" related to the amount of ORV use or the amount of other use, for example horse pack trips, and why was it not mitigated by limiting or eliminating the other use rather than the ORV use? Why was the adverse impact of the other use on ORV use not mentioned? For example the impact of horse manure on the ORV recreational experience?

23-15 | p. 2-56 "ORV use ... impacts other types of recreation." How? What? Is the impact good or bad? ORV use gives access to hiking, fishing, hunting, and boating areas, but this is not discussed - instead we are led to believe that the ORV use is unsavory, practiced by "suspect" characters. Instead, "ORV activities ... cause changes in the landscape." How? Where? What types of landscapes? How many landscape types: sand dunes? slickrock? mud? How many acres of each? Again, the only resolution discussed, if conflicts were proven to exist, is "through restrictions of ORV use." Why not restrictions on the other conflicting use, such as eliminating hiking (for safety's sake) in the White Wash Sand Dunes, as has been done in places in the Little Sahara BLM Area? Also, what is the impact of other recreational uses among themselves - what other recreational uses "cause changes in the landscape"? Such as the ruts caused by the horse pack trips?

23-16 | Within the RMP/EIS, statements indicate that the impacts of ORV use are invariably negative. Impacts to ORV use, good or bad, are not identified, and therefore are not mitigated. Even slight impacts are thrown in against the ORV user, although on p. 4-2, Guideline 1 states that only significant impacts will be discussed. This wasn't done. The deck is stacked against the ORV user by compounding even admittedly insignificant impacts to give the appearance of an ominous, major threat that must be quashed.

For example:

23-17 | p. 4-10 A-7 Soils - Why would greater use cause an increased cryptogam disturbance? This is the same confusion mentioned earlier about greater use equating to greater area, which it doesn't. Moreover, is the disturbance to cryptogam significant? Which generates a greater dollar value: ORVs or cryptogam, or is this another data gap? This section reads as if 70,000 acres of cryptogam were to be extinguished. Where does the EIS show the areas of Mancos soils that are being impacted - again the implication is over the entire 70,000 acres. Where is the acreage of Mancos soils given in the EIS? Where is a chart or map showing the ORV use on the Mancos soils? How does the reference to the California Desert relate to this area, if at all? Are soils and precipitation rates similar?

23-18 | Vegetation - Is the loss of "individual plants" signif-

cant? The section states even the impact to riparian areas is "insignificant." Then why are these impacts discussed? It is not explained why the areas listed have a substantial ongoing impact to vegetation - what plant types are disturbed in the White Wash Sand Dunes? There are virtually no plants there.

23-19 | Livestock - The impact is stated as not being significant, so why is it discussed?

23-20 | Transportation - The correlation between numbers of users and numbers of roads is a fallacy.

23-21 | Scenic areas - ORV use is the way to get in to see the scenic areas. Why does the EIS assume ORV use has a negative impact on scenic values? Why is a jeep trail more ugly than an antelope guzzler? Why would ORV use on existing roads and trails diminish the potential for further special area designations? What special area designations are contemplated? Why not a special ORV area designation?

23-22 | p. 4-11 A-8 Why isn't the adverse impact to the ORV resource discussed? The lands disposed of would no longer be available for ORV use, recreational or under the public land laws.

23-23 | p. 4-18 A-18 Soils - Onsite gully erosion would be related to ground conditions more than ORV use. The impact on sand or slickrock areas would be nonexistent. How many areas are involved? Where?

23-24 | p. 4-46 C-16 Soils - No correlation is given between the acres of Mancos soils and the acres given. How many acres are Mancos? What is the use on those acres? Where is a map? There is no correlation between the map, Fig. 1-3 showing critical erosion areas and Fig. 2-8 or 2-9 showing ORV alternatives under "C" and "D". The watersheds in Fig. 1-4 all have a road in them now, so what is being protected? Terrain makes it virtually impossible to leave the established road.

23-25 | p. 4-46 C-16 Vegetation and livestock - Under Alternative "A" there was no significant conflict identified between ORVs and vegetation or livestock. What would be "protected" and why?

23-26 | Transportation - The number of new roads and trails is not related to ORV user numbers. This is a fallacy. Road building under 3809 or oil and gas regulations is virtually non-existent now since the BLM requires all new, as well as old "excessive" roads, to be reclaimed.

23-27 | Special designations - Areas shown as being under Wild and Scenic Rivers consideration in Figure 2-24 do not show a conflict with any ORV use areas in Fig. 1-6. Why is this a problem? What one WSA would be "protected"? The map indicates portions of three WSAs would be affected.

Visual - If the vegetation impact is insignificant, then so would be the visual impact, according to this.

23-28 | p. 4-46 C-17 Vegetation - If there is no significant conflict identified under Alternative "A", why is there a problem here? Where does BLM figure that without ORV use there would be a 5% increase in vegetation? For example the Behind the Rocks WSA has very little vegetation, according to the BLM's Draft Wilderness Site Specific Analysis. The WSA identifies the area impacted by ORV use as being slickrock. How will eliminating ORV use cause a 5% increase in vegetation on bare rock? The "closed" area along Westwater Canyon is not now accessible to ORVs and isn't used for such, according to BLM's Westwater Canyon WSA Site Specific Analysis. If the area is not now used for ORVs, how will vegetation increase by 5% by designating the area "closed" to ORVs?

23-29 | Wildlife - Where does BLM document harassment of wildlife by ORV users in Behind the Rocks, Westwater Canyon, or Negro Bill Canyon WSAs? How many instances of wildlife harassment by ORV users were reported to the BLM in 1982? Is this another data gap? Why would populations increase in Westwater Canyon, which is not now used by ORVs, by designating the area "closed" to ORVs?

23-30 | Visual and recreation - See the above comments for vegetation. Since the EIS ties these to vegetation, and vegetation impacts are stated as being insignificant, these impacts as stated are irrelevant and should be deleted.

23-31 | p. 4-47 C-18 Soils - How would closing "duplicate" roads in the Mill Creek area affect Ken's Lake, since the entire Mill Creek basin joins Mill Creek downstream of Ken's Lake? The ORV area is downstream of the diversion dam.

Vegetation, livestock, special designations and recreation - See comments above under C-16 and C-17.

23-32 | p.4-68 D-20 Areas shown on Fig. 2-9 are for the most part already disturbed; each watershed drainage shown in Fig. 1-4 already has a road in it. The impact analysis appears

to assume that the area is not disturbed. Again, why are non-significant impacts, such as those to vegetation, livestock, and transportation, mentioned? Where does the BLM calculate the increase to the number of wildlife species (or does the EIS mean population numbers)? Or that it would increase even with heavy traffic on adjacent existing roads, such as the one in Hay Canyon?

23-33 Discrepancies also appear in BLM's dollar figures and employment counts. On p. 3-37 BLM states that boating in Westwater Canyon has been estimated to generate $500,000 of local wages and proprietor's income and provide 45 local jobs. However your Draft wilderness SSA on Westwater Canyon WSA states that total local income is only $131,700 and accounts for 17 employees. Why so much discrepancy between the two documents? You state on p. 3-37 that the Moab Jeep Safari has been estimated to generate $23,000 in local wages, salaries and proprietor's income. Where is your data, what is your data source, for what year? Our Club figures show that in 1983, 450 vehicles participated in the Jeep Safari; using your dollar figures that translates into $51 per vehicle spent locally. We find this figure to be appallingly low. A more correct figure would be $150 per vehicle, for a total of $67,000 for the 1983 Jeep Safari. Our estimates are that during the 90 day ORV season, 50 4x4s per day (including support vehicles for dirt bike groups) are using the GRA. Using the $150 per day per vehicle figure, this amounts to $7,500 per day, $52,500 per week, or $675,000 per year spent locally during a three-month period. ORV dollars are very important for Moab's economy, and the BLM GRA ORV resource is very important to Moab. We feel it therefore pertinent to include more accurate dollar figures in the EIS.

23-34 On p. 2-61 the BLM states that management actions proposed under the lands actions and utility corridors issues have the potential to safeguard or improve recreational opportunities. As an example you list obtaining access easement across private lands in the vicinity of Cisco to safeguard continued public access to the Cisco boat launch area. Why didn't you include obtaining easements across private lands to access public lands for ORV-based recreation in the Mill Creek area and the Pritchett Canyon area? After our recent letter requesting help in obtaining access into the Mill Creek area you responded by stating that since Grand County claimed the road that it was in the best interests to let the County and the landowner resolve the issue. The BLM felt that this was in tune with the "good neighbor" policy in that the appropriate local officials solve the problems without Federal intervention. Since Grand County claims all roads within the County, why wasn't the Cisco boat launch access problem turned over to Grand County, the river runners and the landowners to solve without "Federal intervention"? Why wasn't this addressed in the RMP/EIS? Isn't the BLM consistent in its access easement policies? Why wasn't this inconsistency documented in the RMP/EIS?

While in general matters pertaining to mineral interests are outside the scope of concerns of this Club, we feel that the glancing treatment of minerals within the RMP/EIS is indicative of the

23-35 same types of problems we have noted relating to ORV use. On p. 1-17 the EIS states that the locatable minerals in the GRA, under the 1872 mining law, are gold and uranium. This is a little brief, isn't it? The BLM spent over $127,000 of tax monies for the GRA alone, to Science Applications, Inc. and Oak Ridge National Laboratories to evaluate minerals resources in relation to wilderness review areas, with the understanding that the information garnered would be used for many land-use planning efforts. This report is not even mentioned in your list of references. The report, at the request of the BLM, evaluates several energy and mineral resources, including copper and manganese, as well as vanadium, all of which are found to be at least moderately favorable within the GRA. And how about silver, molybdenum, barite, lead, zinc, selenium, and lanthanides (rare earths)? Isn't the BLM aware of the existence of breccia pipes in the GRA? Surely you are aware of the significant exploration efforts being conducted in Breccia pipes on the Colorado Plateau, and the locatable minerals being found in them. The RMP/EIS doesn't address the locatable mineral potential in this geologic environment at all. Why wasn't this done? Why wasn't the possible conflict with these geologic structures documented in the RMP/EIS's lands requested for disposal, Appendix 2?

We appreciate the opportunity to comment on the BLM's Draft GRA RMP/EIS. We look forward to having our concerns and questions answered in the Final GRA RMP/EIS.

Respectfully submitted,

George Schultz
President, Red Rock 4-Wheelers

cc: Congressman Howard Nielson
Del Vail, BLM, Washington
Roland Robison, State Director, BLM, Utah
Grand County Commission
San Juan County Commission

Response to Letter 23 from Red Rock 4-Wheelers, Moab, Utah, George Schultz, President

23-1 This was an oversight. The Red-Rock 4-Wheelers organization has been added to the mailing list.

23-2 The material referenced on page 3-39 of the draft document is a summary of community attitudes expressed by residents of the GRA during unstructured interviews and does not represent BLM policy.

Figure 1-6 in the draft shows current ORV use areas and four-wheel drive routes. The map was developed from a field survey of ORV use areas and the knowledge of resource area specialists. Potential ORVs were not included in the Draft RMP/EIS as a complete listing of such areas was determined to be infeasible.

23-3 Only primary ORV routes were identified. Numerous seismic lines and other routes suitable for ORV use are found within the GRA.

23-4 The cover letter was sent with each copy of the draft and is considered to be an integral part of the public participation effort.

23-5 The draft does not mention the livestock/ORV conflict in the ORV section because it is ORV use that impacts livestock use. Throughout the document, resource conflicts are discussed under the resource impacted. The livestock/ORV conflict is further discussed on page 1-8 under livestock requirements. On page 2-32, a conflict with minerals is mentioned in the ORV section. Mineral exploration and development activity impacts ORV use by opening up new use areas and altering current use areas. No management actions were proposed in the Draft RMP as it was determined that impacts upon ORV use could be mitigated under existing regulations. The conflict is not mentioned in the minerals section because there is no significant adverse impact upon the minerals resource from ORV use.

Conflicts among ORV uses were considered and found to be insignificant; therefore, no management actions were proposed.

ORV use impacts are summarized under the recreation component in Table 2-11 on page 2-79 of the draft document.

Resoonse to Letter 23, continued

23-6 Impacts to ORV use are shown under the recreation section in Chapter 4 of the Draft RMP/EIS, since it was determined that it would be primarily the recreational use that would be altered by the management actions.

23-7 Funding was not available for a comprehensive study of actual ORV use. Management actions were based partially upon a two-season survey of ORV related resource impacts completed in 1980. The survey was inadvertently left out of the list of references in the Draft RMP/EIS and has been added to Chapter 3 of the proposed RMP and final EIS. A copy of the survey is available for public review in the GRA office.

The absence of actual ORV use data should have been listed in the Data Gaps section on page 4-3 of the draft and has been added to Chapter 3 of this document.

The sentence on page 3-34 of the draft regarding the relative amount of ORV and horse use by ranchers has been deleted, as shown in Chapter 3 of this proposed RMP and final EIS.

The decrease in ORV use from closure of 7 miles of duplicate roads (Table 2-11, page 2-79 of the draft) was based upon professional judgment after considering the total number of miles of recognized ORV routes.

The sentence on page 4-11, Management Action A-7, should not include the word "roads." This word is deleted in Chapter 3 of the proposed RMP and final EIS.

23-8 ORV registration information was used to display the trend in use. It is recognized that this does not represent all four-wheel drive vehicles in use.

23-9 The term "excessive roads" (Table 2-2, page 2-11, Management Action C-18 in the draft) refers to roads that duplicate other roads (i.e., they provide access to the same location as another road does). The duplicate roads would be closed by installing signs. The RMP describes all ORV management actions currently under consideration. The 7 miles of duplicate roads being considered for closure are currently used for recreational purpnses but are not essential for enjoyment of the area.

23-10 Other types of use restriction under the limited use category were considered. It was determined that they would not meet management needs. ORV use on Mancos Shale is detrimental in dry weather as well as in wet weather. Much of the damage (vegetative cover removal) caused during dry weather is accelerated during wet weather.

23-11 ORV use has the potential of increasing both soil disturbance and erosion rates. The impact and degree of conflict can be seen by comparing Figures 1-2, 1-3, and 1-4 with Figure 1-6 in the draft (ORV use). The poor correlation identified in this letter indicates that the watershed protection actions would not conflict with most exising ORV routes.

Management Action C-18 was determined using an average soil erosion rate for soil types found in this area. This was determined by field investigation. The 7 miles of duplicate roads was converted to an estimated acreage figure by comparing soil loss rates at areas of "duplicate roads" to soil types with existing vegetation and cover. The difference in erosion rates between the two sites was used as a factor in the determination of this figure. The methodology for determining these erosion rates was the universal soil loss equation. Also, sediment evaluations were determined for the area in question with the following formula:

number of acres of duplicate roads x difference in tons/acre from distance and undisturbed sites = 200 tons/acre/year.

23-12 The loss of forage through ORV activity was one of the conflicts originally identified in the planning process. As the RMP developed, this was seen to be less of a problem and, in fact, no management action was proposed to restrict ORV activity because of the loss of forage. However, as mentioned in Chapter 4 of the draft document, some of the ORV restrictions proposed for other reasons would also have a positive impact on vegetation.

Loss of AUMs from ORV use was not estimated.

ORV use on public land does not usually result in a loss of forage for wildlife because of the location (away from big game and wildlife habitat areas). There is a beneficial impact to range users from ORV use, but not to vegetation or forage, which was the issue.

23-13 The impacts are mentioned here simply as an explanation of the allotment categorization process and resultant changes under the alternatives. The impacts are also mentioned in Chapter 4 of the draft document. The entire acreage of the allotments is not affected. Documentation or location of certain areas is shown in Figure 1-6 (page 1-11 of the draft). The number of AUMs involved was not determined because no management actions were proposed as a result of this conflict. Although there is limited forage in the example cited, the impact or conflict comes from the fact that it is a major ORV use area within an allotment, which includes an area larger than the specific jeep trails mentioned.

23-14 Some trade-offs proposed in the draft document (e.g., mitigation of livestock/ORV use conflicts in the Behind the Rocks and White Wash sand dune areas) would favor ORV use.

The degree of conflict was determined on the basis of observation and public comment.

23-15 Recreational and nonrecreational ORV activity is a recognized use of the public lands. White Wash sand dunes should not be limited strictly to ORV use because of other historical uses such as scouting activities.

23-16 See response 23-6 above.

23-17 Greater use would result in greater soil disturbance or increased or recurring soil disturbance in one area.

Disturbance of the cryptogam is significant when evaluating soil loss and erosion rates. The cryptogam is a natural stabilizer of soils in aridic areas and areas of fragile ecosystems.

The implication of all 70,000 acres being potentially disturbed by ORV use under the open designation reflects a worst-case analysis.

Reference to the California Desert is merely a reference to relate potential quantified impacts. No soil or watershed studies have been conducted on the soil types in the GRA. The K value generally is higher on soils in the GRA.

Response to Letter 23, continued

23-18 It is individual plants near the sandy areas that are being lost. Total loss, when compared to total vegetation in the GRA, would be insignificant.

23-19 Technically, this statement could be eliminated, as the impact is not significant. The statement that no loss of AUMs is expected was provided only for information.

23-20 See response 23-8 above. There is a correlation between increased ORV use and the development of new ORV routes.

23-21 In some cases, ORV use does impact existing scenic values through impacts to the soil and vegetation resources. ORV use on existing routes would not diminish the potential for special designation areas. The potential exists for special management of the Colorado River viewshed.

23-22 The areas under consideration for potential disposal are not considered to be significant ORV use areas. Some ORV use does take place on parcels near Moab. Other recreational uses such as camping and hunting could also be precluded. Additional analysis will be conducted prior to actual disposal of any parcel. All resource uses and values will be considered at that time on a case-by-case basis.

23-23 Onsite gully erosion depends on characteristics, such as the natural erosion rates (K value), slope, length of slope, vegetative cover, and climatic factors. These natural conditions are altered when disturbed by ORVs. The tracks and disturbance created by ORVs are linear in nature. This creates or modifies soil water movement and channelizes surface runoff, which in turn increases gully erosion. The impacts to slickrock and sand areas are minimal.

23-24 Correlation with the acres of soils derived from Mancos Shale and management action C-16 can be accomplished by viewing Figure I-2 in the draft instead of I-3 and the ORV alternatives under C & D. Watersheds are not identified in Figure I-4. If, however, this comment is alluding to the major washes and flood prone areas, limiting travel to existing roads and trails would help ensure that no additional disturbance is created in areas of watercourses where soil disturbance, soil erosion, and subsequent salinity and sediment would be more easily transported downstream.

Response to Letter 23, continued

23-25 The individual plants would be protected to provide forage for livestock.

23-26 See 23-8 and 23-20 above.

23-27 There are currently no significant problems with ORV use within the areas under consideration for Wild and Scenic River status. The ORV designation is analyzed as a preventive measure. The Behind the Rocks, Westwater, and Desolation Canyon WSAs would be protected.

23-28 A 5 percent increase would occur in plants within the entire area mentioned, which includes much more than the Behind the Rocks and Westwater WSAs.

23-29 BLM has no documented cases of wildlife being harassed by ORV activities in the Behind the Rocks, Westwater Canyon, or Negro Bill Canyon WSAs. However, there has been an increase in sediment deposits in the Negro Bill stream since the road up the canyon was improved. The increased sedimentation has had a negative impact on the aquatic macroinvertibrates present and on the overall stream quality.

As mentioned in the draft document, wildlife and their habitats generally do not tolerate human activities without incurring population losses or some degree of habitat degradation. Desert bighorn sheep, bald eagles, and other raptors are sensitive to human intrusion and noise. Bald eagles and raptors are especially susceptible to disturbances during the spring nesting season. A bald eagle nest site has been confirmed in the Westwater Canyon area. This is the only bald eagle nest known to occur in the State of Utah. An ORV closure would help to ensure that habitat for these species would remain undisturbed.

23-30 On page 4-46 of the Draft RMP/EIS, under C-17, Vegetation, it is stated, "There would be an estimated overall 5 percent increase in vegetation..."

23-31 The duplicate roads are above Ken's Lake and below the diversion dam.

23-32 The comment correctly points out that roads and trails already exist in the areas mentioned. The management action (D-20) would limit additional disturbance of the sensitive resources.

Response to Letter 23, continued

23-33 The discrepancies between the figures in the site-specific analysis (SSA) and the RMP are due to the following:

The RMP figures were based on a 3-year average use during 1980, 1981, and 1982, which was greater than the 3-year average use for 1978, 1979, and 1980 presented in the SSA.

In addition, RMP income figures include wage and salary disbursements, other labor income, proprietors' income, rental income, dividends, personal interest income, and transfer payments; the SSA income figures accounted for only wage and salary disbursements and proprietors' income.

An economic model that was more representative of both Grand County and its amusement and recreation sector was used for the Grand RMP. The amusement and recreation sector has higher than average ratios of sales/employment and sales/income, and higher than average indirect and induced multiple effects.

One error was discovered in the local importance estimates for Westwater given in the RMP. The sales estimated were adjusted from 1977 dollars to 1980 dollars twice instead of once. Correcting this mistake results in local income and employment estimates (due to boating in Westwater Canyon) of $400,000 and 30 jobs, respectively. Because the analysis is based on secondary data, a fairly wide confidence interval should be placed around these estimates. Westwater's importance to Green River, Utah ($265,000 of income and 20 jobs) and to Mesa County, Colorado ($420,000 of income and 32 jobs) was not included in the RMP since these areas lie outside the defined impact region.

The Jeep Safari's local importance estimates were given in terms of personal income and employment. Dividing the personal income figure by the number of vehicles does not give the local sales due to each vehicle; instead, it gives the locally earned income due to the expenditures associated with each vehicle.

The Jeep Safari lasts 1 day. The average length of stay due only to the safari was estimated to be 2 days, half a day before the safari, the entire day of the safari and half a day after the safari.

Response to Letter 23, continued

23-33 cont'd. A 1981 study by the Institute of Outdoor Recreation and Tourism (ISORT, 1981) estimated that the average expenditure by out-of-state parties was $40. Other ISORT studies have shown that in-state tourists spend less than do out-of-state tourists. As would be expected, local residents spend the least. Furthermore, only those expenditures by locals that exceed the amount that they would have spent without the Jeep Safari should be included in the importance estimates.

Using the ISORT expenditure estimates, the number of parties in 1983, and the average length of stay gives an estimated expenditure total of $36,000. This figure is only slightly larger than the sales figure used to estimate local income and employment. The figures used in the importance estimates seem even more reasonable when the lower expenditure by in-state visitors (40 percent of the total use) and local participants (20 percent of the total use) are taken into account.

It can be argued that the safari draws people for a longer period of time. However, it is common practice to attribute the local expenditures in any one day to the activities participated in during that day. Therefore, the activities participated in before or after the safari would be responsible for the local expenditure made during those days.

More accurate use and expenditure estimates would require obtaining primary data through statistical sampling of tourists visiting the area. Although ISORT conducts these kinds of surveys, the sampling size for Grand County was too small to estimate expenditures due to ORV use. Because people who participate in ORV activities simultaneously participate in other activities, it is difficult to break down ORV related expenditures due to those other activities. The fact that ORV use is associated with many other activities may be one of the reasons that ISORT studies for the area seldom list ORV travel among the ten most popular tourist activities.

23-34 Legal access by vehicle is available to the Mill Creek and Pritchett areas, but not to the Cisco takeout.

23-35 The Oak Ridge Studies (DOE, 1982), which examined only wilderness study areas, will be used as part of all future wilderness study efforts in the GRA.

Gold and uranium/vanadium are the only locatable minerals currently being produced from mining claims in the GRA.

The Draft RMP/EIS contained only a preliminary identification of areas to be considered for disposal. Isolated tracts and lands needed for public uses were identified, but other resource values were not considered in detail. Later a more complete evaluation, including minerals, will be made as part of an EA.

LETTER 24

Utah Wool Growers

10 WEST 100 SOUTH
SUITE 600
SALT LAKE CITY, UTAH 84101
TELEPHONE 359-3972

June 7, 1983

Mr. Gene Nodine
District Manager
Bureau of Land Management
U.S. Department of Interior
P.O. Box 970
Moab, UT 84532

Dear Mr. Nodine:

We have reviewed you draft, "Grand Resource Area Management Plan, Environmental Impact Statement".

Our concern is livestock that as alternatives are studied, and that livestock maintain their priority and not be juggled for the benefit of other activities.

The ranching operations in that area have been the main foundation for the founding of other activities. They have been the backbone of the economic base for the area, therefore, we recommend, "1) Continuance of present livestock operations and they be allowed to operate on the basis of economic units, 2) manipulate where needed the forage in such a manner that livestock are given priority for forage, 3) that new species of wildlife be curtailed and not interfere with livestock production, 4) that you recognize livestock play an important part on public lands and utilize resources that would otherwise go to waste, 5) improve watering holes, and springs for better water distribution, 6) plan for additional forage for domestic livestock."

Sincerely,

Malcolm Young
President

MY:tr

LETTER 25

Penstemon utahensis

UTAH NATIVE PLANT SOCIETY

Reply to: P. O. Box 1555
Salt Lake City UT 84110

June 10, 1983

Bureau of Land Management
Moab District
P. O. Box 970
Moab UT 84532

Re: Draft RMP-EIS
Grand Resource Area

Gentlemen:

We strongly support the preferred management alternative (C) with respect to the Onion Creek ORV closure and with respect to designating Negro Bill Canyon as an outstanding natural area. We also support limiting ORV use to designated road and trails as outlined in the draft.

Protective measures need to be implemented at all sites where *Cycladenia humilis* var. *jonesii* occurs. ORV's have invaded all or most of the known populations of this species. A motorcycle trail bisects the Onion Creek site and without protection, this population may be exterminated. For this reason fencing of the site should be considered. Implementation of alternatives A or B would inevitably lead to the destruction of at least one population of *C. humilis* var. *jonesii*. Since it is doubtful that any population destroyed would be able to be restored naturally or artifically, an irretrievable and irresversible loss would occur in addition to a reduction in the chance of this species' survival. The U.S. Fish & Wildlife Service's Denver office has recently re-submitted a listing package to Washington, D.C. for this species.

25-1 Page 2-15 of the draft appears to contain an error. According to UNPS maps, *C. humilis* var. *jonesii* does not occur in Negro Bill Canyon. On page 3-24, a different senstive plant is indicated as occurring in the canyon. Page 2-15 should be corrected and the scientific name of the smallflower columbine should be listed on pages 3-21 and 3-5 for consistency and completeness. We assume that the species that is referred to as occurring in Negro Bill Canyon is *Aquilegia micrantha*, and that the BLM considers this species "sensitive."

25-2 Additional searching should be conducted with respect to the listed Echinocereus triglochidistus var. inermis which so far has not been found on BLM lands. We acknowledge that Mr. Daryl Trotter has already done some searching for this species; in view of its listed status, more searching should be done.

Proposed land actions/exchanges, mineral leasing, utility corridors, etc. should always include the scrutiny of sensitive, unique and undisturbed native plant habitats. Areas should be declared unsuitable as appropriate. This would rarely, if ever, involve many acres of land. As a management tool, the RMP should also provide for the filling of any data gaps and the necessary gathering of information in order to properly administer rare or sensitive plant sites.

Thank you for this opportunity to comment.

Very truly yours,

UTAH NATIVE PLANT SOCIETY

Anthony J. Frates
Conservatibn Committee

AJF:t

cc: Elizabeth Neese
Duane Atwood

Response to Letter 25 from the Utah Native Plant Society, Salt Lake City, Utah, Anthony J. Frates, Conservation Committee

25-1 Comment correctly points out that C. humilis var. jonesii does not occur in Negro Bill Canyon. Aquilegia micrantha does occur and is recognized by BLM as sensitive. The text has been changed to reflect this correction (see Chapter 3 of this proposed RMP and final EIS).

25-2 Both the BLM and Forest Service have spent considerable time searching for additional populations of this species in habitat similar to that of the known populations. To date no populations have been found on lands administered by BLM.

Prior to any surface-disturbing activities, BLM conducts a clearance for archaeological resources and threatened and endangered species. This procedure affords the necessary protection for these resource values.

LETTER 26

8 32 Baron D.
Knoxville TN 37923
June 8, 1988

Mr. Kenneth Rhea
Moab District, Bureau of Land Management
P.O. Box 970
Moab, Utah 84532

Dear Sir,

I am writing to comment on the Grand Resource Area Management Plan Draft Environmental Impact Statement. (For your record I refer to 1601/1792 and 8520.) Thank you for the opportunity to comment on the DEIS.

As I read the goals of the four alternatives I selected alternative E as representing my goals for public lands to be managed by the BLM. I was disappointed to find many management actions listed under alternative C which is second to no biological under alternative B. More serious still, the proposed actions of Alternative C except for livestock which would have Alternative A, No Action. As far as I can see the issues. This combination of alternatives seems to make a mockery of the whole planning process.

26-1 I am particularly concerned that Alternative C seems do not attempt to restore bighorn populations to optimal prior stable numbers. The best I can figure out is that bighorn are in competition with domestic livestock and the exclusion of bighorn is to protect one or more [illegible] livestock operators

I recently took a vacation trip to the the Death Canyon area & I took south of the Grand Resevoir Area. One of the principal attractions of this area for me was the hopeful opportunity to see and possibly photograph desert bighorn sheep. I saw sign of bighorn but I saw much more sign of domestic livestock. Why does Alternative C not aim to increase bighorn populations up to at least half of the estimated prior stable population? Why does Alternative C which purposes to seek a balance strike entirely against the bighorn?

26-2 I do not understand how Alternative A seems to be compatible with Alternative C goals. As the DEIS states above, many of the Will be management improvements and many of the current control measures involve reducing or eliminating grazing on certain places favoring certain species. How is the BLM going to achieve areas control and wildlife improvement goals without making needed improvements in grazing practices?

I have generally high regard for BLM lands management but I am disappointed with the preferred options described in the Grand Resevoir Area DEIS. While it is good and proper that livestock grazing take place on public lands, these public lands and their resources are the birthright of ALL Americans. It is not proper for land and water quality or wildlife resources to be significantly compromised for the sake of livestock operators whose operations are damaging the lands & waters on public lands. I believe I appreciate the difficult positions faced by land managers who must seek a balance between the interests of local people who are trying to survive & living out of marginal lands and the interests of all other Americans who resources are to be protected by the BLM. Please reconsider the bias for livestock operations which are damaging the resources on public lands.

Thank you for considering my comments.

Truly yours

James McCall

Lance McCold

Response to Letter 26 from Lance McCold, Knoxville, Tennessee

26-1 Alternative C is the Limited Protection alternative. Management action C-10 would change the season of livestock use to restrict livestock from winter and spring grazing on the Hanley Dome, Mineral Point, and Potash allotments, allowing bighorn sheep populations to remain stable or increase. Management action C-22 would ensure protection of 48,245 acres of critical bighorn sheep habitat from right-of-way intrusions. As noted on page 3-13 of the draft document, bighorn population trends are currently upward. Refer to the response to Letter 14, comment 3 for an explanation of prior stable numbers.

Under Alternative D (Protection), additional restriction of livestock grazing for the benefit of bighorn sheep was considered (see Management Actions D-10, D-15, D-16).

26-2 Alternative A actions are not meant to be compatible with Alternative C goals. They are different actions to meet different goals.

MEC

LETTER 27

MINERALS EXPLORATION COALITION
Minerals Advocate In Public Policy

12649 West Cedar Drive
P.O. Box 15638
Denver, Colorado 80215
303 • 894 • 7507

June 10, 1983

Colin P. Christensen, Area Manager
Bureau of Land Management
Grand Resource Area
P.O. Box M
Moab, UT 84532

Dear Mr. Christensen:

These comments constitute the response of the Minerals Exploration Coalition (MEC) to the Draft Grand Resource Area Management Plan and Environmental Impact Statement. The MEC is a coalition of exploration companies and individuals conducting exploration on federal lands.

In view of the fact that wilderness areas designated after December 31, 1983, will be withdrawn from appropriation under the mining and leasing laws, we believe that all areas with mineral and energy potential should be excluded from wilderness designation, even though no economic deposit is now known. The withdrawal limitations will preclude the collection of new data, and new areas of mineral potential will not be found. With new discoveries effectively stopped, the policy of excluding all currently known mineral potential from wilderness should be followed, so that exploration of these areas will not be restricted and minerals might yet be produced. Explorationists tend to look at the long term because the lead time of discovery may be ten to fifteen years. The impact of wilderness on minerals should be assessed over the long term (a century or more). We believe that land use decisions should be in conformity with the policy statements made in the National Minerals Program Plan and Report to Congress released by the President in April, 1982.

The MEC would generally oppose the withdrawal from mineral entry of additional lands that have potential for future mineral and energy production. We believe withdrawals are unwise and unnecessary. They are unwise because they reduce management options and impose inflexibility, thus preempting changes that may be indicated by situation changes in the future. They are unnecessary because current exploration practice limits environmental impact and future technological advances will further limit the impact, therefore, regulations short of withdrawal are adequate for environmental protection.

In addition, withdrawal of areas where mining claims and leases exist would increase management problems because valid existing rights, including access to the lands, must be honored. Challenges of the validity of each of the claims and conflicts over approval of operating plans and lease stipulations might result in legal action.

Mineralized lands should remain generally accessible, therefore, MEC would favor Alternative B.

The Minerals Exploration Coalition thanks you for the opportunity to comment on this draft resource management plan and environmental impact statement.

Sincerely,

John D. Wells
President
MINERALS EXPLORATION COALITION

JDW/th

LETTER 28

June 12, 1983

Grand Resource Area Manager
BLM
PO Box 970
Moab, Utah 84532

OUTLAW RIVER EXPEDITIONS
P.O.BOX 790
MOAB, UTAH 84532
(801) 259-8241

Dear Gentleman and Ladies of the BLM;

First, I thank-you for the opportunity to comment on your draft Resource Management Plan/ Environmental Impact Statement (RMP/EIS). Also I wish to compliment you on your fine preperation of such a comprehensive document which I have spent many hours reviewing in attempt to provide intelligent and informed comment. This document no doubt represents thousands of man-hours of effort on your part.

My first few comments are of a more general and philosophical nature, then I will deal with comments directed to specific SSA's. My "hat's off" and I express my empathy to the BLM's mission in administering over hundreds of thousands of acres of public lands that are under pressure for use by many diverse special interest groups. Truly, these lands a some of America's greatest assets and must be protected from irretrivable loss and yet must be utilized to the benefit of Americans.

As a professional river outfitter in the area, I, of course, will tend to take a some what conservationist point of view. My business is to provide recreational river vacations to people of Americas working class. The river and canyons in which I operate a regulated by the BLM. The RMP/EIS does indeed make a good attempt at the economic analysis of the business
28-1 | operation in the local economic picture. I might like to add that the continued operation this recreational opportunity draws considerable money both from within our country and from abroad. The destruction of such use might indeed have greater impact on balance-of-trade and national assets than is represented in the economic analysis.

My greatest "gripe" is the increase of my user fees without the concurrent increase in services provided by this regulatory agency. I make a good effort to conform to all the regulation (at considerable additional expense) and yet other "pirate" operators and other form of land users are able to benefit from said land use without this regulatory and economic burden.

I certainly feel strongly about the development of Americas energy resources and energy independence. Our resources and our resourcefulness have always been our greatest strengths. I also believe that energy development can accomplished without the destruction of the lands recreational resourse value through proper scheduling and site reclamation requirements and discharge and residue restrictions. To argue that these requirements are too costly makes about as much sense as me trying to tell you that lifejackets are too costly for my passengers!

An area my greatest concern is that of enough water to run my boats on. Some measure of "instream flow" requirements may well be necessary for the future of our rivers. Also the protection of our canyons now require the legal designation of "wilderness" to prevent future dam builders from backing artificial reservoir waters into those canyon and rivers. Those of you that have vacationed on our wilderness rivers and then on our "Recreation Area" waters know the dramatic difference between the cleanness and beauty of the two. Unfortunately, these areas can only go from "preserved and used" to "developed and abused". I sure your support in preserving these areas.

With regard to the constrants of the four Alternatives A,B,C & D and the WSA's currently under consideration, my comments and recommendations are as follows:

UT-060-068A Desolation Canyon - All Wilderness - outstanding river wilderness deserving full protection

UT-060-138 Negro Bill Canyon - All Wilderness with continued permited hourseback and hiking use, otherwise ORV use will undoubtedly destroy this fragile scenic beauty. Rim area could be used for production with a one-mile setback or visual impact restriction.

UT-060-118 Westwater Canyon - All Wilderness - an outstanding and popular river wilderness area deserving full protection from all current and future impacts.

UT-060-140A Behind the Rocks - All Wilderness - I concurr with the BLM recomendation, save this area for future recreation use.

Additional Area -MILLCREEK CANYON - All Wilderness with a single designated 4WD trail. Preseve it or lose it!

The other WSA's I am not personally familar with, (I have indeed visited or operated within the WSA commented upon above) and therefore feel I cannot intelligently comment upon them.

Again, Thank-you for the opportunity to comment, keep up the good work.

Sincerely,

Joseph V. Greno
President
OUTLAW RIVER EXPEDITIONS INC.

Response to Letter 28 from Outlaw River Expeditions, Moab, Utah, Joseph V. Greno, President

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28-1 It is true that foreign visitor use affects the balance of trade; however, from a national perspective, the effect is insignificant.

LETTER 29

Noranda Exploration, Inc.
12640 W. Cedar Dr. P.O. Box 15638
Denver, Colorado 80215

noranda

Rocky Mountain District
Tel.: (303) 988-6464
Telex: 45-4375
Noranda DVR

June 10, 1983

Mr. Colin P. Christensen
Bureau of Land Management
Grand Resource Area
P.O. Box M
Moab, Utah 84532

Dear Mr. Christensen:

On behalf of Noranda Exploration, Inc., I would like to make the following comments regarding the Draft Resource Management Plan/Environmental Impact Statement for the Grand Resource Area. I am a geologist for the Rocky Mountain District of Noranda which has conducted mineral exploration programs in the Grand Resource Area at various times in the past.

In general, we support your preferred action (Alternative C) for the resource area, because it has minimal effect upon access to mineral resources such as uranium and gold.

29-1 However, I am concerned that this alternative is projected to have a negative impact on the number of oil and gas wells to be drilled and the potential annual production of oil and gas. I do not, in reading this draft, understand why the reduction in available acreage is warranted.

Thank you for the opportunity to comment on this resource plan and E.I.S.

Sincerely,

NORANDA EXPLORATION, INC.

Earl H. Detra

Earl Detra,
Geologist

ED/kd

Response to Letter 29 from Noranda Exploration Inc. Denver, Colorado, Earl Detra, Geologist

29-1 The bases for applications of the oil and gas leasing categories under the various alternatives are explained in the response to Letter 6 from the U.S. Fish and Wildlife Service.

LETTER 30

Utah Wilderness Association
325 JUDGE BUILDING · SALT LAKE CITY, UTAH 84111 · (801) 359-1337

June 9, 1983

Mr. Gene Nodine
District Manager
Moab District, BLM
P.O. Box 970
Moab, Ut 84532

Dear Mr. Nodine:

We are commenting on the Grand Resource Management Plan (GRMP). There are several questions and concerns we have about the plan and the EIS.

The planning process is a complex, difficult undertaking for the agency involved. However, when the planning process involves the public, it should be easy to understand. This does not imply planning should be so simplified that it excludes necessary data-gathering and information, but it should be both understandable and complete. Unfortunately, the draft document is very difficult to follow and understand. The breakdown of the subjects necessitates time consuming cross-referencing which complicates public involvement. If a plan is too difficult to follow, public involvement is, in fact, precluded. Obviously, this should not occur.

The integrated big picture needs better emphasis in the plan. The fragmented nature of the document regarding resources and alternatives renders any full-scale environmental analysis difficult. The interrelationships of the various resources are lost in the paper shuffle. Although grouping and categorization are necessary in an EIS, the goals of proper resource analysis and management must be met.

The draft GRMP is full of flaws. There is not enough specific information in the document to see how the BLM came up with the various alternatives. There are no rationale or guidelines given in the document as a logical framework to make resource allocation decisions. The GRMP would serve as a good scoping document for an EIS; however, it does not have the necessary data to meet the mandates of the law.

The entire plan will have to be reworked before it can meet the mandate of the law. The GRA must have an excellent plan that takes into account the significant environmental values of the region. Two national parks, Canyonlands and Arches, are either within the GRA or on its borders. Cultural resources, river recreation and wildlife values are nationally known. The public cannot afford a shoddy or rushed RMP for this region. The reworking of the plan should take the important national resources into greater account.

Planning Guidelines

30-1 § 1601.5-2 and § 1601.5-3 detail the planning requirements of criteria and threshhold levels. Where in the document is the criteria developed for the resources? Where are the threshold levels for each resource? There seems to be a lack of these two required features in the document.

Minerals

30-2 The alternatives presented for minerals do not represent a range of alternatives. Two alternatives (A & B) leave the entire resource area open to hardrock minerals with the exception of existing withdrawals. Alternative C (preferred) withdraws only 32,000 acres out of 1,800,000 acres. The protection alternative (D) proposes to withdraw only 47,000 acres. This amounts to less than 3% of the resource area!

Potash leasing would be the same in all alternatives. How can this be considered a diversity of alternatives? This is particularly important because the southern portion of the potash area slightly overlaps into bighorn sheep habitat.

Over 80% of the resource area is allocated to category 1 (open leasing) and category 2 (special stipulations) for oil and gas. Although some protection is offered under category 2, this does not seem to fit well as a protection alternative especially since the production alternative proposes to lease the entire Grand Resource Area (GRA) under category 1.

Mineral production estimates for the different alternatives have very little difference. Again, this does not reflect a diversity in the alternatives. These flaws must be corrected in the final EIS.

Appendix R must be revised. The USGS (MMS) has recently been incorporated into the BLM. The stipulations and EA process should reflect this change.

Two important oil and gas aspects the GRMP failed to consider are the concept of unitization and establishing known geological structures (KGSs). Unitization creates many management problems and precludes many management options.

Criteria need to be developed when and where lease unitization will or won't be allowed. Criteria need to be developed where and under what conditions KGSs will be established. Criteria must be developed for selecting areas for the various leasing categories and for determining what areas should be open to hardrock mineral claims and under what stipulations mining will be allowed (the formulation of mining plan guidelines). Factors that could be considered for leasing categories are critical watersheds, wildlife habitat, sensitive species habitat, percent slope, probability of mineral occurance, wilderness study areas and sensitive regions such as archaeological sites or riparian areas. Criteria could be established that would take these resources into account and assign them different leasing categories under the various alternatives. The same would apply to renewal of existing leases. Similar resource criteria could also apply to other leasable minerals, hardrock minerals (both area open and closed and the development of mining plans) and locatable minerals.

The EIS does not detail the criteria for minerals as is required by the planning regulations. The weak attempt on pages 1-17 to come up with mineral criteria in no way meets the requirements. Concrete guidelines are needed.

Wilderness

30-3 The management of WSA s and appealed units need special attention. The EIS proposes a variety of management schemes for WSA s. Unfortunately, the appealed areas were not identified in figures 1-14 of the document. These areas must be noted as they, for the most part, are under IMP management by virtue of their remanded status.

The GRMP must be delayed until the final decision on the appealed units is made. The plan makes decisions regarding management of WSAs. A "go slow" approach is necessary.

The oil and gas leasing proposals must be altered. The BLM does not have the authority to lease WSA s. Secretary Watt recently banned any new leasing in these areas. The final EIS should reflect this change.

A very disturbing statement appears on page 4-84. The SPECIAL DESIGNATION AREAS paragraph reads:

> In Alternatives A, B, and C, long-term loss of wilderness values could result from lack of protection on WSA s not recommended as suitable for wilderness designation. This would reduce the potential of these areas over the long-term for future wilderness designation.

The BLM does not have the authority to manage WSA s differently, whether recommended suitable or not. To do so is a violation of law. Congress has directed that interim protection be applied to all WSA s. They, not the BLM, are the final determiners of wilderness. The BLM must manage all WSA's and appealed units equally under the IMP until a final decision has been made so as not to preclude congressional perogatives.

All WSA s and appealed units should be withdrawn from mineral entry. All WSA s and appealed units are now off limits to oil and gas leasing. Leases should not be renewed in wilderness inventory lands, WSA s or appealed units. All of these areas should also be closed to ORV s, and recommended for wilderness designation. We have included our comments on the SSA s in the GRA as attachments to this comment.

Livestock Grazing/Vegetation

30-4 The questions and four alternatives with respect to livestock grazing do not show a diversity in options. Every single alternative except Alternative A (no action) increases livestock use over present levels. There is no discussion of significantly increasing or decreasing the AUM's allocated to livestock. The no-grazing alternative was not analyzed even though it is required to be analyzed in grazing EIS's. Why was this alternative dismissed in light of this requirement?

There appear to be several problems with the data available for the vegetative condition of the various allotments. When were the studies conducted on the ecological condition of the range? Obviously, there are problems with one-time range surveys. The major weakness is the lack of trend data for each allotment. We find it inconceivable the BLM would attempt to complete an EIS without trend data! Why isn't there trend data for each allotment? How can the BLM meet the regulations and guidelines without trend data? Without trend data now can the BLM be sure the impacts of the various alternatives are accurate?

Comparing present forage production with potential (climax) is how condition is derived. It is essential the have comparison areas and/or relic sites to determine climax. Are there any such areas in the GRA? Will comparison areas or range plot exclosures be established for monitoring studies?

Critical watersheds including areas of high salinity are impacted by livestock grazing and other surface-disturbing activities. The BLM has determined some areas in the various alternatives that are to be restricted and/or excluded from livestock grazing because of watershed reasons. What were the criteria used to determine whether an area would be recommended for special management due to watershed concerns?

There are several miles of riparian zones and streams in the GRA. What is the present condition and trend of these riparian zones? How did the BLM determine what riparian zones would receive either special management or exclude livestock under Alternatives C and D? Distribution of livestock critically affects riparian zones. Recent studies indicate riparian areas suffer even with the traditional range improvements designed for better distribution (Bryant 1982). We suggest livestock be excluded from riparian zones in most instances. The GRMP needs to develop criteria and data in order to determine how to best manage riparian zones.

There are several proposed threatened and endangered plant species in the GRA. Small exclosures or other type of management activities should be developed to protect these sensitive species from livestock and ORV s.

The goal of the vegetation/grazing management should be to improve the ecological condition of the range. About half of the GRA is in fair or worse condition (less than 50% of climax). Range and grazing systems, season of use changes, livestock class changes, better distribution and limiting livestock and surface disturbing activities all contribute to upward trend. Care must be taken to ensure these improvement activities accomplish their goal without impacting other resources. Grazing systems must meet the conditions of the land and be tailor-made for each area. Have any studies been conducted in the GRA that reflect on the merits of rest-rotation or grazing systems versus continuous grazing? Not every condition is conducive to grazing systems.

Surface-disturbing range improvements should not be proposed inside WSA s or appealed units. There are better sites outside these potential wildernesses.

The biggest problem with the grazing and vegetation portions of the GRMP is the lack of specifics. The document does not present enough specific information on proposals, present conditions and trends and criteria used to formulate alternatives. We find it incredible there are no trend data in the EIS. Has the BLM been doing trend studies in the GRA? If not, why not?

Wildlife

There is a diversity of wildlife in the GRA. The Bookcliffs harbor some of Utah's most important big game habitat. Species include elk, deer, antelope, bear, cougar and bighorn sheep. This important resource must be protected.

Bighorn sheep are extremely sensitive animals. They do not tolerate human activities and are a prime example of a wilderness dependent species. Page 2-82 of the EIS notes:

> Sixty-six percent of the bighorn sheep habitat would be protected only by the stipulations in oil and gas Category 1. The areas involved include the Potash, Mineral Bottom, and Westwater areas. This could result in bighorn sheep losses through stress and displacement if oil and gas development takes place.

30-5 The EIS further notes that prior stable numbers of bighorn sheep will not be reached under any alternative. These animals are excellent indicators of the health of the ecosystem. Proposals acknowledging the fact bighorn will not reach prior stable numbers and that they may be in jeopardy reflect poor past management, and poor proposals. Positive and vigorous steps must be taken to ensure expansion of this important species.

Areas delineated in figure 1-5 as bighorn habitat should be protected. These areas should exclude ORV s and domestic stock. No leases should be allowed nor should hardrock mineral claiming be permitted.

Elk, deer and antelope habitat need protection. Special stipulations on leases, no-leasing in critical areas, closures and livestock restrictions should be implemented and criteria established for protection.

There is not much discussion about endangered species and their habitat. There are significant data gaps. The GRMP states on page 4-3 that an inventory of the black-footed ferret is needed. This probably is the most endangered mammal in North America. Management decisions must be based upon the proper data. When information is lacking, the planning process should be slowed down until the information is available.

The information gaps are a serious problem in the document on all wildlife concerns. The GRMP mentions several different places that threshold levels for bighorn sheep/livestock conflicts, elk/livestock conflicts and deer/livestock conflicts have not been determined on the allotments where this is a problem. Threshold analysis is a pre-requisite to the preparation of a draft RMP.

Critical Watersheds

30-6 The GRMP is full of references about watershed concerns. Unfortunately, the proposed solution too often is a band aid, the placement of gully plugs or other structures. The real problem, as is noted in the EIS, is surface disturbance. It is the antithesis of good land management and planning to propose these stop-gap measures instead of resolving the problem through elimination of surface disturbing activities.

Page 4-3 notes several watershed data gaps. Again, lack of information is a problem. This cannot be tolerated in a resource management plan! Criteria should have been developed on when, where and how to deal with the watershed concerns. An example would be to declare areas over 40% slope with unstable soils as unsuitable for livestock and off-limits to leasing and ORV's. Specific guidelines must be developed.

ORVs

30-7 Again, no specific guidelines were developed regarding classification of areas for ORV use. Of course, sensitive wildlife habitat, WSA's, riparian areas, important livestock concentration areas, areas with cultural resources, sensitive plant species and areas possessing important environmental values should be closed to ORV's. Guidelines need to be developed for ORV management in the GRA.

Reality Actions

Several proposals have been made in the EIS to select lands for disposal. Public land should not be put on the auction block. If isolated tracts are needed for community expansion, they should be given to the local entity or leased under the Recreation and Public Purposes Act. The isolated tracts in the state Bookcliffs area could be transferred to the state under indemnity selections or as a part of project BOLD. The only lands that should be considered for transfer to other governmental entities are those isolated parcels that cannot be managed by the BLM.

ACEC's

30-8 The GRMP totally neglects the identification of areas of critical environmental concern. The identification and subsequent protection of ACEC's is mandated in both the planning regulations and FLPMA. Several areas could have been considered such as Onion Creek, the area east of Labyrinth Canyon and important cultural resource areas. This glaring ommission must be corrected.

Utility Corridors

The existing and proposed utility corridors avoid sensitive areas including WSA's, appealed units and sensitive wildlife habitat. New proposals should be routed through existing corridors.

Summary

The GRMP needs substantial revision to meet the planning requirements of FLPMA. We realize this type of planning process is new to the BLM. However,

this critical region cannot tolerate a management plan that is anything but the best. Unfortunately, it appears the entire plan needs substantial revision and new information before it can be accepted.

We certainly hope the BLM will take these criticisms into account. It may be necessary to re-issue a new draft GRMP after the necessary information has been obtained. It is not the decisions or management direction that is lacking, but the rationale behind these decisions and directions. The various alternatives and proposals must be justified by the appropriate data and a logical set of criteria. This has not been done.

We appreciate the opportunity to comment. Thanks very much.

Cordially,

Gary Macfarlane
Staff Member

GM/lmo

Response to Letter 30 from the Utah Wilderness Association, Salt Lake City, Utah, Gary Macfarlane, Staff Member

30-1 The planning criteria used during development of the plan are described on pages 1-3 through 1-23 of the Draft RMP/EIS.

30-2 Currently only 1,850 acres are withdrawn from mineral entry (see Table 2-2 on page 2-12 of the Draft RMP/EIS). For Alternative C, the designation of 32,000 acres represents more than a 1,600 percent increase, and the increase in Alternative D to 47,000 acres represents over a 2,000 percent increase. These withdrawals are designed to protect sensitive resource values along the Colorado River (Alternative C) and along the Colorado and Dolores rivers (Alternative D).

The alternatives range from production to protection. Under the protection oriented alternatives, nonconsumptive uses would be emphasized. The bighorn sheep habitat is in an area already leased for potash. Protective stipulations are included in the lease agreements. Proportions of the GRA that would be in various leasing categories under the four alternatives are listed in Table 2-2 on page 2-13 of the draft. Category 2 lands can be protected by stipulations for many resource values. A major portion of the GRA would be included in Category 2 under the Protection Alternative (see Table 2-9 on page 2-55 of the draft for a list of the resources that would be protected).

There would be relatively minor differences in mineral production among the alternatives because major developed areas, where production is ongoing, would remain open under all four alternatives.

Appendix R has been revised and reprinted in Chapter 3 of this proposed RMP and final EIS to reflect the BLM/MMS merger.

Unitization is the process whereby several lessees can pool their areas and resources to avoid duplication of wells. Unitization is discussed in some of the SSAs for areas under wilderness review. The SSAs are available from the Moab District Office.

A KGS is an area of known production with known geographic limits. The establishment of KGSs is beyond the scope of the RMP.

The bases for applications of the oil and gas leasing categories under the various alternatives are explained in the response to Letter 6 from the U.S. Fish and Wildlife Service.

Response to Letter 30, continued

30-2 cont'd. Mining under the 1872 Mining Law is open throughout the GRA except within 1,850 acres of withdrawn land. Stipulations necessary to prevent undue degradation are added at the time mining plans of operation are approved under the authority of the 43 CFR 3809 regulations. See page 1-17 of the Draft RMP/EIS, point 2 at the bottom of the page.

30-3 The proposed RMP and final EIS has been updated to incorporate the areas remanded to the district for further consideration. The oil and gas category system specifies types of stipulations that would apply to particular areas if leased. Such stipulations would apply if areas are not designated as wilderness. Secretarial orders will be followed regarding future leasing in wilderness study areas.

The section referenced is ambiguous and has been deleted (see Chapter 3 of this proposed RMP and final EIS). The BLM will manage all WSAs to protect their wilderness suitability until they are either designated wilderness or released from interim management.

30-4 The proposed RMP and final EIS considers two additional subalternatives which expand the range of the analysis.

The studies were conducted in 1980 and 1981. There are no reliable trend studies; the existing photo trend plots, which were established in the late 1960s have not been read because of program priorities. Impacts of the various management actions were estimated utilizing past experience and knowledge of the various resources.

Comparison areas were used during the inventory to determine potential for ecological sites. Small exclosures (4 feet by 4 feet) will be used at each monitoring site.

The areas within the GRA that have the highest salinity problems were identified for special management options (change in season of use, intensive management, livestock exclusion).

The Draft RMP/EIS does not show the present condition of each riparian area other than as they are included in the condition information for each allotment. Condition on each of the riparian areas has not been compiled or analyzed from the stand-

Response to Letter 30, continued

30-4 cont'd. point of their being riparian areas. Livestock management or exclusion was considered in those riparian areas that had major wildlife conflicts. Watershed management, such as construction of control structures, was considered (and identified in some areas) for riparian zones as well as for major drainages without riparian vegetation.

Special management (such as fencing or exclosures as suggested) may be developed as areas of threatened or endangered species are encountered. Under the Endangered Species Act, BLM is required to protect habitat for these species.

The only studies that have been conducted on grazing systems in the GRA are the existing AMPs. Results of these management actions will help to determine what type of management may be effective for other allotments that presently have no management plans.

Although there may be better sites outside WSAs, that may not be where a project is needed. Projects may be constructed inside WSAs if the nonimpairment criteria contained within the Interim Management Policy and Guidelines for Lands Under Wilderness Review (BLM, 1979) are met.

Trend data have been collected to some degree on most allotments. Some allotments have never had any trend studies established, and continuous data have not been collected on those allotments that have studies. The study is the BLM photo trend plot method. Over the years, some plots have been photographed every few years but have not been read (plot has not been diagrammed as to species present). The main reason for this has been a lack of manpower. Over 200 plots were established in the late 1960s and there has not been enough funding in recent years to continue the studies to establish reliable data.

30-5 The entire GRA was inventoried for threatened and endangered species prior to writing the Draft RMP. As identified in the draft document, there are data gaps concerning the black-footed ferret. The site-specific EAs that will be prepared for each project prior to implementation will address the possibility of potential impacts to threatened and endangered species.

Response to Letter 30 concluded

30-5 cont'd. Please refer to the response to Letter 14 from the Moab District Grazing Advisory Board for an explanation of the term "prior stable number."

30-6 The management actions proposed under the Critical Watersheds issue are not the only ones that would help to correct watersned problems. Please refer to Table 2-2, page 2-7 of the draft. Changes in season of livestock use (management actions C-10 and D-10), management of perennial streams (C-12, D-12), grazing restrictions (C-13, D-13, D-14), restrictions on ORV use (C-16, C-17, D-18, D-20, D-21), and applications of the oil and gas leasing category system (C-25, D-30) would contribute to the reduction of surface disturbance.

Criteria were developed in the draft document to deal with specific watershed concerns contained in the Critical Watersheds issue. To refer to the examole presented in this comment, leasing restrictions for slopes greater than 50 percent are found in Alternatives C and D. ORV restrictions are focused on highly saline, highly erodible soils in the Mancos Shale Formation.

Specific guidelines outlined on pages 1-4 through 1-7 of the draft have been incorporated into the planning alternatives and their specific management actions. Management actions proposed to resolve the Critical Watersheds issue are listed under the surface-disturbing activities, as well as in the issue itself.

30-7 The planning criteria followed for the ORV issue are listed on page 1-10 of the draft. Each alternative analyzes a specific ORV designation program.

30-8 ACEC designation was not proposed in the Draft RMP because it was determined that other multiple use management actions could adequately protect resource values.

NOTE: Letter 30 from the Utah Wilderness Association also included specific comments on each WSA under study in the GRA. These comments are being considered as scoping input for the Utah statewide wilderness EIS and therefore are not reprinted here.

LETTER 31

United States Department of the Interior
NATIONAL PARK SERVICE
ROCKY MOUNTAIN REGIONAL OFFICE
655 Parfet Street
P.O. Box 25287
Denver, Colorado 80225

IN REPLY REFER TO:
L7619 (RMR-PC)

Memorandum

JUN 13 1983

To: Grand Resource Area Manager, Bureau of Land Mangement, Moab, Utah

From: Associate Regional Director, Planning and Resource Preservation, Rocky Mountain Region

Subject: Review of Draft Resource Management Plan and Environmental Impact Statement for the Grand Resource Area, Moab District, Grand and San Juan Counties, Utah (DES 83/7)

We have completed our review of the subject document and would like to offer the following comments.

This document continues the recent trend by BLM toward differing proposals for designation of wilderness study areas (WSA's) under differing
31-1 management strategies. The document indicates that the Grand Resource Area contains eight WSA's, and under Alternate D (Protection) all eight would be recommended for wilderness designation. We are puzzled about the failure to make such a recommendation under any of the other alternatives. Although Alternate C (Limited Protection) includes partial wilderness recommendations for some of these areas, Alternates A (No Action) and B (Production) would not include any such recommendations. It would seem that, if all eight areas could be recommended as wilderness under one alternative, then they could be so recommended under any of the other alternatives.

31-2 We are also puzzled about the reason for designating Negro Bill Canyon as an Outstanding Natural Area under Alternate C but apparently not so designating it under Alternate D, which would presumably entail a greater amount of protection for such resources. As with the recommendations for wilderness, we believe that such a designation would also be prudent under Alternates A and B.

The visual resources surrounding Arches and Canyonlands National Parks are of concern to us because they are a component of the scenery viewed by park visitors from within the parks. We realize that these areas cannot receive the same protection as park lands, but we would like to see consideration given to averting or mitigating impacts on the visual resource as viewed by visitors to these parks. Such consideration has been given elsewhere in the plan for visitors to Dead Horse Point State
31-3 Park, wilderness study areas, and river corridors (Figs. 2-20, 2-21, and 2-22). These considerations should include visual resource management Class I designations, which are noticeably absent from Figure 3-3.

4-55

31-4 Also with regard to visual resources, Figures 2-19, 2-20, 2-21, and 2-22 show substantial portions of land adjacent to Arches and Canyonlands National Parks as open to potash exploration and leasing as well as oil and gas leasing. Certain Category 4 areas, such as wilderness study areas and the view below Dead Horse Point State Park, have been buffered by Category 2 and 3 areas, while the National Parks have not. We recommend that similar buffer areas be established adjacent to the parks because of their special preservation status as national parks and proposed wilderness areas.

We appreciate the inclusion of the provision for regular contacts with other agencies found on page 2-85. The National Park Service staff at Arches and Canyonlands National Parks would like to meet with the Bureau of Land Management in order to discuss the following issues:

1. Wildlife habitat requirements
2. Off-road vehicle (ORV) use and management
3. Minerals
4. Visual resources

Our specific concerns on these issues are addressed elsewhere in these comments.

31-5 In the event that drill feeding for livestock is contemplated on lands adjacent to the aforementioned parks or on drainages that lead into the parks, we recommend that native species be used. National Park Service policy seeks to maintain natural ecosystems and exclude exotic species as much as possible.

31-6 The National Park Service is contemplating the reintroduction of bighorn sheep and pronghorn antelope into Arches National Park. The Utah Division of Wildlife Resources has indicated their support for these actions. Habitat requirements for these species should be considered during further project planning and implementation.

31-7 In conjunction with our earlier comments on visual resource management for areas surrounding the national parks, we recommend that the proposed "open" designation for these areas regarding off-road vehicle use be reconsidered. Also, Figures 1-6 and 2-24 are in need of correction. The Island in the Sky access road is shown as a four-wheel drive route when in fact it is a county road open to regular traffic and will be paved as part of the Canyonlands General Management Plan. These same figures show the Yellow Cat four-wheel drive route entering the extreme northern end of Arches National Park. The National Park Service plans to close that route and therefore it should be deleted.

31-8 Contrary to the statement in paragraph 2 of the Air Quality section on page 3-3, air quality is also being monitored by the National Park Service as follows: fine particulate samplers at both national parks, contrast telephotometer for visibility at Canyonlands, and photography for visibility at both national parks.

31-9 The Grand Resource Area contains seven potential National Natural Landmarks. They are:

Crystal Geyser
Fisher Towers - Onion Creek Gorge
Lemon's Dinosaur Footprints
Red Canyon - Moab Canyon Fossil Localities
Tennile Morrison Fossil Wood Locality
Westwater Fossil Plant Locality
Williams Bottom Playa Deposits

Further planning for the Grand Resource Area should consider these potential designations and avoid impacts that could adversely affect the ecological and geological features of these areas. Further information can be obtained from Ms. Carole Madison, National Park Service, Rocky Mountain Regional Office, Division of Recreation Grants and Review, P.O. Box 25287, Denver, Colorado 80225 (Phone: 234-6443).

31-10 The entire portion of the Green River within the State of Utah as well as the Colorado River from the San Juan/Grand County line to the southern boundary of Canyonlands National Park are Nationwide Rivers Inventory (NRI) streams which are potential candidates for study as components of the National Wild and Scenic Rivers System. The Colorado River is listed in the NRI because of scenic, recreational, geologic, fish, and wildlife values. The Green River is listed because of scenic, recreational, geologic, fish, wildlife, and cultural values. The subject document should be modified to include this information.

We are pleased to note that the draft responds to the national significance of these streams by proposing Recreation Management Area (RMA) status and management activities for them. Recognition of their inventory status can give added support for their qualifications for RMA status.

Richard A. Strait

4-55

Response to Letter 31 from the U.S. Department of the Interior, National Park Service, Richard A. Strait, Associate Regional Director for Planning and Resource Preservation, Rocky Mountain Region, Denver, Colorado

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31-1 Since the All Wilderness alternative represents full protection, it would be appropriate only under Alternative D (Protection) in the RMP; it would be inconsistent with the goals and objectives of the No Action, Production, and Limited Protection alternatives. The proposed RMP and final EIS deletes this material.

31-2 Under Alternative D, Negro Bill Canyon would receive greater protection through recommendation as suitable for wilderness designation.

31-3 The inventory of the visual resource did not identify any Class I areas on BLM administered lands within the GRA. The Class I designation is normally given to areas managed under special designations, such as Wild and Scenic Rivers. The public lands surrounding the national parks are managed for multiple use.

31-4 The oil and gas leasing category system is oriented toward protecting site-specific resource values. The categories are not designed to act as protective buffers.

31-5 None of the areas proposed for seeding (or treatment and seeding) is adjacent to a park. Some areas under consideration for seeding on Hatch Point may influence the Lockhart Basin drainage; native species will be seeded on these sites. Appendix A, page A-1 of the draft, provides more information about mitigating measures for seeding.

31-6 Specific future proposals for big game introductions on public land within the GRA will be considered on a case-by-case basis in cooperation with the Utah Division of Wildlife Resources. All BLM policy and habitat evaluation procedures will be followed.

31-7 Chapter 3 of this proposed RMP and final EIS, which presents revisions to the draft document, includes a notation that the road to Island in the Sky is not a four-wheel drive route. This correction applies to Figures 1-6 and 2-24 in the draft. The Yellow Cat route north of Arches National Park should, however, remain on the map, even though it is to be closed at the park boundary. Closure within the park would not affect use outside the park.

Response to Letter 31, concluded

31-8 The statement on page 3-3 of the Draft RMP/EIS referred directly to the studies conducted by the National Park Service at Arches. In addition to the work cited in this comment, Buttes Resources has done some additional air quality monitoring in the Ten Mile Wash area. The second paragraph of the Air Quality section on page 3-3 of the draft has been revised in Chapter 3 of this proposed RMP and final EIS.

31-9 Sites with potential for becoming National Natural Landmarks may be nominated by a land management agency or an interested person. If a resource protection need is identified for one of the sites mentioned, nomination for National Natural Landmark status is one of several actions that could be considered in the future.

31-10 The National River Inventory identifies outstanding river segments for possible inclusion in the National Wild and Scenic Rivers system. The river segment mentioned has been inventoried, but is not presently being studied for inclusion in the system; however, having once been listed, it could be studied for designation at a later date. The study procedures would take place outside the BLM planning system.

Natural Resources Defense Council, Inc.

Public Lands Institute
1720 RACE STREET
DENVER, COLORADO 80206
303 377-9740

LETTER 32

June 13, 1983

Colin P. Christensen, Area Manager
Bureau of Land Management
Grand Resource Area
P.O. Box M
Moab, Utah 84532

Dear Mr. Christensen:

Enclosed are the comments of the Public Lands Institute of the Natural Resources Defense Council on the Draft Environmental Impact Statement/ Resource Management Plan for the Grand Resource Area.

We commend the staff of the Bureau of Land Management (BLM) for preparing a well-thought out, detailed, analytical document. The summary, concise tables, figures, and appendices contribute to a product that is readable, well organized, and informs the public of the Bureau's objectives, management actions to achieve the goals, and impacts of the management actions. It is obvious that the staff has spent much time in collecting data, analyzing existing resource use and potential resource use, and finally preparing this analytical document for the public's review.

Some issues are inadequately analyzed and others need clarification. Because the statement fails to perform an adequate analysis of grazing, we recommend a supplement be prepared.

Again, we would like to emphasize the excellent effort which has been made to prepare this RMP and draft EIS. Many features of this document should be used as a model for other plans, although we recognize that the new planning regulations issued in May could change the requirements for future RMPs. We believe the supplement should address the effect the new regulations (43 CFR Part 1600) have on draft RMPs.

Sincerely yours,

Carolyn R. Johnson

Carolyn R. Johnson
Senior Public Lands Specialist

CRJ:km
Enclosure

Natural Resources Defense Council, Inc.

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1720 RACE STREET
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COMMENTS OF THE

NATURAL RESOURCES DEFENSE COUNCIL, INC.,
AND ITS PUBLIC LANDS INSTITUTE

ON THE

DRAFT RESOURCE MANAGEMENT PLAN

AND ENVIRONMENTAL IMPACT STATEMENT

ON THE GRAND RESOURCE AREA

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General Comments

32-1 Other management actions should be proposed under the Protection Alternative (D) to fulfill the objectives and goals for this alternative and enhance the resources beyond what has been considered. In some instances Alternatives D and C are identical or not well distinguished. This may reflect in part the fine line that exists between the goal stated for Alternative D and the goal stated for Alternative C (p. 2-2). Examples are recreation and the inclusion of existing potash leases (4,600 acres) and prospecting on additional acres (150,000) for all the alternatives, including Alternative D (Protection) (DEIS S-8, 9). Should potash leases be developed to their full potential, the loss of 13,567 acres of bighorn sheep habitat could be significant (p. 4-13). Other options besides inclusion of potash leases should be explored for Alternative D and perhaps Alternative C. Lease exchanges of critical habitat areas might be possible. Has the BLM staff explored this option fully?

32-2 Potential Areas of Critical Environmental Concern receive no analysis, or even mention that we can find, yet the regulations require that priority be given to their identification, designation, protection and management (43 CFR 1601.8(c)). Why is there no discussion?

In the Environmental Consequences Chapter (4), as well as the summary, the staff has identified specific impacts as to changes, duration, and the context
32-3 of the impact, whether local, regional, or national. The detail provided is excellent; however, in many instances the impact or impacts are not labeled as to significant or insignificant -- minor, moderate, or major. The statement on p. 4-2 adds to our confusion. In the "analysis guidelines," the staff has stated "only significant changes or impacts will be analyzed." First, an analyst cannot know what impacts are significant until all the impacts have been analyzed. Second, if we interpret this phrase correctly, all the impacts discussed in Chapter 4 and in the summary are significant (unless specified otherwise) because

these are the analyzed impacts presented to the reader. Is this correct?

The staff has noted where a cumulative impact analysis was not possible or is lacking. Other than these specific noted areas, we believe some areas require more effort to comprehensively identify and quantify the cumulative impacts that occur to a resource with implementation of one of the alternatives. For example on p. 4-12, under the No-action Alternative (A), allowing mining over the entire area (except for 1,250 acres) would result in wildlife populations disturbed and displaced. What would be the cumulative impacts on the Grand Resource Area?

Erosion and Salinity Management

32-4 Minimizing erosion should receive the highest priority possible in the proposed alternative. A very large portion of the resource area is highly erodible and has extremely fragile ecosystems upon which surface-disturbing activities have long-term or irreparable impacts. These areas may have "low" soil productivity in terms of their ability to support livestock grazing, as the DEIS notes (p. 3-1) however their "productivity" in terms of non-game wildlife and scenic and recreational values is often extraordinary.

The DEIS performs an outstanding analysis of the economic impacts of increased sediment and salinity on water users downstream, but it gives less thorough consideration to the loss of productivity on eroded areas. Granted that many of the impacts on land uses such as visual quality, recreation, wildlife and conservation for future uses are difficult or impossible to quantify (especially in economic terms), we feel these multiple use values are important enough to the area to warrant additional analysis and emphasis in the proposed management-actions.

Protecting critical erosion areas and major washes (figures 1-3; 1-4) should receive greater emphasis in the proposed alternative. In many cases, placing

restrictions on one particular activity -- such as on ORV use from certain access roads, grazing, or oil and gas development -- could be an extremely cost-effective way of maintaining or enhancing the other land uses of watershed, wildlife habitat, non-ORV recreation and conservation for future land uses. BLM has made a laudable proposal to restrict ORV use to existing roads and trails in some areas, but a comparison of figures 1-3, 1-6, and 2-8 shows that most ORV restrictions are not placed where most ORV routes exist or where they overlap critical erosion and highly scenic areas. Also, a comparison of the economic benefits associated with the restrictions contained in Alternatives C and D indicates that major reductions in site erosion and watershed sediment and salinity would result from the additional ORV restrictions and grazing management practices which distinguished Alternative D from C. See pp. 2-7--2-11; 4-40, -42, -45, -47, -52, -68 and -74. Therefore, the economic benefits of additional protection of critical erosion areas under Alternative D are significant (compare Table 4-3 to Table 4-6) and should receive renewed consideration as the preferred alternative.

Grazing and Range

The EIS states that this statement was mandated by court order (p. S-1). Although the DEIS apparently meets the Court's schedule, it does not contain the substance of an EIS required by the Court's judgment to assess actual environmental impacts of permits and to comply with NEPA in all respects. Natural Resources Defense Council, Inc. v. Morton, 388 F. Supp. 829 (D.D.C. 1974), aff'd., 527 F.2d 1386 (D.C. Cir. 1976), cert. denied, 427 U.S. 913 (1976).

32-5 First, the DEIS fails to assess the "no livestock grazing" alternative which constitutes the "no action" alternative required by the CEQ regulations 40 CFR 1502.14(d)(1982) because BLM found that alternative impractical (p. S-3). As the Bureau has previously recognized, the no grazing alternative must be included in

order to provide a baseline against which to compare the environmental impacts of present and future grazing. Further, all four alternatives continue present levels of grazing at 72,236 AUMs under various management schemes and no alternative levels are analyzed (p. 3-5). Analyses of different levels including the no grazing one must be included in a supplement to the DEIS so the public may review and compare them.

32-6 Second, much necessary information and analyses are lacking. While the text and appendices do contain a great deal of information on specific allotment conditions, much of it is not presented in a useful, coherent form such that the reader can evaluate it. For example, ecological conditions are rated as low, medium, and high, but these relative terms are not related to specific standards such as tons of actual and potential forage production per acre (p. 3-3, 4; Table 3-1; and Appendix I). Necessary allotment information appears to be missing such as erosion conditions and types of plants and soils. Appendix D does contain erosion rates on those allotments with grazing conflicts and Appendix I does give the MIC category for each allotment, but Appendix D should cover all allotments. Without this information the reader cannot come to an independent conclusion on the existing range conditions and compare this with the alternatives. Present management prescriptions in Appendix K for all alternatives do not describe what that entails for each allotment other than "present" and "future" AUM levels or when and how those future AUMs are obtained. Obviously, the BLM has collected a great deal of data and we suggest it be put in understandable forms, with careful explanations and analysis so this DEIS will be the useful document intended.

32-7 We are puzzled as to why the BLM chose the No-Action Alternative (Alternative A) despite the fact that the DEIS states that serious problems exist with the current grazing program on the 67 allotments which will not be corrected under A:

> "An inherent problem in the livestock program itself is the improper season of use authorized on some of the allotments. Changing the season of use. . .would be implemented to protect forage resources under Alternatives C and D." (p. 2-23)

and,

> "Under Alternative A, . . .grazing would continue to conflict with wildlife on 26 allotments even after all management actions are taken. . . . (and) for critical watersheds would continue on 22 allotments. . . ." p. 2-24.

Both the Public Rangelands Improvement Act and the Federal Land Policy and Management Act require BLM to prevent overgrazing and resource deterioration and to improve range conditions.

Wilderness

32-8 As the Grand Resource Area staff are probably aware, the Interior Board of Land Appeals has remanded a number of areas in Utah for reassessment in the wilderness inventory and two units were placed in WSA status directly. The remand and reversal were based on the inadequacy of BLM's assessment commission of procedural errors and substantial documentation that the results would be different had BLM conducted a proper inventory. IBLA Appeal No. 81-648, 72 IBLA 125 (April 18, 1983). Because a substantial acreage lies within the Grand Resource Area, this decision will affect the alternatives and proposed management practices of the RMP. Thus, BLM should delineate these changes and schedules such that the public can comment on a comprehensive plan. We recommend a supplement be prepared to address these areas, and the other omitted or inadequately addressed issues described elsewhere in these comments, before a final EIS is prepared.

Secondly, we urge that the actions in Alternative D be adopted as the preferred alternative, with the additions of the remanded and reversed areas discussed above. This alternative would provide considerable ecological and

recreational variety in the 219,480 acres that are now ready for recommendation and in the additional areas under remand and reversal. (For a detailed discussion of these resources, values and attributes, please see Appellants Statement of Reasons, IBLA Appeal No. 81-648, which document we hereby incorporate by reference.)

Wildlife

Unlike other RMP/EISs we have reviewed, this one appears to give commendably high priority to some wildlife issues. However, the DEIS approaches its management alternatives solely in terms of habitat for four big game ungulates: deer, elk, bighorn sheep and antelope (5-6; 2-8 and 2-9). We believe that this approach ignores the many other wildlife resources present in the area (which are briefly mentioned on pp. 3-12 and 3-14) and subtracts from the overall quality of the planning effort.

While we certainly support efforts to sustain and encourage the four big game species mentioned above, we believe that the RMP/DEIS team needs to examine the apparent underlying assumptions and make appropriate changes to benefit all wildlife. These assumptions are:

1. Game species are the most economically important species for management to maintain and/or increase in population.

2. If habitat portection and enhancement focuses on big game ungulates, the habitat for all other species will be protected and enhanced accordingly.

3. The primary habitat needs for big game ungulates can be equated to the range needs of domestic livestock.

These assumptions are made by many in the wildlife management profession but we believe that BLM must take a wide perspective to carry out its responsibilities for multiple use-sustained yield management.

Specifically, we would like to propose the following:

32-9 1. BLM should devise and evaluate alternative management practices on especially varied habitat areas, such as the Mill Creek area. This area contains an unusually rich variety of wildlife, perhaps attributable to the perennial stream in a high-desert canyon, such as nesting waterfowl, black bears, both open-area and woodland raptors, and beaver occur there. Target practice, grazing restrictions and ORV closure in the western portion should greatly enhance watershed, wildlife and primitive recreation values.

32-10 2. The RMP/EIS should evaluate riparian habitat such as that along the Colorado River for additional protection and enhancement. For example, the areas just downstream from the Moab bridge where the great blue herons nest* and the areas upstream to Dewey bridge sustain many small mammals and shore and water birds. The area above may require regular patrolling, erection of barriers, and clear markings to limit effectively ORVs to existing roads and trails as vehicles drive down at every accessible point now.

32-11 3. BLM should present analyses of the populations of coyotes, bears, and cougars and whether they are in balance with small and large-prey species. Additional management techniques may include livestock herders and dogs, and allotment management plans that avoid predator habitat, prohibit trapping, and prohibit cyanide "coyote getters" or other poison techniques.

*The packet map is insufficiently scaled for us to determine with certainty whether the slough downstream is public land.

Comments by Page Number

32-12 pp.3-5, 1-3, 2-5 and throughout the document -- "vegetative manipulation" and "livestock manipulation techniques". These terms are vague and without basis in any scientific discipline. We suggest deletion of these terms and use of precise techniques or management.

32-13 p. S-9, Alternative D -- Recreation should include designation of an Outstanding Natural Area (1,375 acres) to be consistent with Chapter 4.

32-14 pp. S-9 and 2-16 -- Under Alternative D, wilderness recommendations are listed as eight. According to the Alternative C discussions and Appendix D, there were only seven areas studied for wilderness recommendation.

32-15 p. S-11, Table S-3 -- The Alternative D description of soils management actions and impacts in the second sentence does not make sense when compared with the description in Alternative C.

32-16 p. S-12, Table S-3 -- Under Alternative D, it is mentioned there would be a five percent increase in vegetation due to ORV closure. Is this total percent or an increase over that applicable to Alternative C?

32-17 p. S-13, Table S-3 -- Under Alternative B, the entry for livestock grazing seems incorrect given later analyses in the document (see Chapter 4).

32-18 p. S-15 -- All Alternatives, Cultural Resources. Given the known resources in the area (p. 3-17), it is hard to believe that no significant impacts to cultural resources would occur upon implementation of management actions such as mining, oil and gas drilling, and road building. Even with implementation of mitigation measures such as retrieval and documentation, there is always a loss of scientific information which could possibly be retrieved with future methods and techniques.

32-19 p. S-16, Table S-3 -- Under Alternative C it is stated that oil and gas stipulations would provide protection for scenic areas, including areas within

Wild and Scenic River study corridors. We believe that disruptions such as roads, surface disturbance around drill pads, noise, and human intrusion destroy scenic and wilderness qualities.

32-20 p. S-16, Table S-3 -- Under Alternatives C and D, Recreation. It is stated restrictions on ORV use will decrease ORV opportunities. In addition, it should state that this action will increase recreational opportunities for ORV users seeking natural settings or solitude in scenic recreational areas. Also the entry which states "Protection of Wild and Scenic River study corridors will ensure that their essential recreational values are diminished," is inaccurate and needs modification.

32-21 p. 3-4, Table 3-1 -- The use of the terms low, medium, and high to describe vegetation conditions should be explained.

32-22 p. 3-17 -- The description of cultural resources is scant and appears to ignore the information available. Detail should be given to explain the significance of prehistoric and historic sites, other than "low to high". The kind of sites that are found in the region should be described in some detail to give the reader an understanding of what is significant versus what is insignificant.

32-23 p. 4-10 -- The description of impacts under soils and water quality caused by increased ORV use seems to indicate that the impact is significant. We are not sure that the summary reflects the same analysis that is shown here. We realize the summary is supposed to be general. However, the seriousness of the effects of ORV use is not as clear in the summary.

32-24 p. 4-19 -- Under Special Designation Areas we suggest adding a line that explains there is also a reduction of recreational enjoyment which cannot be quantified in terms of lost income to the area.

32-25 p. 4-29 -- Under Special Designation Areas, the last line should be modified to include "long-term lowering of the VRM class" as well as short-term lowering.

32-26 p. 4-32 -- Same comment for page 4-19 is applicable.

32-27 p. 4-36 -- Economic Impacts Related to Recreation, B-13, B-15. Has BLM made any estimates of the income losses caused by mineral activities? Such estimates would provide the reader with a better understanding of the economic significance of damaged recreational resources.

32-28 pp. 4-83 and 4-84 -- The comments we made earlier concerning cultural resources losses is applicable in this section. Again, even though areas targeted for surface disturbance would be inventoried and documented, there is still a loss of scientific information over the long term. In some instances this information loss could be significant.

32-29 The Plate -- The map needs much more detail so the reader can compare it with the figures in the text to find the areas under discussion. It would be helpful to have major geographic features and roads at a minimum.

Response to Letter 32 from the Natural Resources Defense Council, Inc., Denver, Colorado, Carolyn R. Johnson, Senior Public Lands Specialist

32-1 This proposed RMP and final EIS includes two new subalternatives which expand the range of the analysis. The reduced livestock grazing subalternative contains a number of new protection oriented actions.

32-2 Please see the response to Letter 30, comment 8.

32-3 Estimating the effects of the alternatives required the team to evaluate the significance of a large number of potential impacts. In order to focus the analysis in Chapter 4 of the Draft RMP/EIS, the discussion of imoacts was generally limited to those that would be significant. In some instances, however, insignificant impacts are included in the narrative to show that they were considered in the analysis.

Maintaining the entire GRA as open to mineral location would continue the present situation. As documented in the impact assessment on page 4-12 of the draft, future mining activity is expected to disturb 30 additional acres per year. The cumulative impact of this activity (given the continued protection of habitat for threatened or endangered species as a standard operating procedure) upon wildlife from a species standpoint would be insignificant, as this activity would be widely scattered over a large geographical area and occur in a variety of habitat types. The habitat of individual animals would be disturbed. It is not possible to predict the cumulative impact of mining upon wildlife, as these impacts vary greatly from case to case. Mineral development under 43 CFR 3809 regulations will be managed to prevent undue or unnecessary degradation.

32-4 Alternative D, which is oriented toward protection and enhancement of natural values, includes actions that would minimize erosion and protect critical erosion areas and major washes. Minimizing erosion was less of a priority in Alternative C, which represents a balancing of conflicts between renewable and nonrenewable resources. As expected, watershed related economic benefits would be greatest under Alternative D.

Increased erosion would lead to a decrease or loss of soil productivity, which is not quantifiable at this time, as outlined in the analysis of economic impact.

Existing soil productivity values were discussed and quantified on pages 3-27, and 3-28 of the draft. Current state of the art in erosion modeling does not accurately quantify changes in range-

Response to Letter 32, continued

32-4 cont'd. land soil productivity. It was therefore impossible to quantify market and nonmarket value losses from changes in soil productivity (see page 4-52 of the draft). Changes in soil productivity were qualitatively discussed in Chapter 4 of the draft.

ORV limitation focused on areas of critical watershed concern and values; as noted, these do not correspond to areas of high use.

32-5 The two new subalternatives included in this proposed RMP and final EIS expand the range of alternatives under consideration for livestock grazing. The elimination of livestock grazing from individual allotments was considered on a case-by-case basis to protect sensitive resource values during the development of the RMP/EIS.

32-6 Data on erosion rates by allotment have been gathered only for those allotments that have livestock grazing conflicts.

The ecological condition ratings used have been added to clarify the definition of this term under the Glossary portion in Chapter 3 this document.

Existing ecological conditions for each allotment are shown in Appendix I of the draft. Specific, detailed vegetation and soils data pertaining to present or actual production for each grazing allotment are available for public review in the GRA office. SCS stocking guides showing potential production are not available in Utah.

Pages 3-7 and 3-8 of the draft discuss the meaning of present management for all allotments.

32-7 Please see response to Letter 38 from the State of Utah (comment 2).

32-8 Please see the wilderness section in Chapter 1 of this proposed RMP and final EIS.

32-9 An additional management approach for that portion of the Mill Creek drainage within the Moab municipal watershed is analyzed in the Reduced Livestock Grazing subalternative in Chapter 3 of this proposed RMP and final EIS.

32-10 Additional management actions that would improve riparian habitat are also analyzed as part of the Reduced Livestock Grazing subalternative. The lands downstream from the Moab bridge and upstream from Dewey Bridge are not public land.

Response to Letter 32, continued

32-11 The UDWR is responsible for managing the species mentioned. BLM has responsibility only for habitat management.

32-12 The terms "vegetation manipulation" and "livestock manipulation techniques" have been added to the Glossary section of Chapter 3 of this proposed RMP and final EIS.

32-13 Under Alternative D, the Negro Bill Canyon WSA would be recommended as suitable for wilderness designation.

32-14 The eighth area, UT-060-116/117, Black Ridge Canyons West, is being studied by the Grand Junction District and is listed separately in Appendix U.

32-15 This error is corrected in Chapter 3 of the proposed RMP and final EIS.

32-16 This would be percent increase of ground cover in relation to the present situation.

32-17 B, C, and D on page S-13 of the draft have all been revised to be consistent. The revised summary is reprinted in the proposed RMP and final EIS.

32-18 The mitigation measures described on pages 2-64 and 3-17 of the Draft RMP/EIS are designed to reduce impacts to cultural resources. In the vast majority of cases, projects avoid cultural resource sites completely. Where salvage excavations are unavoidable, some information may be lost due to the limitations of current techniques.

32-19 Roads, drill pads, and other surface-disturbing actions can alter scenic and recreational values. Stringent stipulations can mitigate or eliminate the potential adverse effects. For example, some leases have time-restrictive stipulations that prohibit activity during wildlife breeding seasons or summer tourist seasons.

32-20 The word "not" has been added to Alternatives C and D in the Summary of Management Actions and Impacts, which is revised and reprinted in this proposed RMP and final EIS.

32-21 See the Glossary portion in Chapter 3 of this document for an explanation of ecological condition ratings.

Response to Letter 32, concluded

32-22 The types of cultural resources found within the GRA are briefly described on page 3-17 of the Draft RMP/EIS. Cultural Resources are not discussed in detail for reasons explained in the response to Letter 1, comment 1. Further information is available in the form of published literature. The Utah BLM publication, A Cultural Resource Summary of the East Central Portion of the Moab District, 1980, Cultural Resource Series No. 10 (BLM, 1981), contains additional information about this subject as well as numerous references.

32-23 ORV related impacts are discussed in the Summary for the No Action alternative under both the Soils section on page 5-11 and the Vegetation section on page 5-12 of the draft document.

32-24 BLM recognizes that additional non-economic values such as recreational enjoyment may be involved in such cases. These values are difficult to quantify.

The economic impact analysis was confined to describing and quantifying local economic impacts.

Data gaps and the limitations of existing economic techniques are troublesome, particularly in estimating recreation related local economic impacts from mineral activities. The analysis of economic impacts on recreation, therefore, consisted of identifying and discussing management actions that could affect those recreational resources identified in Chapter 3 of the draft as being the most important to the local economy.

32-25 The text of the proposed RMP and final EIS has been changed as suggested.

32-26 Please see 32-24 above.

32-27 As discussed on page 4-20 of the Draft RMP/EIS, the relationship of visitation by activity type to local sales, income, and employment can be quantified; however, quantifying the relationship between management actions and visitation to the GRA has not been possible for most activities.

32-28 Please see 32-18 above.

32-29 Additional details are shown on the maps in this proposed RMP and final EIS.

LETTER 33

ARCHES NATL. PARK by Karen Kendall

SIERRA CLUB **Utah Chapter**

James Catlin
736 S. McClelland St.
Salt Lake City, Utah
84102

12 June 1983

Pete Christensen
Grand Resource Area Manager
P.O. Box 970
Moab, Utah 84532

Dear Mr. Christensen,

Please consider these comments on the Draft Environmental Impact Statement for the proposed Grand Resource Management Plan. We would like to thank you and your staff for taking extra time to explain many of your resource programs. They were extremely helpful in explaining the information and helping with photo copies.

The strength of a land use plan comes from several sources. First the information used in the plan needs to adequately estimate the factors affecting important resources. Statistical analysis can test the accuracy of the data base. The next strength of a good land use plan is derived from strong openly developed decision criteria. These criteria developed with each affected interest group form a mutually understood platform. Lastly the development of alternatives using objective evidence and unbiased analysis will develop consistent results. The strength of the plan relies on those who will be managed understanding and responding to each component as it is developed.

Some areas in the plan do contain strong elements of a good plan. Unfortunately some of the most important issues (leasing, ORV, grazing, ACEC, and wilderness, for example) have serious flaws.

The Utah Chapter of the Sierra Club offers these comments on many of the issues. In the recent past, the Chapter sent specific comments on the wilderness review. Those are also included here and we request that they be addressed in the Draft EIS.

Please send us any information concerning decisions and public comment periods on resource management in your Resource Area.

Sincerely,

James Catlin

James Catlin
Public Lands Coordinator,
Utah Chapter of the Sierra Club

Grand Resource Area
Planning Issues

Throughout the wilderness review and other resource management programs the Sierra Club has raised issues which need consideration. Several of those issues raised are considered in the draft RMP but many are not. Since the merger with ASS, additional issues now need consideration.

Issues raised in writing to the BLM:

33-1 1. Many of the major land use decisions for public lands are made in separate fragmented plans with little comprehensive environmental analysis. Those include leasing of oil and gas, coal, and other minerals; wilderness study; utility transmission development; and the nuclear waste dump. While national and regional guidance is needed, the major policies on land use need to be made in the RMP and not restrained by fragmented auxiliary administrative policies.

While mention is made to most of these within the plan, the actual land use decisions are occurring in other documents. Leasing for oil and gas has no plan which considers leasing need or economic return to the public. Coal leasing is covered in a regional EIS. Wilderness study is covered by a state EIS and the wilderness recommendations were made prior to this RMP being circulated. Utility facility development has generally been processed with environmental analysis reports on individual applications. While the site of the nuclear waste dump now supported by local government and the Secretary of the Interior is in the San Juan Resource Area, many of its support facilities would cross the Grand RA. A large number of the impacts from this facility would occur in the Grand RA.

These major actions need to be considered in the plan. Seperate decision documents fail to adequately address conflicts.

33-2 2. Under present forecasts for BLM management resources, can the BLM manage wilderness lands under the nonwilderness alternative? An analysis and published results of the budget and staff levels available are needed. For example, protection of sensitive resources under major mineral development requires added resources and this management need should be explained.

33-3 3. What is the regional supply for products and services that can only be supplied by nonwilderness designation? On public lands, other federal lands, local government lands, and private lands, what resources are available? In some alternatives, the BLM offers portions of roadless areas for sale without evaluating the ability of other lands to meet the stated need.

1.1

33-4 4. What alternate resources both on and off public lands can be used for the same end use? Many of these resources have readily available substitutes, such as fertilizer from sources other than potash. Still other minerals face a declining future demand, such as uranium. Conservation or energy including recycling of materials needs to be considered for meeting future needs.

33-5 5. On a map where have vegetation manipulation from chemicals, fire, or machines occurred? Again on a map, which areas now have ORV use designations?

33-6 6. In areas recommended to be dropped from wilderness designation, what wilderness values and special features are present?

33-7 7. What areas are now leased? For leases of minerals, what specific protection stipulations are now in place?

33-8 8. What areas are now claimed for locatable minerals? What mining plans are in effect and what special development stipulations are in place?

Since these issues were raised several times in writing to the BLM, we request an explanation as to why they were not being considered in the RMP.

The Federal Land Policy Management Act requires several issues be considered. These issues also appear not to have been adequately considered and given priority as Congress has directed:

33-9 Issue 1) The net value of archaeological sites has and will add to our understanding of America before the Europeans arrived. These resources are being destroyed both accidentally and deliberately. The destruction of some of America's most important wildlife habitats is accelerating. Increased motorized recreation is causing both primary and secondary impacts to important wildlife species, plant communities, and water resources. Grazing continues to damage important natural resources. Important relic natural communities face major disturbances. Visual, scientific, and recreational opportunities are being degraded, and in some cases lost.

33-10 Issue 2) Commercial operators on public lands are making profits from public land resources at a cost less than that offered by non-public lands. Leases and permits are being granted, and management projects conducted to subsidize permit and lease holders.

33-11 Issue 3) The BLM has not required diligent development of coal leases and should revoke those leases. Leases should not be extended unless diligent development is occurring and the lease fee is a competitive price.

33-12 Issue 4) The BLM is not directly monitoring the production of resources on public lands. Oil and gas production information is monitored by the permittee not the agency. Direct monitoring by the agency is needed.

33-13 Issue 5) No objective data or documentation exist on the forage condition of the range and current animal use. Decisions on grazing management are made without adequate objective analysis of long-term range condition.

33-14 Issue 6) Gradual changes in animal and plant populations are not known and are not properly assessed at the present time. The impacts of management actions on these populations need to be predicted.

33-15 Issue 7) It is the present policy of this administration to sell as much public land as possible for less than market prices. This plan to sell public acreage clearly violates the intent of Congress.

33-16 Issue 8) It is well known that an excessive number of coal, oil, and gas leases have been issued on federal lands. The effect has been to render impractical the multiple use of resources. Excessive leasing has made mineral exploitation the dominant, single use on most BLM lands.

33-17 Issue 9) No greater waste for no net benefit to the public is possible on BLM lands than off-road vehicle use. Alternate recreation methods are restricted by ORV uses. Wildlife populations and habitats are degraded. Grazing operators see increased damage to the range and grazing facilities. The problem grows, and yet the BLM has not acted as mandated to protect BLM lands.

33-18 Issue 10) Mineral entries threaten important archaeological sites, endangered and threatened species habitat, springs and important water courses, significant recreation areas, important visual resources, etc. The majority of mining claims do not meet the necessary requirements to be deemed valid. Mining plans are not currently evaluated adequately, and modifications are not

33-19 Issue 11) Public lands are increasingly being criss-crossed by utilities and roads causing major impacts to all land users. The BLM has allowed utility development without making designations of utility corridors in the Grand RA, thus exacerbating this

problem.

33-20 Issue 12) The permitted grazing use in many cases exceeds the carrying capacity of the land.

Issue 13) Stipulations commonly found on mineral exploration permits and special use permits allow often conflicting activities with few requirements for reclamation. The choice of stipulations is inadequately covered by the land use plan.

33-21 Issue 14) The Secretary of the Interior decided not to consider areas less than 5,000 acres for wilderness consideration. BLM districts in other areas have reinstated those areas back into the wilderness review. The Moab District has not done this on East Spring Canyon. No explanation has been made on what the BLM has recommended. This area needs to be reconsidered in the wilderness review.

33-22 Issue 15) The BLM needs to consider in the plan for wilderness designation the areas remanded by the IBLA for further wilderness inventory.

33-23 Issue 16) The BL.. has allowed federal funds to be used for the personal benefit of grazing operators and members of the Grazing Advisory Council.

The selection of an alternative is guided by the planning criteria. Some of the criteria in the DEIS (Draft Environmental Impact Statement) help in this process. A majority of these criteria offer no aid in developing alternatives or in the selection of the best alternative.

33-24 Confusion appears in the use of the terms goals, objectives, and criteria. The plan uses them interchangeably. On page 1-4, for example, one objective for critical watersheds states, "surface disturbance must be kept to a minimum." That actually is a goal. Objectives are more tightly defined and include specific measurable output or achievements in defined time periods. In using goals in the place of objectives, the BL.. limits the plan's ability to prevent environmental impacts and resolve conflicting actions.

Threshold levels and resource capacities need to be established for each major natural value. These levels and capacities then need to form the criteria measurements to select alternatives. Some of these thresholds are indirectly referenced but not placed in the criteria. The DEIS refers to erosions factors and salt production levels, for example. These levels can be used as threshold levels in the criteria.

Lastly, the criteria and objectives outlined in the plan fail to guide the formation of alternatives and the selection of the most beneficial alternative. Again using the example on critical watersheds, the BL.. stated, "surface disturbance must be kept to a minimum." Figure 1-2 on page 1-5 describes saline soils which present the most important impact to salinity on the Colorado River. All of the area is open to oil and gas leasing, one of the most surface disturbing activities. More than nine-tenths of the saline soil area has no specific soil protection stipulations. The remainder of the saline soil area limit surface activity to part of the year (category 2 stipulations). Inadequate provision is made for erosion control, reclamation requirements, or vehicle use. The exploration roads are made permanent.

33-25 The preferred alternative allows uses which conflict with the goal or objective in this case. One example of this is the prefered alternative allows the burning of sagebrush (for alleged range improvement) in critical watersheds with major erosion problems. Removal of vegetation will increase erosion in those areas. In some cases this burning (disguised as "fire management") will occur in areas under wilderness study.

This is not an uncommon occurrence. As the resource areas are discussed, many of the preferred alternative decisions conflict with the published criteria, goals, and objectives.

33-26 The Utah Chapter requests that the planning goals, objectives, and criteria include the following:

1. Critical watershed:

Goal

1* Develop salinity and sedimentation monitoring to quantitatively measure the effect of management on water quality.
* Designate areas significantly contributing to sedimentation and salinity of the Colorado as areas of critical environmental concern.
* Establish salinity and sedimentation threshold levels and a planning period water quality level which will be monitored.

Objective

Within one year begin monitoring the sedimentation and saline levels in the Colorado and Green Rivers at locations at the entry the rivers into the RA, immediately before the confluence of the two rivers, and after the entrance of each major side drainage. (Only one monitoring point now exists.)

Begin soil sedimentation and salinity erosion trend analysis giving five year changes in soil degradation.

Criteria

Areas containing highly saline soils or highly erodable soils contributing to water quality degradation in the Colorado River be managed to reduce sediment and salts to a threshold level. This program be given priority over other programs.

In these critical watershed areas, mineral exploration and development activities have stipulations which limit public ORV use to maintained roads, allow no road construction in major washes or on slopes steeper than 5%, and require closure and reclamation of exploration and development facilities including roads.

Mineral exploration access be excluded from sensitive surface water courses.

2. Livestock grazing

Goal

Identify indicator animal and plant species which are sensitive to grazing. These species should not be limited to major game species or plants found favored by domestic stock.

Develop threshold levels measuring the quantity and quality of indicator species for each grazing area.

Develop range condition trends on forage, water quality and quantity, wildlife diversity and populations, ORV use, etc. (Range trends are not now known.)

Objectively monitor actual grazing use of public lands by wild and domestic animals. (Currently, the BLM does not perform first hand inventories of actual domestic grazing use. Use is now based upon forms voluntarily submitted by permittees. These forms usually reflect the number of AUMs the permittee has purchased. Actual use may not follow the permitted period or permitted number.)

Criteria

Remove grazing use from critical saline watersheds, from fragile riparian zones, from endangered plant species habitat, and during important periods from critical winter range for game and nongame wildlife.

Reduce grazing use in allotments where wildlife population levels reach the threshold level or when the forage trend is downward. Remove or reduce grazing from spreading grounds, nesting areas, and critical wildlife habitat. In the case of bighorn sheep, this means removing grazing from their habitat.

Limit range improvements (vegetation changes and water development) to areas where the costs clearly are less than benefits, where no quantifiable increase in salinity or sedimentation will occur, where wildlife range and populations are not affected, and other planning goals are first met. Range improvements funded by public money should be given a priority lower than protection for watershed, wildlife, wilderness, riparian habitat, and areas of critical environmental concern.

Reduce grazing from areas where the benefits of salinity reductions outweigh the benefits from grazing.

3. Wildlife Habitat

goal
Designate habitats of threatened and endangered (T&E) species and species being considered to be added to the T&E list as areas of critical environmental concern.

Reduce wildlife conflicts with water resources through allowed grazing level and period, fencing, and offering alternate water supplies.

4. Off-road vehicle use and management
The planning criteria need to more clearly separate recreation vehicle use (sight seeing, hunting, etc.) from permitted use (grazing, mining, oil & gas, etc.). Permitted vehicle use is managed under the specific language of the permit. Permittees often confuse public use restrictions which do not actually affect permitted use.

The Utah Chapter requests that the following ORV use desination criteria be used:

Closed Closed designations will be made on areas where significant impacts from vehicle use have or will occur, designated wilderness areas, designated primitive or natural areas, relic biological communities, endangered and threatened species habitat, archaeological sites, areas where ORV use would impact important nonmotorized recreation, areas which have no existing vehicle ways which would be impacted by ORV use, riparian habitat and water resources, areas where the BLM lacks the budget to manage ORV use, and wildlife habitat during critical seasons.

Limited Limited designations should occur on lands under Wilderness study, areas of critical environmental concern, land important for domestic and wildlife range, lands where sustained use of the existing vehicle ways will not cause impacts to the adjacent lands, the travelled way, livestock & wildlife populations, and other nonmotorized uses. Specific ways open for use to ORVs within areas designated as limited should be designated and maps produced which are available to the public. Within limited areas, the ways designed for use should be only those needed for recreation use, which don't prevent conflicts to other resources (for example, ORV use increases archaeological site destruction), and can be managed for resource protection.

Open Open designations are allowed on lands which have proven by a recorded comprenensive analysis to be able to sustain general area off-road vehicle use under the worst case use estimates. The analysis needs to consider

thresnold levels for scenic qualities, soil condition, forage production, wildlife & livestock population, and conflicting uses. Areas identified for open ORV use should be sole to be intensively managed to monitor and control the ORV use. A minimum of areas should be designated open to meet the limited demand for general area ORV recreation.

5. Cultural Resources
The BLM offers no specific inventory nor management policy for archaeological site protection. While oil & gas stipulations prohibit access roads from crossing a site until it is inventoried, no protection is given from the impacts of permittees and ORV users. The Chapter requests the following planning criteria be used:

Conduct a comprehensive 5% inventory of archaeological sites in the RA. (Currently a 1% survey has been conducted on part of the RA.)

Designate areas having site densities of 10 or more per section as areas of critical environmental concern. Manage these designated areas to restrict vehicles away from sites, to intensively inventory archaeologic resources, and to prevent theft, destruction, or degradation of these cultural values.

6. Lands actions
Planning Criteria
Lands available for acquisition: (not considered in plan)
*nonpublic lands which are critical for the management and protection of natural values on adjacent public lands
*nonpublic lands within designated wilderness areas
*lands that would improve the managment of public lands.

Lands available for sale or exchange.
Each of the following criteria needs to be met:

*lands which do not possess present or future valuable natural, scenic, historic, economic purpose.
*lands because of location or characteristic is difficult and uneconomic to manage as part of the public lands and is not suitable for management by another Federal agency.
*lands whose disposal serves a documented important public objective in the local government land management plan which can not be achieved by any other alternative. The public objective must outweigh all the benefits that could be realized in retaining those lands.

*Lands which have qualified for disposal must first be considered for exchange of other nonpublic lands which meet the acquisition criteria.
*Lands made available for sale which have met the above criteria be sold for fair market price.
(a majority of lands offered for sale in the proposed plan fail to meet these criteria)

7. Utility Corridors
   Criteria
Utility facilities be limited to designated corridors (none are designated in the RA at the present time).

Designation of a utility corridor or right-of-way only occur through a plan amendment or revision.

To minimize environmental impacts and reduce the number of rights-of-way, common rights-of-way should be required to the extent practical.

Each right-of-way or permit of access shall require removal of facilities and reclamation after the permit purpose has ended. The permittee should be responsible for the control of ORVs to prevent ORV use in sensitive areas.

8. Minerals:
   Leasable Minerals Planning Criteria:
* Limited leasing to only those lands which can adequately be proven to have diligent exploration and development within the lease period.
* Extend only leases which are diligently producing a commercially competitive mineral commodity.
* Require fair market competitive pricing on all leases.
* Require exploration to occur within two years of lease issuance.
* Revoke leases sold for more than the lease fee.
* Not more than 10% of the RA should be available for lease above the amount of land expected to be diligently explored and developed in the lease period.

Lease stipulations are described out which category attached is attached to leases is not described by the planning criteria. The following criteria need to be used:

Category 1 Minimal resource protection
Areas where this category applies include those areas where the ORV designations for open area apply. Limit the use of these stipulations to areas where current intense oil or gas production has occurred and no significant impacts are found.

Category 2 Watershed and Wildlife Habitat protection
This category needs to be divided into subcategories which will be explained later:
Category 2A Watershed Protection
Apply this criterion to critical watersheds and riparian habitat areas
Category 2B Cultural Resource Protection
Apply this criterion to areas containing archaeological sites.
Category 2C Protection of ACEC
Apply this to areas designated areas of critical environmental concern
Category 2D Wildlife and Livestock Protection
This category applies to areas which have important game, nongame wildlife or livestock resources.
Category 2E Recreation and scenic resources protection.
Areas which contain important recreation and scenic resources (class II or III VRM) should have these stipulations on any lease.

Each of these subcategories will contain common protection stipulations which apply to areas sensitive to soil erosion, slopes greater than 5% where road construction will be made, grazing lands.

Category 3 No Surface Activity
Surface protection needs to be required on lands within important natural areas to protect their resources. Certain ACECs will need this stipulation.

Category 4 No Leases Issued
Lands that are designated wilderness areas, under wilderness study, major archaeological sites, endangered and threatened species habitat, major recreation areas should not be open for lease.

Locatable Minerals

Controlling locatable mineral exploration and development offers several management options. A majority of the present mining claims fail to meet the minimum requirements necessary for remaining valid. In managing mineral development, the BLM needs to systematically evaluate the performance of assessment work and establish the presence of a valuable mineral. Claims which fail to meet the necessary criteria need to be contested for validity.

The Utah Chapter of the Sierra Club requests that mining plans be systematically evaluated and protection requirements placed depending upon the following criteria:

Sierra Club Comments, Grand RA RMP

Class 1 Operation in existing production areas
In areas where historic major mining has occurred mining plans need to include removal of surface structures, elimination of human hazards, disposal of tailings, replacement of top soil, control of erosion, water quality protection, and revegetation with natural vegetation in a manner which will allow natural plant succession. This category applies to areas where major mining activities have occurred in the past.

Class 2 New mineral activities in existing natural areas
Mining plans need to perform Class 1 requirements and avoid impacting surface water supplies, road construction on steep slopes, opening new areas to ORV use. New roads need to be reclaimed and closed to ORV access within a stated period. This category applies to areas where mining activity has not regularly occurred.

Class 3 Mining in ACEC
In areas of critical environmental concern mining plans need to include the requirements in Classes 1 and 2. In addition to these, mining plans need to limit mining activities in duration, period, and degree that would lead to an important natural value found in the ACEC receiving a measurable negative impact. Vehicle access would be limited to the mining operation and access routes closed and reclaimed after diligent operation ceases.

Class 4 Closed to mining, withdrawn from mineral entry
Areas withdrawn from mineral entry are those which are designated as wilderness areas, wild and scenic rivers, relic communities, and outstanding natural areas. Also withdrawn are areas where management of mining activities can not be allowed without significant impacts or conflicts with other multiple resources.

9. Fire Management

The planning criteria incorrectly propose to start fires for grazing range projects with no protective stipulations. Vegetation destruction should not be required to follow the same criteria placed on other vegetation manipulation methods for range changes.

10. Wilderness

The Chapter has sent extensive comments on each of the wilderness study areas in the resource area. None of the decision criteria and issues raised in those comments are specifically addressed in the draft RMP. We request that those comments be responded to in the final EIS for this plan.

c.8

Sierra Club Comments, Grand RA RMP

The plan fails to consider Lost Spring Canyon WSA dropped and not reinstated as other areas have been. The plan also fails to consider the areas remanded for further inventory to the BLM. The plan also fails to consider wilderness designation for new, additional areas identified by the Chapter in its detailed wilderness site specific analysis comments. All of these must be considered in detail in the EIS process. The Chapter requests that the BLM review the intensive inventory areas dropped from wilderness study and identify those areas where deletions were made for the same reasons the IBLA ruled invalid. Those areas should also be reinventoried.

11. Areas of Critical Environmental Concern

Mandated by FLPMA, the BLM is required to give priority to the identification and designation of ACECs. There is no evidence in the management situation assessment, the DEIS plan, nor any other document that the BLM inventoried and documented this priority. No recommended designation is made in any of the alternatives. We request that the MSA and DEIS report the inventory of important natural resources, the application of ACEC criteria, and the rationale for the BLM decision.

The Chapter has identified areas which mandate designation as ACEC. These need analysis in the preferred alternative.

ALTERNATIVES AND THEIR ANALYSIS

33-27 The proposed Resource Management Plan (RMP) places each of the alternatives in parallel columns. This helps compare the differences between alternatives. Improvements are needed with the maps provided in the DEIS. Even the BLM resource specialists had difficulty locating some of the information using these maps. The maps need to offer base information showing the location in the resource area (RA). The management situation assessment offered no improved information. No maps appeared to have been prepared that better detail resource location. The location of competing resources plays a critical role in assessing the alternative against the planning criteria. As each resource area is discussed, specific examples will be given.

In this section of the Sierra Club's comments on the Grand RA RMP, the existing alternatives will be commented on. The Chapter also requests consideration of changes to these alternatives.

Grazing

33-28 Decisions made in this plan will guide the longterm trends for forage and soil conditions for more than a decade. The grazing program in the BLM has a history of poor management. Fees for grazing are documented by the BLM at less than $2 for one animal unit month (AUM) while equivalent grazing on private land sells for more than $30 for one AUM. A large grazing allotment within the resource area recently sold for approximately $300,000.

The real return to the public for grazing fees is even less than the fee paid. A fraction of that fee goes to grazing "improvement" programs. Traditionally those include vegetation manipulation (bulldozer chainings, herbicide spraying, and burning) selected by the local grazing advisory council (who are major grazing permit holders). This DEIS proposes to continue this tradition. The plan proposes to give priority in the budget to diverting money for fire management (which in reality is sagebrush burning for grazing interests) and range improvements (which is vegetation removal). Protection of other resources is given a lower priority.

The BLM needs to openly discuss the budget and report the information that either proves or disproves these traditional problems. All the information given suggests that the problem exists. The DEIS needs to include what range improvements have been made in the last planning interval and their cost. The DEIS needs to report what permits the Grazing Advisory Council holds in the RA and which range improvements are associated with council members.

FLPMA requires the government receive fair market value for the use of the public lands. The DEIS clearly documents that this legal requirement is not being met.

"BLM has not yet begun to maintain records on actual livestock use." (Grand RA RMP pg 2-34).

For both cattle and sheep, the BLM does not systematically sample the number of grazing stock on BLM land. The numbers of cows and sheep appearing in the DEIS are the maximum number of permitted animals or the number of animals that the permittee pays a fee for. Both of these numbers appear to grossly misrepresent the actual use.

Here the management of cattle use will be used as an example. The management of sheep is equally problem prone. The permitted total herd size for the Grand RA is slightly more than 10,000 cows. On average permits are paid for a total herd of 8,000 cows. All the alternatives in the DEIS retain the current permitted level and limit livestock to 80% of the permitted level.

The economic analysis of grazing used a total cattle herd size of 7300. In 1981 the Utah Department of Agriculture estimated that the total herd size for Grand County is 3,700 cows. The difference in the resource area boundary from the county boundary could not account for the differences in these herd sizes.

If the economic analysis herd size is correct, then the BLM is allowing unpermitted grazing on public lands. The most logical choice in this period of hardship for the cattle industry is that the total herd size is closer to the Utah Department of Agriculture.

This indicates that permitted use is 2.2 times more than actual use and that fees are paid for twice as many cows as actually use the land. Cuts in the grazing fees have encouraged operators to buy more permits than are used.

Clearly, if the number of grazing animals is exaggerated, then almost all the plan's actions have no effect on land mangement. In some of the alternatives, the period of use limits grazing use somewhat. During allowed periods, the permittee still can put any chosen number of cattle on the range since operators are not normally limited by permitted grazing numbers.

The analyses of the grazing management alternatives are largely meaningless and must be redone again. The actual use needs to be objectively determined and permitted levels selected to match occurring use.

The BLM has initated a good program to assess range trends as outlined in Appendix L (page A-57 in the DEIS). A good sample size of each of the allotments is proposed to determine the diversity of species, their quality, and their production. The one flaw in the range studies is site selection. All the sites are areas that are grazed by domestic stock. For comprenensive analysis, areas not grazed by domestic stock need also to be chosen.

The Chapter agrees with the BLM that it will take many years for the information from these range studies to judge trends in range condition. The variation in range use and environmental factors (rainfall for example) can make comparison of adjacent years inconclusive. Five year intervals for trend analysis will allow more accurate estimates of changes. The dilemma is that no trend analysis now exists. The BLM is just beginning their range studies.

Levels of use are now being determined without adequate knowledge of range condition. The forecast impacts and benefits in the DEIS are not supported by the information presented by the BLM. The plan needs to openly admit that range use permits should be based upon range condition and actual use and schedule a time to gather that information and make those decisions. This plan fails to do this.

Several grazing alternatives need consideration. The first is the no domestic grazing alternative mandated by the grazing court decision. The second alternative would permit current grazing use (all the present alternatives allow this plus increased grazing). The next alternative should remove grazing for the whole year from critical watersheds, from critical winter range, from bighorn sheep habitat, from important surface water sources, and from T&E habitat. These alternatives should not have vegetation manipulation imbedded in them as all the current alternatives have.

Each of the alternatives propes catatropnic vegetation manipulation projects including chaining of pinyon juniper, chemical destruction of shrubs, and burning of sagebrush. No comprenensive analysis is performed on these programs showing the net long term costs and benefits. No other alternatives are selected for long term range improvement in those areas. These laternatives include reduced grazing use, fencing, and nonmechanical reintroduction of native plants. In the absence of good analysis of the potential damage and the history of past actions, we request that no catastropnic vegetation manipulation be recommended by the plan.

Areas of Critical Environmental Concern

33-29 The DEIS makes no recommendation for designating ACECs in any alternative. The Utah Chapter of the Sierra Club requests that the following areas be considered for designated ACECs:

Habitats for the threatened and endangered species and species now with serious threats. Those include:

Bald Eagle, Haliaetus leucocephalus
Peregrine Falcon, Falco peregrinus anatum
Golden Eagle, Aquila chrysaetos
Osprey, Panoion Haliaetus
Black-footed Ferret, Mustela nigripes
Kit Fox, Vulpes macrotis
Spotted Bat, Euderma maculatum
Great Blue Heron, Ardea herodias treganzai
Colorado Squawfish
Humpback Chub,
Razorback Sucker

The location of these habitats is documented in several sources including the report to the BLM by Michael A Schwinn. We recommend implementing the management recommendations proposed in this Utah UWR inventory of terrestrial wildlife.

The following plant species are important and their habitat also requires ACEC designations:

Astragalus monumentalis
Lomatium latilobum
Eriogonum mancus
E. diamorphopnyllus itermedias
Hedysarum occidentale canone
Gaillardia flava
Echinocereus triglochidiatus var. inermis
Asclepias cutleri
Astragalus iselyi
Astragalus sabulosus
Atriplex welsnii
Cryptantha elata
Cycladenia humilis var jonesii
Phacelia howelliana

The Chapter also recommends that the following important natural values be designated ACEC:

* the necessary habitat to support the target antelope and bighorn sheep, herd sizes;
* critical breeding and forage habitat to sustain the target deer and elk herds;

* Current black bear habitat;
* prairie dog communities;
* relic plant communities;
* areas where important archaeological sites are found;
* critical watershed areas include significant saline soil, important water courses, and important surface water sources;
* all class II and Class I visual resource management areas facing mineral exploration or development, and seeing ORV use.

The plan needs to propose an ACEC designation of the habitat necessary to maintain the present population of these species with no changes. The proposed management of the ACEC needs to guide actions that prevent any population change in these sensitive species and the ACEC plan be included in the RMP available for public comment.

Land Sales

33-30 Certain lands have been proposed for sale by the BLM. These lands need the following consideration placed on each area:

*because of location is its management difficult,
*is management by another federal agency possible,
*does the sale outweigh other public objectives and values including wilderness,
*is an important public objective being met which cannot be met realistically with nonpublic land?

None of the recommended lands have had each of these questions answered in the draft RMP. Each of these questions needs to be answered and if disposal is possible, exchange for needed lands pursued first. If exchange is not possible, then sale should be considered.

The RMP needs to present any potential conflicts of interest that may occur if the sale is made. Do any employees or advisory council have any interest in any of these potential sales. One potential example is with Mr. and Ray Tibbetts. The BLM allowed Ray Tibbetts to illegally bulldoze a road into lands under wilderness review. The BLM did not require reclamation and dropped the area from wilderness consideration. Now the BLM wants to sell this same man public land.

None of the private land sales have any assessment of any of the points raised by Section 203 of FLPMA answered. These sales should be fully analyzed and reported for public comment. The present information is inadequate.

The Chapter does not have full information on each tract proposed for sale. Here is what is known:

1 This section is inside the state Bookcliffs roadless area. This area should be exchanged for equivalent state land.

2 These are not isolated tracts and do not qualify for sale. They are bounded by BLM lands and lie within the Bookcliffs Wilderness Study Area.

3 This area would be part of the Bookcliffs ASA except for a strangly shaped 600 acre area of nonpublic land. All of these lands now qualify for wilderness study. The BLM should initiate acquisition through purchase or exchange of the nonpublic land preventing management of these tracts.

4 & 5 These two area are surrounded by state land (the Bookcliffs roadless area) and should be exchanged for equivalent lands.

6 This area abuts state lands near the town of Green River. These should be exchanged for other state lands.

7 While the immediate land around this tract is nonpublic land, BLM land can be reached in approximately 1/4 mile in each direction. This area should be exchanged for other needed purposes.

9 & 10 These tracts near the town of Green River should be exchanged with other state and private lands (the inholdings in the Bookcliffs for example)

11 This tract abuts state land and when project BOLD becomes effective will be joined with other BLM lands. This area should not be yet offered.

12 &13 These area abut Arches National Park and form an important wildlife habitat for that park. The BLM should consider offering these lands to the National Park.

14 & 16 This area is not an isolated tract and abuts the Negro Bill Canyon inventory unit. This area has important scenic, archaeological, recreation values.

15 This area is also not an isolated tract of BLM land and is within the Cache Creek area which the BLM should have studied for wilderness designation.

120 This section is separated from BLM land by 1/4 mile of private land and some state land. When project SOLD is completed, that BLM land may again be linked. This area is an important antelope habitat area.

C1 Because of the lack of adequate maps, it unclear if this project will affect the wilderness review in Hill Creek. The intensive inventory of that roadless area should consider this area.

C4 The proposed RMP states that 3,250 acres is for community expansion. This area abuts behind the Rocks WSA. No human impact separates these lands from that WSA. It is not an isolated tract. Almost all of this area is cliffs and slopes too steep for construction of any kind. It is unsuitable for community expansion involving the construction of utilities, roads, and buildings. This area was illegally deleted from the wilderness review and should be considered with the adjacent WSA for wilderness designation.

C9 & C11 Converting public lands into private nuclear waste dumps appears to violate the intent of FLPMA. Other areas should be available for this activity.

C17 Developing a 3,900 acre community near Moab Airport appears not in the public's best interests. Now this is largely natural and has important wildlife value that depend on this area and the adjacent area. No need has been objectively presented supporting sale of this property.

S1 Exchange of BLM lands for difficult to manage state lands should be followed. These lands within Sand Horse Point State Park should be state lands and other state lands should be BLM lands, T27S R21E sec 2 for example.

Critical Watersheds

33-31 The preferred alternative chosen to control salinity and sedimentation appears to have inaqequately defined benefits. First it is not clear if the seasonal use in the plan represents any change at all. In most of the problem area grazing will be allowed from mid October through mid May. Based upon present use this change is largely insignificant. Most of the operators take the stock to private or forest lands during this period.

Since the level of current use is not known, the changes in salinity from changes in grazing are without support. The benefits from salinity control appear fabricated from parts of technical studies with serious missing links. The BLM admits

that the water quality change which occurs as the Green and Colorado Rivers pass through this resource area is unmeasured.

The BLM needs to monitor the actual salinity and sedimentation produced in this RA. This means begining a comprehensive water quality monitoring program. The preferred plan is correct in limiting OHV use in the problem soil areas.

The BLM also needs to consider removing grazing completely from these areas. The environmental analysis incorrectly assesed the impacts of grazing when only winter use occurred. The preferred plan allows fall, spring, and winter use. Fall and spring see the highest period of erosion.

Off-Road Vehicles

The preferred alternative would designate 65% of the RA as open for all use. The BLM offers no criteria supporting that decision. The preferred alternative would designate 1% of the RA as closed to vehicle use. Alternative D would add some more area to the limited designation.

It is difficult to gauge the changes this decision would cause. In the limited areas, with one exception, all vehicle ways will remain open. Somehow the BLM judged that this would remove several hundred tons of salt from rivers.

The BLM needs to measure vehicle access not in acres out in miles of vehicle ways used. With a few exceptions, vehicle use usually follows vehicle ways and roads. By measuring the length of the roads rather than the acreage which in most cases vehicle don't use, a more accurate measure of ORV use areas can be made.

33-32 The Chapter proposed a set of criteria to choose which area are open, closed, and limited. The BLM lacks comprehensive criteria and many conflicts can be seen in areas designated open and limited. Some of the most important animal habitat is designated open. In the Book Cliffs these areas have no vehicle routes now and are within wilderness study areas, yet the BLM recommends designating them open. All lands under wilderness review must be designated limited or closed.

In areas designated limited, the BLM has not inoicated which routes are open or closed. A map needs to be provided detailing which routes are needed and should remain open. Areas designated limited are required to have those routes recorded on a map. No map at the BLM office could be found which showed all the routes open for use in limited areas.

The BLM needs to develop an alternative which uses the criteria the Chapter proposed and assess its impacts. The designations should not be described in acres but in miles of vehicle routes open for use.

The BLM has not identified areas where degradation from ORV use has occurred. Numerous conflicts between hikers, hunters, ranchers and dirt bikers have been reported to the BLM. Yet nothing is reported in the DEIS. The BLM has dropped areas from wilderness study because of ORV impacts and now recommends more deletions because of "management problems." None of these impacts or management problems are reported in the DEIS.

The BLM displays a strong bias on the ORV issue. With the wilderness review, ORV use is a reason to drop areas. With planning, there are no ORV problems and therefore very few areas closed to vehicle use. The Chapter requests the BLM to review each of the wilderness inventory units and designate those areas closed or limited. Action needs to be taken to stop ORV impacts.

Minerals, Leasable

33-33 The BLM proposes to allow mineral activities which will build more than 75 miles of new roads in the RA every year. All the alternatives will allow a major increase in road construction. The BLM fails to mention that they then will consider these roads permanent and open for ORV use. The BLM needs to consider an alternative where no net gain in roads are added and where the net road mileage is reduced.

The BLM needs to consider a no further leasing alternative for the next planning cycle. The economic analysis needs to consider the ability to produce products from existing sources to meet the expected demand, public lands, recycling materials, and conservation need to be considered. At this time, no estimates of mineral demand are given in the DEIS.

The stipulation categories for oil and gas need the following stipulations added to them:

In all categories: a) The permittee shall provide a copy of all geologic and mineral deposit information obtained from exploration and development to the BLM.

b) The permittee shall be responsible for preventing ORV use of access roads which are not on the RA transportation system map. Preventing ORV use includes the construction of barriers, posting of signs, and the placing of gates.

c) The operator shall close and reclaim the access ways not open to ORV use upon completion of exploration or development.

d) For production facilities, the operator shall provide calibrated flow measurement instruments which are monitored by the BLM. These instruments shall have protective features preventing tampering.

Category 2 Limited Resource Protection
Category 2A Watershed Protection
Add to category 2S requirements need to prevent any salinity or sedimentation increase over the established thresholds. Allow no roads in surface water supplies or construction of a road that would increase surface runoff and soil sluff into surface water.

Category 2B Cultural Resource Protection
Add to category 2 requirements to prevent additional vehicle visitation to archaeological site areas. This includes closing vehicle ways to ORV use and payment for agency monitoring of archaeological sites for damage or theft. This requires the operator fund an intensive inventory for archaeological sites in the activity area and within 100 yards of those activities.

Category 2C Protection of ACEC
Add to category 2 requirements that prevent any measurable change in the important natural value for which the area was designated ACEC.

Category 2D Wildlife and Livestock Protection
Add to category 2 requirements that prevent measurable forage changes, animal breeding, changes in nesting patterns, population changes, and other impacts to water and facilities.

Category 2E Recreation and Scenic Resources Protection
Add to category 2 requirements that prevent measurable loss of recreation opportunities and degrading of scenic visual resources.

Minerals, Locatable

33-34 The DEIS addresses management of locatable minerals in the "protection alternative" for only 3% of the RA. All other alternatives consider management action on less than that area. No management for 97% of the RA is given in the DEIS for hard rock minerals.

In an alternative management of minerals for the whole RA needs to be considered. The Utah Chapter suggests that the BLM manage all the resource area for minerals. We recommend adopting a class system described in the planning criteria of our comments. As with oil and gas leasing, mining plans would have different

kinds of protection requirements placed on activities depending upon the recommendations of the plan.

The dEIS has no consistent criteria for the selection of areas to withdraw from mineral entry. We suggest that you adopt our recommended criteria and apply them consistently to the RA.

33-35 Cultural Resources

None of the alternatives considers archaeological resource inventory, study, protection, or listing on the registry. No staff is allocated to this resource. The preferred alternative needs to make this a priority program.

33-36 Utility Corridors

Consider also not siting rights-of-way in ACECs, critical watershed areas, wilderness study areas, VRM class II and I areas, T & E habitat areas, important wildlife habitat, and important water resource areas.

Wilderness

33-37 As described in the criteria comments, other alternatives need consideration. Under full development, consider recommending all wilderness areas which have no commercial development potential. Consider wilderness study of areas with inventory errors that the BLM remanded to the BLM. Consider wilderness study on additional areas where similar inventory errors occurred.

Response to Letter 33 from the Sierra Club Utah Chapter, James Catlin, Public Lands Coordinator

33-1 The issue raised in this comment is beyond the scope of the RMP.

33-2 Lands not designated as wilderness would be managed giving consideration to their multiple use values. Funding would be requested to manage specific resource values as appropriate.

33-3 A major function of the Utah statewide wilderness EIS is to evaluate the wilderness allocation issue from a regional perspective.

33-4 The concerns expressed in this comment are addressed in the Management Situation Analysis (MSA), which is available for review in the GRA office.

33-5 Figure 2-4 on page 2-26 of the draft shows existing vegetation manipulation sites. At the present time there are no ORV use designations. Specific designations are proposed in the Draft RMP.

33-6 This information is found in the wilderness SSAs, which are available upon request.

33-7 Figure 2-20 on page 2-50 of the draft illustrates the areas currently available for oil and gas leasing (i.e., in leasing Categories 1, 2, and 3). This represents approximately 92.5 percent of the GRA which is either under lease, in the process of being leased, or available for lease application.

The protective lease stipulations are contained in Appendix R of the draft and pertain to all oil and gas leasing categories. Appendix R has been revised and is reprinted in Chapter 3 of this proposed RMP and final EIS.

Lands under lease and available for lease for potash are shown in Figure 2-19 on page 2-49 of the draft. Lease stipulations for potash are similar to those imposed for Category 1 oil and gas leases as detailed in Appendix R.

Information for coal leasing is beyond the scope of the Draft RMP and will be addressed in future planning documents.

33-8 Information about mining claims is available at the BLM Utah State Office and at individual county courthouses. A number of mining plans of operation under the 43 CFR 3809 and 3802 regulations are currently in effect. More information is available at the GRA office.

33-9 BLM is required by law to protect cultural resources found on the public lands. Some of the management actions analyzed in the RMP, such as wilderness designation, grazing restrictions, and ORV area designations, would provide additional protection to cultural resources. Prior to implementing on-the-ground projects, cultural resource surveys would be completed. Damage to cultural resource sites will be mitigated or avoided, as appropriate.

33-10 This issue is beyond the scope of the RMP. Fee schedules are either authorized by law or set after public participation.

33-11 This issue is beyond the scope of the RMP.

33-12 This issue is beyond the scope of the RMP.

33-13 This information is summarized in the draft document in Appendix I, Present Management Category, Ecological Condition, and Livestock and Wildlife Use by Allotment. Additional information is contained in the MSA and in the GRA files.

33-14 The monitoring section of the Draft RMP/EIS contains a proposal to study gradual changes in vegetation. Additional information has been included in the monitoring section in Chapter 1 of this proposed RMP and final EIS.

33-15 Under FLPMA, fair market value must be received for public lands.

33-16 This issue is beyond the scope of the RMP.

33-17 ORV use is a legitimate form of recreation on public lands. The Draft RMP/EIS analyzes potential ORV designations designed to provide for OPV use while protecting sensitive resources.

33-18 This issue is beyond the scope of the RMP.

33-19 The Draft RMP/EIS analyzes potential utility corridors and utility avoidance areas designed to provide for utility needs while protecting sensitive resources.

33-20 The level of livestock grazing on the public lands within the GRA is analyzed under the Livestock Requirements issue in the Draft RMP/EIS. Existing data are inadequate to make a determination regarding stocking levels. The monitoring studies described on page 2-24 of the draft will provide this information.

33-21 Lost Spring Canyon was included in the Secretarial Order that removed areas of less than 5,000 acres from wilderness review.

33-22 These areas have been incorporated into the planning process in this proposed RMP and final EIS.

33-23 The procedures for distribution of range betterment funds are established by law.

33-24 The distinction between goals and objectives is subjective. In the Draft RMP/EIS the objectives are more specific than the goal statements.

The impacts analyzed in the draft implicitly reflect threshold analysis. The selection of the impacts discussed was collectively determined by the interdisciplinary team and generally reoresents their combined judgement regarding significance. For example, the water quality analysis is based upon water quality standards. Throughout the process, a great number of potential impacts were considered. Many of these were determined to be insignificant and were dismissed from further consideration. In certain cases insignificant impacts were discussed to document that they were considered.

33-25 The preferred alternative identified in the Draft RMP/EIS would be one way to balance resource production and protection. As the emphasis is on balancing resource uses that sometimes conflict, the preferred alternative is not purely protection or production oriented. Certain actions proposed within areas under wilderness review would be implemented only if such areas are released from further wilderness consideration. All areas under wilderness review will be protected following the guidelines of BLM's Interim Management Policy and Guidelines for Lands Under Wilderness Review

33-26 The obvious careful thought given to the suggested goals, objectives, and planning criteria is noted. Many of the items are reflected to some degree in the draft RMP/EIS. The planning criteria were intentionally written so that they would not predetermine the eventual planning decisions. The material suggested for consideration is written more in the form of decisions than criteria. The activity plans developed during subsequent planning will focus on achieving more specific objectives designed to accomplish the overall aims of the RMP.

33-27 Additional geographic reference points have been added to the maps in this Final RMP/EIS to improve readability. Larger, more detailed maps are available for public review in the GRA office.

Response to Letter 33, continued

33-28 cont'd. The range of alternatives has been expanded for this proposed RMP and final EIS with the addition of two subalternatives: (1) Graze at Full Preference and (2) Reduced Livestock Grazing.

Site-specific EAs will be completed prior to implementation of vegetation manipulation projects. All known resource values will be considered at that time, and action will be taken to either minimize or eliminate adverse effects. The benefits of land treatments (increases in AUMs) are shown in Table 2-2 page 2-6 of the draft, and the impacts (benefits in some cases) are discussed in Chapter 4 of the draft.

Other management actions (apart from land treatments) are proposed in the same areas as the land treatments. These include intensive management and changes in season of use.

33-29 Please see the response to Letter 30, comment 8.

33-30 The Draft RMP identified certain lands as potentially suitable for disposal. Potential tracts were screened using the disposal criteria established in FLPMA. Later, prior to offering any land for disposal, more specific factors will be thoroughly evaluated on a case-by-case basis. This evaluation will include public involvement, consistency with other Federal, State, and local land use plans, an EA and land report, and other reports. Conflicts with other resources or land uses will be addressed and will help shape the eventual decision on a specific parcel. All sales will be consistent with Section 203 of FLPMA.

33-31 Change of season of use benefits for salinity are outlined on pages 4-43 and 4-64 of the draft. Impacts to salinity and sedimentation were estimated on the basis of soils survey and vegetation information established for the GRA. This procedure is consistent with methodology used in the Colorado River Salinity reports referenced in the draft document (BLM, 1977c and BLM, 1980a).

33-32 The criteria used during development of ORV designation alternatives are listed on page 1-8 of the draft.

Upon approval of the RMP, a map showing routes open to ORV use within the limited areas will be prepared as part of the ORV designation procedure.

ORV use areas are shown on page 1-11 of the draft. Management concerns pertaining to ORV use coincide with these areas.

Response to Letter 33, continued

33-28 The Public Rangelands Improvement Act of 1978 (PRIA) established a grazing fee formula by which BLM and USFS grazing fees are computed annually. The PRIA formula was adopted on a 7-year trial basis for the years 1979 to 1985. PRIA also established a grazing fee study to evaluate the formula and other fee options. The Secretaries of Agriculture and Interior are to recommend to Congress a grazing fee formula for 1986 and subsequent years. Half the grazing fee revenues are used for rangeland improvements, and the other half become general Federal revenues.

The county herd size estimates by the Utah Department of Agriculture account for the aggregate herd size of operators who reside in the county. Over half of the operators who have grazing permits in the GRA reside outside Grand County. It can therefore be expected that total herd size of operators with grazing permits in the GRA would differ significantly from total herd size of ranchers living in Grand County. Ranch budget aggregate herd size estimates for operators living in the county and having Federal grazing permits compare well with statistics of the Census Bureau and the Utah Department of Agriculture. These comparisons were presented in the MSA, which is available for public review in the GRA office. The total amount of use is limited to active preference.

The level of livestock use fluctuates on individual allotments, depending upon a variety of factors, but must be at or below active preference. It is agreed that actual use needs to be more objectively determined, or at least more reliably submitted by the permittees. This information will be part of the monitoring studies (see page A-57 of the draft).

Because of the limited manpower and the fact that the main purpose of monitoring is to determine accuracy of carrying capacity, areas not grazed by livestock cannot be included in studies unless critical for wildlife species monitoring. Data on ecological site potential have been gathered for each study location.

Reliable ecological condition data were collected during 1980 and 1981 as part of the soil and vegetation inventory and are on file in the GRA office. The impacts and benefits mentioned in Chapter 4 of the draft are realistic. The vegetation monitoring program is described on page 2-24 of the draft.

Response to Letter 33, concluded

33-32 cont'd. Specific management concerns regarding ORV use within the WSAs are documented in the SSAs prepared as part of the wilderness review.

33-33 The construction of new roads is a necessary part of mineral development. When a road is not reclaimed after the conclusion of a mineral development activity, it would be open to ORV use unless specifically closed.

The decision to reclaim a road or to leave it open to serve a specific purpose is made on a case-by-case basis. Such site-specific planning is beyond the scope of the RMP.

The alternatives analyzed in the Draft RMP/EIS cover a broad range of mineral leasing options. Alternatives A, C, and D considered the use of Category 4 (no leasing) to protect specific resources; the leasing category system would be applied differently under the four alternatives because of the varying amounts of resource protection required to meet the goals of the alternatives.

33-34 Mineral withdrawals were considered in Alternatives C and D to protect sensitive resource values. All other areas would be managed according to the provisions of the 43 CFR 3809 regulations.

The planning criteria used to identify withdrawal areas under Alternatives C and D are listed on page 1-17 of the draft.

33-35 Please see the response to Letter 1, comments 1 and 2.

33-36 The sensitive resource values identified are evaluated in the siting of all rights-of-way as a matter of policy.

33-37 Please see the wilderness section in Chapter 1 of this proposed RMP and Final EIS.

NOTE: Letter 33 from the Sierra Club Utah Chapter also included soecific comments on each of the WSAs under study in the GRA. These comments will be considered as scoping input for the Utah statewide wilderness EIS and are therefore not reprinted here.

LETTER 34

United States-Department of the Interior
BUREAU OF INDIAN AFFAIRS
UINTAH AND OURAY AGENCY
Fort Duchesne, Utah 84026
(801) 722-2406 Ext.

IN REPLY REFER TO:
S.N.C.

24

JUN 14 1983

Mr. Colin P. Christensen, Area Manager
Bureau of Land Management
Grand Resource Area
P.O. Box M
Moab, Utah 84532

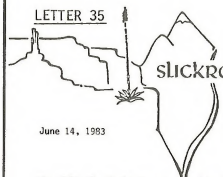
Dear Mr. Christensen:

We have reviewed the Draft Resource Management Plan and Environmental Impact Statement. The document is well prepared and adequately addressed the environmental concerns that are involved in the various management alternatives for the Grand Resource Area. Thank you for the opportunity to comment.

Sincerely yours,

Superintendent

LETTER 35



SLICKROCK OUTDOOR SOCIETY

PRICE, UTAH

June 14, 1983

Mr. Colin P. Christensen - Area Manager
Grand Resource Area
P.O. Box M
Moab District B.L.M.
Moab, UTAH

Dear Sir:

The following comment is the official position of the Slickrock Outdoor Society on the Grand Resource Area Management Plan Draft Environmental Impact Statement. We ask that it be included in the official comment record.

We have structured this comment such that we will first comment on the goals and objectives for the various alternatives under each planning issue, then selectively on individual management action and their impacts.

ALTERNATIVES

The majority of members of this organization support the goals and objectives listed for Alternative C; however, in several instances, those listed under Alternative D more closely parallel our preferred alternatives for specific planning issues. This will be noted as we proceed through this document.

PLANNING ISSUES

1. Crucial Watersheds: We favor the objectives and goals listed under Alternative C for this planning issue. However, we feel the management actions indicated under Alternative D, particularly D-4, are more likely to result in realization of the objectives indicated in Alternative C.

2. Livestock Requirements: We favor a balanced multiple use objective for the majority of lands in the G.R.A. such as described in Alternative C. Specifically we support C-5, C-6, C-7, C-8 and C-9. We recommend action

D-10 over C-10 because it offers greater conservation of basic soil and vegetation resources. Economically, as a whole, D-10 is a more favorable alternative when the annual reduction of salinity to the Colorado River is considered along with area income and employment.

35-1 We can support C-11 and C-12 so long as fencing activities do not impair naturalness in Wilderness Study and appealed areas.

We favor D-13 over C-13 because D-13 offers greater conservation of basic resources. D-13 also offers greater potential for improving water quality in the drainage affected and in the Colorado River.

We support management actions D-13, D-14, D-15 and D-16 and feel they are more likely to achieve stated objectives in Alternative C.

3. Wildlife Habitat Requirements: The majority of members indicated support for the objectives and goals listed under Alternative C with one exception. We believe wildlife habitat should be managed to support prior estimated numbers of big horn sheep, not to simply maintain current numbers. Specifically, we support all management action under Alternative C except we favor the following action over those listed under Alternative C: we favor D-15, D-16, D-20, D-27 and D-30.

4. Off-Road Vehicle Use: Objectives listed under Alternative C most closely parellel the recommendation of the organization on this planning issue. However, we feel management action D-20 more properly should be apart of Alternative C.

5. Lands Actions: Objectives and goals listed under Alternative C and the cooresponding management actions are favored by this group.

6. Utility Corridors: Objectives listed under Alternative C and the corresponding management actions are favored by this group.

7. Minerals: It is interesting to note that while objectives under Alternative C and D for this planning issue sound very different, the actual impacts from implementation of management acts under these two alternatives are insignificantly different. It would seem that even with maximum protection, including maximum wilderness designations, only minimal sacrifices in mineral output would occur [ST fewer barrels of oil and less than 1% fewer M.C.F. of natural gas]. Without exception, every member of this organization has indicated support for Alternative D; we do not feel these production sacrifices are too much to ask for preserving the scenic beauty and the primitive outdoor recreation experience available in the G.R.A. We very strongly favor the objectives and management actions under Alternative D for this planning action.

35-2 8. Recreation: Here again, the goals described for the various alternatives sound very different, but the translation into action via the management actions listed, would produce little difference in recreation experience. We favor the goals, objectives and management actions listed under Alternative D for this planning issue. More specific information as to output differences between the various alternatives [acres available for O.R.V. use, estimated man-hours or days spent in a given type of recreation activity, etc.] regarding different classes of recreation use, should be provided in the final statement.

9. Wilderness: This organization very strongly favors the goals of Alternative D on this issue and specifically management action D-43. Some of the information provided on this issue will need to be changed in the final document to reflect additional acreages added to the W.S.A.'s as a result of I.B.L.A. rulings on appealed lands.

ECONOMIC CONDITIONS

Any change in management of these lands, no matter how appropriate they may be, will be met with some resistance and resentment on the part of traditional users. If the "mix" of management actions we have supported in this document were to be implemented, some individual livestock operators would be significantly adversely affected. We regret this and do not take this impact lightly. However, we feel we have supported those management actions that will allow appropriate production of non-renewable resources, promote production on a sustained yield basis of renewable resources and protect the unique visual and primitive recreational resources of the G.R.A. We feel these objectives must be accomplished and supersede in importance the maintenance of profitable livestock operations.

We have commented in this response on the issues of importance to this organization. We found the document somewhat difficult to analize, with much time spent cross referencing different alternative charts. However, we have no specific recommendations on how B.L.M. might benefically alter their approach. Perhaps this fact speaks to the complexity of the job before public resource planners in today's complex society.

Thank you for the opportunity to respond.

Sincerely,

R. Brent Griggs D.V.M.

R. Brent Griggs D.V.M.
President, S.O.S.

RBG/jhs

Response to Letter 35 from the Slickrock Outdoor Society, Price, Utah, R. Brent Griggs, DVM, President

35-1 Management action C-11 would not affect any WSA or appealed area.

35-2 The BLM does not have reliable recreation use statistics for the entire GRA. Based upon professional judgment, the recreation and ORV management actions analyzed in the alternatives would not greatly alter the total amount of recreation use. In some cases, use could be displaced from one area (such as Negro Bill Canyon in Alternatives C and D) to other areas.

LETTER 36

AtlanticRichfieldCompany
555 Seventeenth Street
Denver, Colorado 80217
Telephone 303 575 7577

[illegible] R. Mitchell
Public Lands Coordinator

June 13, 1983

Mr. Colin Christensen
Bureau of Land Management
Grand Resource Area
P. O. Box M
Moab, UT 84532

Re: Grand Resource Area Management Plan - Utah

Dear Mr. Christensen:

Atlantic Richfield Company appreciates the opportunity to comment on the Bureau of Land Management's Draft EIS and Proposed Grand Resource Management Plan in Utah.

We assert that it is necessary for the BLM to determine whether mineral uses or nonmineral uses are the highest and best use of the public lands as evidenced by public interest. However, we are

36-1 concerned with the apparent inequity between energy and mineral resources and other resource values. We believe that energy and mineral resources have not received the same full consideration during the planning process as is afforded other resources. It is made clear in the Federal Land and Policy Management Act that land management must recognize the nation's need for domestic sources of minerals, yet it has been our recurring experience that during the planning process only mitigation measures for energy and mineral activities on other resource values have been addressed. Such is the case in the Grand DEIS. Nowhere is there mention of a tradeoff analysis or a conflict analysis in which the impacts of other resource values on potential energy and mineral activities are evaluated. However, there are numerous instances where potential impacts are outlined with regard to energy and mineral activities on other resources.

36-2 Section 102(a)(12) of the Federal Land Policy and Management Act (FLPMA) stipulates that "the public lands be managed in a manner which recognizes the Nation's need for domestic sources of minerals...from the public lands including implementation of the Mining and Minerals Policy Act of 1970, as it pertains to public lands." The Public Lands and

Mr. Colin Christensen
June 13, 1983
Page 2

Resources; Planning, Programming, and Budgeting (43 CFR Part 1600) regulations require the following measures for planning:

- Present and potential uses of public lands shall be considered
- Resource demand forecasts and analyses relevant to the Resource Area
- Opportunities to meet goals and objectives defined in National and State Director guidance
- The District Manager or Resource Area Manager shall arrange for resource...data and information to be collected.
- Several complete, reasonable resource management alternatives shall be prepared for the Resource Area.

Since the term "resource" applies not only to renewable resources but also to nonrenewable resources, the above requirements must be applied to energy and mineral resources as required by law. While certain, reasonable mitigation measures may be necessary, a complete evaluation of energy and mineral resource potential must be made in order to provide the same opportunities for energy and mineral resource development that are afforded other resources.

Atlantic Richfield believes that energy and minerals must play a major role in land management decisions.

36-3 The exploration for and development of these resources should be provided for in this plan by opening or maintaining access to areas which may contain these resources. Areas identified as having energy and mineral potential should influence other resource decisions. Access to these areas should be restricted only by the minimum legal standards established for environmental protection. In areas where conflicting resource values may outweigh mineral values, the BLM should identify what minimum environmental protection is necessary to meet the plan objective for these resources.

It is important for the BLM to recognize how energy and mineral resource values should influence the land management decisions and the role of minerals in the formulation of management prescriptions. In order to comply with the FLPMA requirements and to achieve the goals and objectives of multiple use management, the BLM needs to:

1. To provide for mineral resource and development on BLM lands.

2. Identify lands having energy and mineral potential and take action to open or maintain access to those resources, while meeting minimum legal standards for environmental protection.

3. Identify where conflicting resource values outweigh mineral resource values and what minimum standards for protection must be met to meet the plan objectives.

36-4 The BLM is required to show the effects of alternatives on all resource values, including energy and mineral resources. Each of the management alternatives selected must identify the tradeoffs that would occur as a result of the possible implementation of that alternative as it relates to energy and mineral values. The tradeoffs should include: opportunities and restrictions for access to minerals, minimum protection stipulations required under each alternative, and analysis of relative value placed on each conflicting resource.

36-5 The District Manager is required to develop a preferred alternative which will meet national and State Director guidance. When the preferred plan alternative is ultimately selected and published, each prescription for management should describe the specific impact on energy and mineral resources. This should include: the minimum standard requirements for surface protection upon issuance of leases, permits and plans of operation; and what additional requirements if any, are to be placed on these activities in order to meet the objective of the Management Area. Also, the rationale as to why

normal standards are not sufficient to protect the land use objective should be delineated.

In conclusion, we urge that the BLM carefully consider our comments in order that the Congressional mandates of FLPMA and the Mining and Minerals Policy Act are fully implemented and to insure that energy and mineral resources are afforded full consideration in the land management planning of the public lands.

Sincerely,

J. R. Mitchell

J. R. Mitchell
CMM:drm

Response to Letter 36 from Atlantic Richfield Company, Denver, Colorado
J.R. Mitchell, Public Lands Coordinator

36-1 Alternative B, the Production Alternative, would place almost the entire GRA in Category 1 (open to oil and gas development with only standard stipulations). Under this alternative, the entire GRA would be open to mining claims, except 1,850 acres of widely scattered existing withdrawals.

Impacts to mineral resources and rights are analyzed in the Draft RMP/EIS on the pages given below. Management actions not listed are believed to have no impact on minerals.

Management Action	Analysis on Page
A-10, B-13	4-12
A-11, B-14, C-24, D-29	4-13
A-12	4-15
A-13, B-16, C-26, D-31	4-16
A-14, B-17, C-27, D-32	4-16
A-24	4-19
B-15	4-29, 4-35
B-18	4-29
B-30	4-31, 4-32
C-23	4-48, 4-56, 4-57
C-25	4-49, 4-56, 4-57
C-40	4-51, 4-57
D-28	4-70, 4-76, 4-77
D-30	4-71, 4-76, 4-77
D-43	4-72, 4-77

Unavoidable adverse impacts to mineral resources and rights are described on page 4-80 of the draft. The relationship between short-term uses of man's environment and the maintenance and enhancement of long-term productivity is described as it applies to mineral resources and mineral rights on page 4-83. Irreversible and irretrievable commitment of mineral resources is discussed on page 4-85. These sections, as they pertain to the proposed plan, are included in Chapter 2 of this proposed RMP and final EIS.

36-2 The draft document defined goals and objectives for management of the public lands. Pages 1-14 and 1-17 contain the criteria followed in the minerals analysis. These criteria recognize the National policy guidance referenced.

Response to Letter 36, concluded

36-2 cont'd. Data were collected and presented both in the RMP and in the unpublished preliminary document, the MSA.

Throughout the draft document, four alternatives are clearly designated.

36-3 The minimum degree of protection necessary to prevent damage to specific resource values was determined through an EA, which served as the basis for the oil and gas leasing category system. Locatable mineral withdrawals of 32,000 acres and 47,000 acres were proposed under Alternatives C and D respectively.

36-4 Trade-offs and the results of the various alternatives are the subject of Chapter 4 of the draft document. Specific figures on the number of oil and gas wells are contained within the chapter.

36-5 Throughout the draft document, Alternative C is identified as the preferred alternative. Prescriptions are outlined in detail.

LETTER 37

Rocky Mountain
Oil & Gas Association, Inc.

345 PETROLEUM BUILDING • DENVER, COLORADO 80202
303/534-8261

June 13, 1983

Mr. Colin Christensen
Bureau of Land Management
Grand Resource Area
P.O. Box M
Moab, UT 84532

Dear Mr. Christensen:

I am writing on behalf of the Rocky Mountain Oil and Gas Association (RMOGA), a trade association of approximately 800 individuals and companies involved in all aspects of oil and gas exploration, production, and transportation activities throughout the Rocky Mountain West. We appreciate this opportunity to comment on the Draft EIS and Proposed Management Plan for the Grand Resource Area.

We assert that it is necessary for the BLM to determine whether mineral uses or nonmineral uses are the highest and best use of the public lands as evidenced by public interest. However, we are concerned with the apparent inequity between energy and mineral resources and other resource values. We believe that energy and mineral resources have not received the same full consideration during the planning process as is afforded other resources. It is made clear in the Federal Land and Policy Management Act (FLPMA) that land management must recognize the nation's need for domestic sources of minerals, yet it has been our recurring experience that during the planning process only mitigation measures for energy and mineral activities on other resource values have been addressed. Such is the case in the Grand DEIS. Nowhere is there mention of a tradeoff analysis or a conflict analysis in which the impacts of other resource values on potential energy and mineral activities are evaluated. However, there are numerous instances where potential impacts are outlined with regard to energy and mineral activities on other resources.

Section 102(a)(12) of FLPMA stipulates that "the public lands be managed in a manner which recognizes the Nation's need for domestic sources of minerals...from the public lands including implementation of the Mining and Minerals Policy Act of

1970, as it pertains to public lands". The Public Lands and Resources; Planning, Programming, and Budgeting (43 CFR Part 1600) regulations require the following measures for planning:

- Present and potential uses of public lands shall be considered;
- Resource demand forecasts and analyses relevant to the Resource Area;
- Opportunities to meet goals and objectives defined in National and State Director guidance;
- The District Manager or Resource Area Manager shall arrange for resource...data and information to be collected;
- Several complete, reasonable resource management alternatives shall be prepared for the Resource Area.

Since the term "resource" applies not only to renewable resources but also to nonrenewable resources, the above requirements must be applied to energy and mineral resources as required by law. While certain, reasonable mitigation measures may be necessary, a complete evaluation of energy and mineral resource potential must be made in order to provide the same opportunities for energy and mineral resource development that are afforded other resources.

RMOGA believes that energy and minerals must play a major role in land management decisions. The exploration for and development of these resources should be provided for in this plan by opening or maintaining access to areas which may contain these resources. Areas identified as having energy and mineral potential should influence other resource decisions. Access to these areas should be restricted only by the minimum legal standards established for environmental protection. In areas where conflicting resource values may outweigh mineral values, the BLM should identify what minimum environmental protection is necessary to meet the plan objective for these resources.

It is important for the BLM to recognize how energy and mineral resource values should influence the land management decisions and the role of minerals in the formulation of management prescriptions. In order to comply with the FLPMA requirements and to achieve the goals and objectives of multiple use management, the BLM needs to:

1. Provide for mineral resource and development on BLM lands;
2. Identify lands having energy and mineral potential and take action to open or maintain access to those resources, while meeting minimum legal standards for environmental protection;
3. Identify where conflicting resource values outweigh mineral resource values and what minimum standards for protection must be met to meet the plan objective.

The BLM is required to show the effects of alternatives on all resource values, including energy and mineral resources. Each of the management alternatives selected must identify the tradeoffs that would occur as a result of the possible implementation of that alternative as it relates to energy and mineral values. The tradeoffs should include: opportunities and restrictions for access to minerals, minimum protection stipulations required under each alternative, and analysis of relative value placed on each conflicting resource.

The District Manager is required to develop a preferred alternative which will meet National and State Director guidance. When the preferred plan alternative is ultimately selected and published, each prescription for management should describe the specific impact on energy and mineral resources. This should include: the minimum standard requirements for surface protection upon issuance of leases, permits and plans of operation; and what additional requirements, if any, are to be placed on these activities in order to meet the objective of the Management Area. Also, the rationale as to why normal standards are not sufficient to protect the land use objective should be delineated.

In conclusion, we urge that the BLM carefully consider our comments in order that the Congressional mandates of FLPMA and the Mining and Minerals Policy Act are fully implemented and to insure that energy and mineral resources are afforded full consideration in the land management planning of the public lands.

Sincerely,

Alice I. Frell
Lands Director

AIF/dar

4-83

Response to Letter 37 from Rocky Mountain Oil and Gas Association, Inc., Denver, Colorado, Alice I. Frell, Lands Director

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37-1 Please see the response to Letter 36.

LETTER 38

SCOTT M. MATHESON
GOVERNOR

STATE OF UTAH
OFFICE OF THE GOVERNOR
SALT LAKE CITY
84114

June 21, 1983

Mr. Gene Nodine
Moab District Manager
Bureau of Land Management
P. O. Box 970
Moab, UT 84532

Dear Roland:

The state of Utah has completed its review of the Draft Grand Resource Area Management Plan and Environmental Impact Statement. This document is a pioneering effort at land management planning in Utah and represents a great amount of effort by the Grand Resource Area Office of the Bureau of Land Management. We are pleased to be able to participate as part of the review process, and our comments are intended to be constructive and to aid the BLM in improving the final product.

As always, we appreciate and are benefited by the cooperative and constructive relationship that exists between the BLM and the state. If we can provide any additional comments or clarification, please contact the Department of Natural Resources.

Sincerely,

Governor

SMM:tar

June 16, 1983

STATE COMMENTS ON THE BLM DRAFT GRAND RESOURCE
AREA MANAGEMENT PLAN ENVIRONMENTAL IMPACT STATEMENT

The Draft Grand Resource Area Management Plan (RMP) Enviromental Impact Statement is a first attempt to formulate an RMP for Utah and represents a great amount of effort by the Grand Resource Area Office of the BLM. This document contains some very useful information and data on land use activities and on the various options available to the BLM for future management of these lands. While there are many good points in favor of this draft RMP, there are also faults.

This document represents a pioneering effort at land management planning in Utah and, therefore, will as a matter of course require some refining. As it is presently drafted, it is not an acceptable plan. This response, as in any review process, is intended to point out errors and to aid the BLM in revising and improving the RMP to make it a more useful and accurate plan. To that end the following comments are submitted:

GENERAL COMMENTS

There is a problem with the general organization and format of the RMP.

38-1 It is difficult to follow the goals, objectives, and management actions for the various alternatives from one chapter to the next. It is confusing and difficult to have to turn back and forth in the document to follow a topic; e.g., environmental impacts in Chapter Four. In many cases, the appendices contain more useful information than the main document itself and in a format easier to understand.

Perhaps the most confusing aspect of this draft RMP is the "Selection of the Alternatives." These alternatives seem to have been selected without regard for their feasibility and implementability with respect to land use management goals and mandates. A resource management plan should draw on any and all accepted land management techniques to provide for (as exemplified by the Multiple Use-Sustained Yield Act) a full spectrum of land uses.

Substantive Comments

Grazing

38-2 There appears to be a conflict and lack of consistency between the planning criteria for Issue 2, Livestock Requirements, and the goals and objectives for Alternative A, which is the preferred alternative for livestock requirements.

On Page 1-3, it indicates that the planning criteria are to guide the decision-making process by helping to design and formulate the alternatives in the RMP and to identify the management decisions needed.

On Page 1-8, under Planning Criteria for Livestock Requirements, it indicates that major consideration shall be given to the following:

1. Condition and capability of the vegetation to sustain existing and future levels of grazing use;

2. Need to manipulate livestock grazing to benefit livestock, wildlife, and vegetation;

3. To improve livestock distribution; and

4. Need to improve soil, watershed, and vegetative conditions.

These conflict with the goal and objectives stated in Table 2-1 for Alternative A. The goal for Alternative A is to continue present levels of resource use. The objective for watersheds is to provide mitigation to ensure protection of critical watersheds. The objective for livestock requirements

is to maintain vegetative conditions to benefit livestock and maintain existing allotment management plans. The objective for wildlife habitat requirements is to manage habitat to favor a diversity of wildlife with a variety of big game, upland game, waterfowl, and fishing to support current big game populations.

The management actions to accomplish these objectives are listed in Table 2-2. Under Alternative A, Livestock Requirements, it indicates that the management action is to continue present management to benefit livestock by maintaining present medium to high ecological condition on 61 allotments and to continue the existing allotment management plans on 6 allotments to maintain and improve present medium to high ecological condition. This involves authorizing grazing use at present levels, which is the average of the past five years, to accomplish the objective of maintaining and improving present ecological conditions. Monitoring studies showing changes in the condition would determine whether stocking rates should be adjusted.

These goals, objectives, and management actions appear to be inconsistent with the information presented in Appendix I. For example, on the Diamond Allotment approximately one third of the area is listed in low ecological conditions and only 3 percent in high ecological condition. This allotment consists of the upper end of Diamond Canyon, which is a deep, steep, and narrow canyon typical of the Book Cliffs area. The only suitable range is the canyon bottom, which is heavily grazed. This is evidenced by the present vegetative cover consisting almost entirely of big sagebrush and big rabbitbrush with very little understory. Conditions do improve somewhat in the upper reaches where there are some small meadows, but these meadows are heavily grazed. This type of use does not lend itself to improvement in ecological condition or even maintaining the existing condition.

Another example would be the Buckhorn Allotment. This allotment is presently under an allotment management plan, but the plan apparently hasn't been followed very well. There is poor livestock distribution, which results in portions of the allotment being overgrazed and the other portions being undergrazed.

The Sands Flat portion of this allotment is a good example of an area overgrazed. The Granite Creek seeding is an example of an area that receives only light use. The AMP needs to be followed or revised as necessary to get better livestock distribution and, thus, more uniform utilization of the range.

These examples are pointed out to illustrate the fact that the state does not believe the proposed management actions will always benefit livestock or wildlife and, at the same time, maintain a medium to high ecological condition.

Wildlife

The state through the Division of Wildlife Resources appreciates the opportunity to work cooperatively with the BLM in establishing and maintaining a population of big horn sheep in the Grand Resource Area (GRA), compatible with livestock and other wildlife populations.

38-3 Table S-2 (Summary of Management Actions for the Alternatives), states that under Alternative C wildlife habitat would be managed to support, ". . . estimated prior stable numbers . . ." of deer, elk and antelope. Yet, in Appendix K future AUM's shown for those species in each allotment are less, in most instances, than would be required. The Division of Wildlife Resources provided prior-stable numbers and AUM requirements for those numbers to BLM in the planning process and should be reflected in Appendix K.

Nowhere in Chapter I do planning issues for wildlife mention sagebrush control impacts on sage grouse (Pages 1-6) nor increased oil and gas drilling activity and poaching pressure on chukars. The RMP should propose a program

to protect strutting and brooding habitats for these species to maintain and hopefully increase their low populations.

The economic value of hunting (Pages 3-33) does not include the 8,000 hunter-days of recreation for upland game hunting. The 1980 Survey of Fishing and Hunting conducted by the U. S. Fish and Wildlife Service indicated upland game hunters spent an average $11/hunter-day for goods and services. This would bring an estimated $88,000 to the local economy from upland game hunting.

The RMP does not mention small game or cougar and bear. Even though these resources are relatively inconsequential, at least cougar, bear, and chukars should be mentioned. We commend the BLM for its plans on monitoring the objectives and management actions of the resource management plan, Pages 2-82 through 2-86.

In view of Executive Order No. 11990 and the U. S. Fish and Wildlife Service mitigation policy concerning the protection of riparian-wetland habitats, it seems inappropriate for any management option that would negatively affect such habitat types.

There is no time frame identified in the RMP when reservation of all forage and space on Pear Park, Spring Creek, and Castle Valley will occur and be fully implemented. This should be identified.

The bonytail chub has now been federally listed as endangered. Also, the RMP should note that at least one bald eagle does nest in the resource area along the Colorado River, and that two (2) confirmed sightings of black-footed ferrets occurred in the Crescent Junction-Thompson area during July, 1982. Because of the bald eagle and the great blue heron rookery in the Westwater area, we recommend that the BLM retain ownership of the approximately 80 acres of land involved (see Pages 4-24 of the RMP).

Minerals

Under the management actions for the alternatives, there appear to be virtually no difference among them for an issue such as minerals. On Page S-14 the draft states that oil production under the different alternatives would be:

Alternative	A	B	C	D
Number of Wells	150	155	145	---
Barrels of Production	50,000	50,000	49,500	47,500

Given the speculative nature of these production estimates, there is no significant difference between these alternatives. Similar comments also apply to the natural gas production estimates.

38-4 The draft RMP also fails to address the environmental problems associated with present and future mining and milling operations in the Grand Resource Area; i.e., uranium, potash, tar sand, etc.

Wilderness

Because wilderness studies are being pursued apart from the individual area management plans, and more importantly because the decision authority over wilderness designations rests ultimately with the Congress, it is difficult to adequately address the wilderness issue in this document. Final management decisions should follow the existing wilderness study and designation process, and cannot be arbitrarily changed to coincide with alternatives formulated for this EIS. As outlined in the EIS, the wilderness alternatives are probably unrealistic and don't add very much to the discussion of the wilderness issue in the Grand Resource Area.

38-5 More appropriately, the alternatives could address, for example, the need to manage non-recommended or non-designated WSA's for multiple resource values. It is not necessarily true that wilderness values are lost when an

4-91

area is not formally designated. Some areas or portions of areas could be managed to protect significant wilderness or scenic values while at the same time allowing for other resource production and use. There should be flexibility within the RMP to address these issues on a site specific basis.

In some Moab District Wilderness Site Specific Analyses it is recommended that certain areas be managed as Areas of Critical Environmental Concern (ACEC) or as Outstanding Natural Areas if they are not included in the National Wilderness Preservation System. The draft RMP, however, does not discuss these management options, even though they could present a different, and perhaps more realistic, set of alternatives. We understand that the uncertainty surrounding the wilderness issue complicates the analysis, but a different approach would make it more useful.

Off-Road Vehicle Use

The management alternatives and actions proposed in the four alternatives propose designation of all lands as open (Alternatives A and B), or designation of about one-third of the Grand Resource Area as limited to
38-6 existing roads and trails and close some sensitive areas (Alternatives C and D). These, however, fail to address the specific "traditional use" roads and trails in some areas proposed to be closed and ignores the increasing problem of soil erosion and wildlife habitat disruption in the nearly two-thirds of the resource area proposed to be managed for unrestricted ORV use. The draft RMP should contain in its alternatives the recognition that blanket designations limit the ability of the BLM to consider site or area-specific needs that may be contrary to the overall blanket designations.

For instance, there may be many specific sites or areas within the nearly one million acres to be designated as open to ORV use in the GRA that present

significant potential for soil erosion and habitat degradation if not managed to limit ORV use to existing roads or trails. A different land management alternative could be to designate specific areas as open, specific areas as closed, and all other areas as limited to existing roads and trails with allowable exceptions for mineral exploration and livestock needs. This would allow virtually all valid rights and uses to be exercised while taking a big step towards controlling erosion and habitat degrading activities due to unrestricted ORV use.

This issue is intimately connected to all the management issues identified in the draft RMP as being critical; such as soil erosion, habitat degradation, grazing conflicts, and water salinity concerns. There are probably many areas where unrestricted ORV use could occur without significantly contributing to the problems indicated above, but the draft RMP does not sufficiently identify these areas in the alternatives. This lack of more detailed site-specific analysis makes it difficult to accept any one of the four alternatives as being an acceptable land management alternative for this issue.

Salinity

The Grand Resource Area has relatively few water development opportunities, yet it is a large contributor to salinity in the Colorado River system. We were impressed with the awareness of the BLM personnel in this area of the salinity problem and its causes and quite satisfied with the recommendations for salinity control included in the alternative plans.

38-7 One problem, however, relates to cost effectiveness. Although the benefits from the salinity control activities recommended in the alternative plans are quantified (Pages 4-52 and 4-74), we were unable to find in the

report the associated costs that must be incurred to attain these benefits. From an overall salinity control standpoint, it is desirable to establish funding priorities in relation to cost effectiveness (i.e., dollars per mg/l reduction at Imperial Dam). We recommend that estimates of cost effectiveness be made and included at an appropriate place in the report.

Coordination and Consultation

38-8 The draft RMP should recognize the need for coordination and consultation between the BLM and the state on many land management issues, such as:

Livestock Management - There is no mention of coordination with the state or any other group or agency that has management responsibilities for large blocks of land within or adjacent to BLM allotments. Grazing allotments should be coordinated between agencies if possible.

38-9 Fire Management - There is no mention of cooperation or consultation with the agencies regarding prescribed burns as a management tool.

38-10 Sovereign Lands - No mention of sovereign lands or ownership determination of sovereign lands along the Colorado River. The potential conflict of BLM/state ownership should be addressed, particularly the minerals.

38-11 Wildlife Resources - There is no mention of a cooperative work effort between BLM and the state in the establishment of herd unit management plans and projected herd harvests.

38-12 The draft RMP identifies many of the significant land management concerns that need to be addressed by the BLM, but the formulation of the alternatives does not seem to allow for a broad-based resolution of them. This is, however, a good first step in this process, but the alternatives for each planning issue should identify specific further planning needs for determining

other management options necessary in order to achieve the stated planning goals. No one alternative proposed in the draft RMP would accomplish the stated goals without further elaboration on how specific issues that may arise contrary to the proposed actions would be resolved. A reformation of the alternatives is necessary.

Response to Letter 38 from the State of Utah, Scott M. Matheson, Governor

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38-1 The Grand RMP format follows the format recommended in Section 1502.10 of the Council on Environmental Quality guidelines. This format specifies separate chapters for alternatives, affected environment, and environmental consequences. The management actions described under each alternative were selected to be consistent with the goals and objectives displayed on pages 2-2 through 2-4 of the draft document. All of the management actions discussed are considered to be feasible. Not all of the approaches to resolving the issues would be equally practical, nor would they involve equivalent environmental, resource, economic, and social impacts.

38-2 The agency's preferred alternative is Alternative C (not A), as discussed on page S-20 in the draft document. The management actions proposed under Alternative C are consistent with the criteria for the Livestock Requirements issue. Alternative A would not resolve the issue to the extent that Alternative C would. For analysis purposes, the proposed action is to continue existing management. Based upon the analysis, Alternative C was selected in the Draft RMP/EIS as the preferred alternative.

38-3 The intent of Appendix K of the Draft RMP/EIS is to portray only those animal unit months (AUMs) that can be produced as a result of the management actions under consideration. Appendix K was not intended to show prior stable populations or prior stable AUMs. As agreed in past meetings with UDWR, BLM has included prior stable population figures in the Draft RMP/EIS. This was done on pages 2-32, 3-10, 3-11, 3-13, and 5-6.

The attainment of forage for elk, deer, and antelope at the estimated prior stable population level is a long-term objective of Alternative C. The management actions in Alternative C are designed to create habitat conditions that would enable populations to approach prior stable population levels. Forage allocation will be made on the basis of 5-year average wildlife and livestock use through monitoring studies. By monitoring the range and wildlife habitat trend during this period, BLM can determine carrying capacities for both wildlife and livestock.

38-3 cont'd. Prior to conducting sagebrush control actions, areas will be examined for possible impacts to sage grouse. Sage grouse were not mentioned in the planning issues because their populations are extremely low. BLM would appreciate any information UDWR may be able to provide regarding sage grouse strutting and brooding habitat in the GRA and will consult with UDWR prior to taking action that could impact sage grouse. Once identified, areas can be protected through use of oil and gas leasing category stipulations, habitat management plans, or grazing systems, as appropriate.

The local economic importance estimates of hunting account for only big game hunting and related expenditures. Upland and small game were not identified as being impacted by any of the proposed management actions; therefore, the local economic importance of upland and small game hunting was not discussed.

BLM is unaware of significant habitat management problems within the GRA regarding mountain lion, black bear, or chukar partridge. These species have been added to Chapter 3, Affected Environment in the draft (see Chapter 3 of this proposed RMP and final EIS).

The extent of illegal harvest of wildlife is unknown. BLM welcomes suggestions for ways the Bureau can assist UDWR to resolve these problems.

Management Action C-15 (or D-18) would be implemented immediately.

At the time the draft document was written, the bald eagle nest site had not been located, and the black-footed ferret sightings had not been confirmed. This new information pertaining to the threatened and endangered species (including humpback chub) has been incorporated into Chapter 3 of the proposed RMP and final EIS. BLM recognizes the importance of these tracts. These areas were not considered for disposal in the preferred alternative of the Draft RMP/EIS.

38-4 The alternatives analyzed provide different combinations of resource protection and production. Although the acreages that would be included in the four oil and gas leasing categories vary among the alternatives, the impacts upon oil and gas exploration, development, and production would not vary greatly, because of careful consideration of oil and gas resources during the development of the alternatives. Every effort was made to exclude

38-4 cont'd. from the more restrictive categories (i.e., Categories 3 and 4) areas where the presence of oil and gas resources was suspected, while providing protection for sensitive resource values. Most of the areas considered for inclusion in Categories 3 and 4 are not known to be favorable for oil and gas production; thus protection of sensitive resources on these areas would have little effect upon the estimates of future production.

The impacts of future mining activity under the various alternatives are described on pages 4-12, 4-27, 4-48, and 4-69 of the draft.

38-5 The preliminary wilderness suitability recommendations in the draft have been deleted in the proposed RMP and final EIS. Preliminary suitability recommendations will be made through the Utah statewide wilderness EIS (refer to the Introduction to the proposed RMP for more information).

Chapter 1 of this proposed RMP and final EIS contains a section entitled "Management of Wilderness Study Areas," which describes how areas currently under wilderness review would be managed under the RMP if not designated wilderness. For example, a portion of the Negro Bill Canyon WSA would be managed as an ONA. ACEC designation was not proposed in the Draft RMP/EIS, as it was determined that other multiple use management actions could adequately protect resource values.

38-6 The ORV designations analyzed in Alternative C would not significantly impact the use of traditional roads and trails. Only two routes, one in Westwater Canyon and one in Negro Bill Canyon, would be closed. An additional 7 miles of duplicate roads in the Mill Creek area would be closed.

Figure 1-6 on page 1-11 of the draft shows the areas where the where the interdisciplinary team found ORV use to be a concern. These areas were identified for a variety of reasons. ORV related soil erosion and wildlife habitat disruption are not considered to be significant problems in other areas at this time.

The District Manager currently has authority to institute site-specific ORV restrictions, should it become necessary to implement such measures. No additional ORV restrictions, besides those analyzed in the draft, are contemplated at this time.

Response to Letter 38, continued

38-7 The quantification of benefits for salinity control activities was the first step in the impact analysis. A cost-benefit analysis will be performed at the activity plan level, after approval of the RMP. Preliminary estimates, as identified with the Upper Colorado River Salinity Forum, indicate an average cost-to-benefit ratio of 2.5 to 1. Final figures will be determined when specific programs and activities are outlined.

38-8 The GRA staff coordinates frequently with other agencies such as the State of Utah, National Park Service, and USFS which administer adjacent land. Coordination with the State of Utah takes place under the guidelines established in the cooperative agreement of September 1978. As of May 1983, livestock grazing was no longer authorized within Arches and Canyonlands national parks. The BLM has a memorandum of understanding with the USFS which coordinates grazing management on adjacent land. This is discussed on page 3-6 of the draft. Also see Chapter 4 of this proposed RMP and final EIS for further discussion of consultation and coordination during development of the plan.

38-9 Consultation and coordination with other agencies on fire management and prescribed fires will take place when specific fire management plans are drafted.

38-10 The resolution of Federal/State land ownership question along the Colorado River is beyond the scope of the RMP.

38-11 Wildlife habitat management plans and other types of activity plans, such as allotment management plans, will be developed at the next stage of BLM planning, to carry out the decision of the RMP. Additional coordination with UDWR will take place at that time.

38-12 Approval of the RMP will mark the completion of the first step of a three-part planning process. The RMP is intended to provide broad guidance for management. Activity plans such as allotment management plans, wildlife habitat management plans, and fire management plans will contain management direction for specific areas. Project plans will be developed to assure proper implementation of on-the-ground improvements. Throughout the entire planning process, the various resources and uses associated with particular sites are considered, so that trade-offs can be made consistent with the overall goals of the RMP and with legal requirements.

LETTER 39

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VIII
1860 LINCOLN STREET
DENVER, COLORADO 80295-0699

JUL 5 1983

Ref: 9PM-EA

Colin P. Christensen
BLM, Grand Resource Area
P.O. Box M
Moab, Utah 84532

Dear Mr. Christensen:

The Region VIII Office of the EPA has completed its review of the Grand Resource Area Management Plan and Draft EIS and offers the following comments for your consideration.

We are pleased to see the attention given the salinity issue in the EIS. The analysis is generally in-depth and to the point. We support the salinity control measures suggested in the preferred alternative. However, since BLM's own studies, The Effects of Surface Disturbance on the Salinity of Public Lands in the Upper Colorado River Basin and Control of Salinity from Point Sources Yielding Groundwater Discharge and from Diffuse Surface Runoff in the Upper Colorado River Basin, indicate that grazing management may be among the most cost-effective methods available for salinity control. We suggest that you reconsider the decision to wait five years before implementing needed changes to grazing practices.

39-1 The EIS does not adequately assess the seven Wilderness Study Areas (WSA's). The site-specific analyses (SSA) on the WSA's are not prominently mentioned in the EIS nor are they readily available. The lack of distribution of the SSA's provided a stumbling block for the review of wilderness recommendations on the part of the reviewing agencies and concerned citizens. This is a serious flaw relative to the NEPA process and the CEQ regulations. Our concerns are further outlined in our attached Detailed Comments.

According to the system EPA uses to rate draft EIS's, the Grand Resource Area Management Plan and Draft EIS will be listed in the Federal Register as ER-2. This means that although we believe the proposed action offers positive steps towards improving salinity and other water quality problems in the resource area, we would like to see additional water quality and salinity measures from Alternative D adopted and incorporated into the proposed alternative. We also believe that a five year delay in changes in grazing practices to further study the problem is an unreasonably long period. It would seem that after years of experience with the range resources in the area, range management decisions could be made now. If you have any questions, please contact Dennis Sobocki at FTS 327-4931 or 837-4831.

Sincerely yours,

Seth C. Hunt
Acting Regional Administrator

Enclosure

Detailed Comments

39-2 One of our primary areas of concern in our review has been water quality. We recommend your office coordinate your water quality efforts with the Utah Bureau of Water Pollution Control and the areawide water quality management planning agency (Southeastern Utah Association of Local Governments). It would be helpful to work with the areawide agency in prioritizing critical watersheds in order that treatment will be consistent with the areawide plans. We also encourage you to coordinate with appropriate state and local government agencies in working towards filling the data gaps for critical watersheds. The final EIS should recommend a plan and a timetable to meet these important data needs.

We are encouraged by the attention given the salinity issue in the EIS. The EIS addresses the issue in a straightforward and in-depth manner. We strongly support the measures outlined in the preferred alternative to improve water quality and reduce salinity impacts. However, Alternative D offers substantive additional water quality protection and salinity reduction measures. Alternative D would futher reduce the amount of salt and sediment annually added to the Colorado River by over 9,000 tons and 75,000 tons respectively. According to the Bureau of Reclamation's most recent figures, this reduction in salt would mean approximately $600,000 in reduced annual costs borne by water users in the lower Colorado River basin. Yet Alternative D offers a net gain of 1,540 AUM's and only involves a one percent reduction in annual gas production and a four percent reduction in oil production. Similarly, the difference in the amount of public lands open to mining claims is only 15,900 acres out of a total of 1,352,121 acres in the resource area.

39-3 The draft EIS recommends that Alternative C, Limited Protection, is the preferred alternative and the proposed action for all issues, except for livestock requirements, for which Alternative A, No Action, is proposed. The purpose of this recommendation is to allow a five-year monitoring period to determine the appropriate grazing capacity relative to actual use, utilization, production, trends and climate. This appears to be an unreasonably long delay in enacting needed changes in grazing management practices. It would seem that after years of study the range resource data would be available now for making these decisions. While the DEIS recommends spending substantial amounts of money on erosion control structures and land treatments in order to decrease salinity, it offers a five year delay in enacting such a critical area of salinity control is improved grazing practices. At a minimum, incremental range management system adjustments should be made based on current knowledge. We are concerned that by tieing the allotment management plan in BLM's five years from now, these EIS's will contain the real decisions and yet have less urgency and public review and input.

A strong salinity control program must consist of both improved land management practices and capital improvements in a timely and cost-effective manner. In your own 1977 Status Report on The Effects of Surface Disturbance on the Salinity of Public Lands in the Upper Colorado River Basin points out, proper management of grazing practices in this basin is critical to having a viable and cost-effective salinity control program. This report also states that erosion control structures and land treatment may produce potentially harmful side effects on environments with coarse vegetation and highly erosive soils" (page 132). The study further explains that, "Removal of livestock may be the only lasting solution to the salinity problem on highly saline soils". It also recognizes that "ORV use should be carefully controlled", and confined to "established roads and trails or special areas where the products of erosion can be impounded" (page 135).

39-4 The DEIS does not go far enough in identifying key riparian habitat areas and prooosing ORV, grazing and mining restriction to protect and improve these riparian areas. These areas are critical from not only a wildlife perspective but also from a salinity and water quality perspective. Mill Creek, for example, is identified as both a trout fishery and a municipal water supply, yet ORV use and damage to the stream have been increasing. Similarly, in Negro Bill Canyon, its perennial stream riparian habitat has suffered from increased ORV use. It is required that BLM protect WSA's such as Negro Bill from degredation until a Congressional determination is made on its inclusion into the National Wilderness System. The final EIS should be more precise in targeting specific timetables for implementing protection and enhancement practices for key riparian areas along with the other budgeted construction/ management projects. A program should be instituted to more actively manage ORV use in key riparian and other critical watershed areas and in all WSA's, rather than a passive program of monitoring increases in ORV use and damage. Both Negro Bill Canyon and Mill Creek are in the "backyard" of the City of Moab and your Moab district office.

The analysis contained in the DEIS on Wilderness Study Areas (WSA's) is inadequate. It does not clearly explain why the various WSA's were deemed appropriate or inappropriate for wilderness designation. Although final suitability recommendations will not be made until the Utah statewide wilderness EIS, those recommendations will be made largely as a result of this present EIS and its final recommendations. The draft site-specific analyses (SSA's) for the seven WSA's are not prominently mentioned in the DEIS. The first mention of their existence appears on page 2-16 in a table. Their existence and availability should be mentioned in both the cover letter to the EIS and included in the summary in a prominent way. Although the CEQ regulations recognize the need to reference material "when the effect will be to cut down on bulk without impeding agency and public review of the action", they also state that "No material may be incorporated by reference unless it is reasonably available for inspection by potentially interested persons within the time allowed for comment" (1502.21). Copies of the SSA's were only available at the Moab district office and not included with EIS's for agencies' reviews unless requested. Copies of the SSA's should be made available at various BLM district and state offices and public libraries throughout the states of Utah and Colorado.

We also believe that the final EIS should give more consideration to the water quality benefits of wilderness designation. We believe a wilderness alternative between the proposed Alternative and Alternative D (all wilderness) should be developed and carefully considered. Also, there are few photograpns in the DEIS and none in the SSA's to give the reader a sense of the characteristics, land forms and visual attributes of the WSA's. This makes it very difficult for large segments of the public to get a sense of the type of WSA being discussed. Photographs also help to convey qualitative values of a WSA that are not represented in tables, charts and written descriptions.

Response to Letter 39 from the U.S. Environmental Protection Agency, Denver, Colorado, Seth C. Hunt, Acting Regional Administrator

39-1 The role of the SSAs in the Utah BLM's wilderness review process is more fully explained in this proposed RMP and final EIS. Please refer to the Summary and Purpose and Need sections.

The availability of the draft wilderness SSAs was announced in the Federal Register. News releases were distributed within Utah. The wilderness review process and the function of the SSAs has been the subject of several letters sent to persons on the Utah wilderness mailing list. Copies of the SSAs for individual areas under wilderness review are available upon request. Additional informational mailings are planned for the future in connection with publication of the final SSAs and the Utah statewide wilderness EIS.

Range improvement actions such as fencing and water developments would be taken within the GRA during the 5-year monitoring period as funding allows. Livestock use would remain at existing levels pending the outcome of the monitoring studies.

39-2 Coordination and conformance with local and regional plans was done during the MSA. At that time Grand County was not identified specifically as having salinity related water quality problems. At the activity planning level, after approval of the RMP, coordination will be conducted to ensure that all State and local agencies, including those mentioned in the comment, have opportunities for input.

39-3 Please see 39-1 above.

39-4 Additional riparian habitat management actions are considered in the Reduced Livestock Grazing subalternative that is incorporated into Chapter 3 of this proposed RMP and final EIS. All areas under wilderness review will be managed according to the IMP guidelines until either designated wilderness or released from further wilderness consideration. The target date for completing proposed riparian enhancement projects has been included in the General Implementation Schedule of this proposed RMP and final EIS.

The ORV designations included in the proposed RMP are designed to reduce concerns associated with ORV use while providing areas where ORV use can take place.

The preliminary wilderness suitability recommendations contained in the draft have been withdrawn in the proposed RMP and final EIS. Refer to the Introduction to the proposed RMP for more information about the role of the RMP during the wilderness review.

Response to Letter 39, concluded

39-4 cont'd. Please see 39-1 above regarding availability of SSAs.

Potential water quality benefits that would result from wilderness designation are discussed in the SSAs.

Photographs are planned for the final SSAs and Utah statewide wilderness EIS.

Cresto, Joseph G., Wildlife Management Biologist.
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Experience: BLM 18 years; Forest Service 1 1/2 years.

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Svejnoha, Wayne M., Soil Conservationist.
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Experience: BLM 5 years; Northern Illinois University (Regional Environmental Planner), 2 years.

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Education: B.A., Sociology, University of California at Santa Barbara.
Experience: BLM 7 years; USFS 3 years.

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Planning Responsibility: Editing, Tracking, Visuals Coordination.
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Experience: BLM 6 years; Private Industry 15 years.

Von Koch, Russell, Planning Coordinator.
Planning Responsibility: Team Leader.
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M.S., Forestry, University of Washington.
Experience: BLM 5 years.

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Planning Responsibility: Technical Coordinator
Education: B.S., Range Management, University of California at Humboldt.
Experience: BLM 12 years; State of California 6 years.

APPENDIX A

Breakdown by Allotment of Proposed Livestock Management Actions
Initial and Future Livestock and Wildlife Forage Animal Unit Months

Allotment Number	Allotment Name	Initial AUMs		Proposed Plan	Future AUMs	
5821	Adobe Mesa[d]	Cattle	152	Present Management	Cattle	332
		Deer	19		Deer	109
		Elk	53		Elk	143
5853	Agate[e]	Sheep	351	Livestock Manipulation	Sheep	348
		Deer	19	Techniques	Deer	19
5861	Arth's Pasture[a]	Cattle	524	Present Management	Cattle	524
		Deer	19		Deer	19
		Bighorn	32		Bighorn	32
5809	Athena[e]	Cattle	452	Present Management	Cattle	436
		Deer	31		Deer	31
				Manipulate grazing on 1,000 acres of saline soils		
5804	Barley Flat-Ronzio	Sheep	873	Livestock Manipulation	Sheep	837
		Deer	67	Techniques	Deer	67
		Elk	13		Elk	13
				Manipulate grazing on 3,000 acres of saline soils		
5808	Bar-X	Sheep	407	Present Management	Sheep	607
		Deer	18		Deer	18
		Elk	5	Land Treatment (plow	Elk	5
		Antelope	50	3,200 acres)	Antelope	250
5864	Between the Creeks	Cattle	88	Present Management	Cattle	88
		Deer	21		Deer	21
5827	Big Flat-Ten Mile[a,e]	Sheep	2,930	Present Management	Sheep	2,918
		Cattle	5,500		Cattle	5,487
		Deer	166		Deer	166
		Bighorn	43		Bighorn	43

Allotment Number	Allotment Name	Initial AUMs	Proposed Plan	Future AUMs
5872	Big Triangle	Cattle 127 Deer 194	Present Management	Cattle 127 Deer 194
5817	Blue Hill[e]	Cattle 1,842 Deer 314 Elk 132	Present Management Land treatments (320 acres chaining; 980 acres drill seeding) Maintain land treatments (2,883 acres chaining)	Cattle 1,891 Deer 355 Elk 173
5815	Bogart[e]	Cattle 208 Deer 397 Elk 310	Present Management	Cattle 208 Deer 397 Elk 310
5863	Buckhorn[b,c,d]	Sheep 1,497 Cattle 2,743 Deer 1,904 Elk 263	Present Management Land treatment (2,140 acres chaining; 1,715 acres drill seeding) Maintain land treatments (2,470 acres chaining) Change class of livestock, sheep to cattle.	Sheep 0 Cattle 4,557 Deer 2,144 Elk 503
5810	Cisco Mesa[e]	Sheep 2,267 Deer 500 Antelope 13	Livestock Manipulation techniques Manipulate grazing on 3,000 acres of saline soils	Sheep 2,177 Deer 500 Antelope 13
5805	Cisco Springs Wash[e]	Sheep 826 Cattle 943 Deer 79 Antelope 13	Livestock manipulation techniques Manipulate grazing on 5,000 acres of saline soils	Sheep 609 Cattle 1,013 Deer 79 Antelope 13

Allotment Number	Allotment Name	Initial AUMs		Proposed Plan	Future AUMs	
5865	Coal Canyon	Cattle Deer	159 6	Present Management	Cattle Deer	159 6
5862	Corral Wash	Sheep Deer Elk Antelope	1,406 132 3 18	Livestock Manipulation techniques Land treatment (plow 4,480 acres)	Sheep Deer Elk Antelope	1,966 132 3 18
5816	Cottonwood[b,d]	Cattle Deer Elk	450 154 132	Manage perennial stream	Cattle Deer Elk	494 176 154
5856	Crescent Canyon	Sheep Deer Elk	811 34 13	Present Management Manipulate grazing on 1,000 acres of saline soils	Sheep Deer Elk	777 34 13
5826	Crescent Junction	Sheep Deer	173 10	Livestock manipulation techniques	Sheep Deer	173 10
5842	Diamond[d]	Cattle Deer Elk	390 102 79	Land treatment (90 acres drill seeding) Change season of use 6-1 to 11-10 Manage perennial stream	Cattle Deer Elk	409 113 87
5386	East Coyote	Cattle Deer	884 29	Present Management Maintain land treatments (3,023 acres chaining; 3,279 acres plowing)	Cattle Deer	884 29
5838	Elgin[e]	Cattle Deer	48 17	Present Management	Cattle Deer	24 17

Allotment Number	Allotment Name	Initial AUMs		Proposed Plan	Future AUMs	
5874	Floy Canyon[d]	Cattle	255	Change season of use 6-1 to 11-5	Cattle	292
		Deer	78		Deer	94
		Elk	116		Elk	135
5801	Floy Creek[c]	Sheep	1,208	Livestock manipulation techniques	Sheep	1,208
		Deer	40		Deer	40
5851	Granjte Creek	Cattle	39	Present Management	Cattle	30
		Deer	71		Deer	71
		Elk	13		Elk	13
5803	Green River Flats[e]	Sheep	9	Present Management	Sheep	7
		Cattle	32		Cattle	24
		Deer	20		Deer	20
5825	Harley Dome	Sheep	861	Livestock manipulation techniques	Sheep	861
		Deer	53		Deer	53
		Antelope	56		Antelope	56
		Bighorn	4		Bighorn	4
5389	Hatch Point[d,e]	Sheep	2,877	Livestock manipulation techniques	Sheep	3,179
		Cattle	7,490		Cattle	7,792
		Deer	350		Deer	350
		Elk	92	Land treatment (4,430 acres chaining; 1,280 acres plowing; 1,920 acres drill seeding)	Elk	92
		Antelope	73		Antelope	683
		Bighorn	21		Bighorn	21
				Maintain land treatments (2,903 acres chaining; 2,961 acres plowing; 1,205 acres spraying)		
5812	Highlands[b,e]	Sheep	600	Livestock Manipulation techniques	Sheep	1004
		Deer	17		Deer	52
				Land treatment (3,560 acres chaining)		
				Manipulate grazing on 2,100 acres of saline soils		
5877	Horse Canyon	Cattle	410	Livestock manipulation techniques	Cattle	410
		Deer	77		Deer	77

Allotment Number	Allotment Name	Initial AUMs	Proposed Plan	Future AUMs
5850	Hotel Mesa	Cattle 129 Deer 6	Present Management	Cattle 129 Deer 6
5818	Ida Gulch	Cattle 84 Deer 19	Present Management	Cattle 84 Deer 19
5847	Kane Springs	Cattle 287 Deer 17 Bighorn 64	Present Management	Cattle 287 Deer 17 Bighorn 64
5388	Lisbon[d]	Cattle 7,758 Deer 656 Elk 132 Antelope 6	Livestock manipulation technique Maintain land treatment (7,568 acres chaining; 12,126 acres plowing) Land treatment (14,600 acres chaining; 8,320 acres plowing)	Cattle 9,291 Deer 2,811 Elk 132 Antelope 6
5883	Little Hole[d]	Sheep 642 Deer 12 Bighorn 21	Present Management	Sheep 945 Deer 12 Bighorn 21
5837	Lone Cone	Cattle 120 Deer 16	Present Management	Cattle 120 Deer 16
5387	Lower Lisbon	Cattle 787 Deer 27	Present Management Land treatment (350 acres chaining; 200 acres plowing; 1,600 acres drill seeding) Maintain land treatments (1,111 acres chaining; 2,788 acres plowing)	Cattle 922 Deer 162

Allotment Number	Allotment Name	Initial AUMs		Proposed Plan	Future AUMs	
5879	Main Canyon[d]	Cattle	210	Present Management	Cattle	273
		Deer	72		Deer	103
		Elk	26		Elk	57
5871	Middle Canyon[d]	Cattle	264	Present Management	Cattle	327
		Deer	262		Deer	293
		Elk	132		Elk	163
5844	Mill Creek	Cattle	48	Present Management	Cattle	48
		Deer	28		Deer	28
		Elk	13		Elk	13
5852	Mineral Point	Cattle	162	Livestock manipulation techniques	Cattle	162
		Deer	10		Deer	10
		Bighorn	64		Bighorn	64
5811	Monument Wash[b]	Sheep	958	Livestock Manipulation techniques	Sheep	954
		Sheep	1,397		Sheep	1,392
		Deer	27	Land Treatments (640 acres chaining)	Deer	67
				Manipulate grazing on 3,500 acres of saline soils		
5814	Nash Wash	Cattle	1,978	Livestock manipulation techniques	Cattle	1,978
		Deer	413		Deer	413
5819	North River	Cattle	166	Present Management	Cattle	166
		Deer	10		Deer	10
5860	North Sand Flats	Cattle	240	Present Management	Cattle	240
		Deer	53		Deer	53
		Elk	5		Elk	5
5822	Pipeline	Sheep	797	Livestock manipulation techniques	Sheep	797
		Deer	21		Deer	29
		Antelope	19		Antelope	19

Allotment Number	Allotment Name	Initial AUMs		Proposed Plan	Future AUMs	
5869	Potash[e]	Cattle	212	Change season of use 12-1 to 4-30	Cattle	212
		Deer	21		Deer	21
		Bighorn	161		Bighorn	161
5820	Professor Valley[e]	Cattle	424	Livestock Manipulation techniques	Cattle	422
		Deer	126		Deer	126
		Elk	39		Elk	39
				Maintain land treatments (1,247 acres chaining)		
5802	Rattlesnake[e] (Grand County)	Sheep	344	Present Management	Sheep	344
		Cattle	90		Cattle	90
		Deer	72		Deer	72
		Elk	239		Elk	239
		Bighorn	32		Bighorn	32
5385	Rattlesnake (San Juan Co.)	Cattle	210	Present Management	Cattle	210
		Deer	9		Deer	9
				Maintain land treatments (1,753 acres plowing)		
5876	River	Cattle	11	Present Management	Cattle	11
		Deer	2		Deer	2
5823	Ruby Ranch	Cattle	561	Present Management	Cattle	561
		Deer	21		Deer	21
5845	San Arroyo	Sheep	2,180	Livestock Manipulation techniques	Sheep	2,900
		Deer	101		Deer	101
		Elk	11		Elk	11
		Antelope	63	Land treatment (11,520 acres plowing)	Antelope	783
5849	Scarf Mesa	Cattle	48	Present Management	Cattle	48
		Deer	65		Deer	65
		Elk	39		Elk	39

Allotment Number	Allotment Name	Initial AUMs		Proposed Plan	Future AUMs	
5836	Showerbath Springs[d]	Cattle Deer Elk	480 230 206	Manage perennial stream	Cattle Deer Elk	500 240 216
5813	South Sand Flats[a,c,e]	Cattle Deer Elk	383 76 11	Change season of use 11-1 to 4-15	Cattle Deer Elk	378 76 11
5846	Spring Canyon[b] Bottom	Cattle Deer Bighorn	100 36 64	Livestock Manipulation techniques	Cattle Deer Bighorn	100 36 64
5843	Steamboat Mesa	Cattle Deer Elk	453 192 79	Livestock Manipulation techniques Maintain land treatments (1,647 acres chaining)	Cattle Deer Elk	453 192 79
5857	Sulphur Canyon	Sheep Deer Antelope	897 47 25	Livestock manipulation techniques	Sheep Deer Antelope	897 47 25
5882	Taylor	Cattle Deer Elk	3,744 296 5	Present Management Land treatment (6,120 acres chaining) Manipulate grazing on 2,500 acres of saline soils Maintain land treatments (2,914 acres chaining; 466 acres plowing)	Cattle Deer Elk	4,082 676 7
5824	Ten Mile Point	Cattle Deer Bighorn	1,663 35 47	Livestock Manipulation techniques	Cattle Deer Bighorn	1,663 35 47

Allotment Number	Allotment Name	Initial AUMs		Proposed Plan	Future AUMs	
5873	Thompson Canyon	Cattle	379	Present Management	Cattle	364
		Deer	41		Deer	41
		Elk	39	Manipulate grazing on 500 acres of saline soils	Elk	39
5878	Tusher Wash	Cattle	257	Present Management	Cattle	257
		Deer	23		Deer	23
5830	Whipsaw Flat	Sheep	2,932	Livestock manipulation techniques	Sheep	2,789
		Deer	27		Deer	27
				Manipulate grazing on 5,500 acres of saline soils		
5875	Willow Flats[e]	Cattle	153	Livestock Manipula- techniques	Cattle	143
		Deer	17		Deer	17
5384	Windwhistle	Cattle	608	Present Management	Cattle	608
		Deer	158		Deer	158
		Antelope	25	Maintain land treatments (1,825 acres plowing)	Antelope	25
5854	Winter Camp	Sheep	248	Present Management	Sheep	288
		Deer	10		Deer	50
				Land treatment (640 acres plowing)		

[a] Average licensed use shown is the average use that the current permittee has taken.

[b] Since licensed use has been complete nonuse, allowable use would initially be 50 percent of active preference.

[c] New operators' initial AUMs would be the same as active preference.

[d] Increase in AUMs includes prescribed fire.

[e] All or part of decrease is due to land disposal and/or construction of evaporation pond.

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