

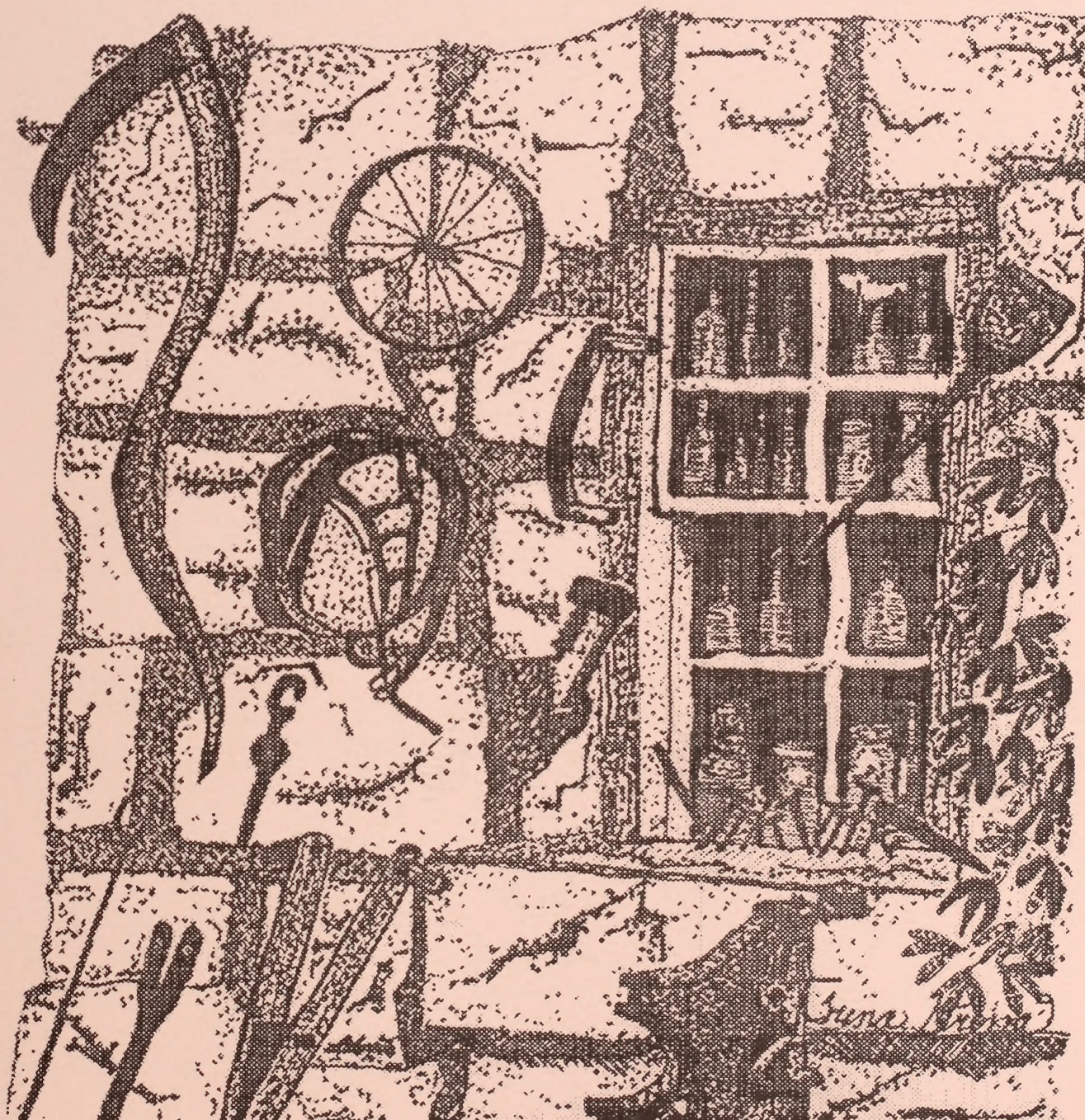


Vernal District Office

November 1991



# Diamond Mountain Resource Area Resource Management Plan and Environmental Impact Statement



STONE HOUSE  
JARVIE RANCH



The Bureau of Land Management is responsible for the stewardship of our public lands.  
It is committed to manage, protect, and improve these lands in a manner to serve  
the needs of the American people for all times.

Management is based on the principles of multiple use and sustained yield  
of our nation's resources within a framework of environmental and scientific technology.  
These resource include recreation; rangelands; timber; minerals; watershed;  
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# United States Department of the Interior

BUREAU OF LAND MANAGEMENT  
Vernal District Office  
170 South 500 East  
Vernal, Utah 84078



IN REPLY REFER TO:

1616.10

Fall 1991

Dear Friend:

This draft Resource Management Plan/Environmental Impact Statement (RMP/EIS) for the Diamond Mountain Resource Area is presented for your review and comment. This document analyzes alternatives for managing public lands in the resource area. These alternatives are designed to guide future management and resolve land management issues that were identified during the early states of the planning process.

We welcome your comments on the content of this document. We are particularly interested in comments that address one or more of the following: (1) possible flaws in the analysis; (2) new information that would have a bearing on the analysis; and (3) needs for clarification. Specific comments will be most useful. Those comments addressing the adequacy of the draft RMP/EIS will be responded to in the final EIS.

In order to be considered in the final EIS/proposed RMP, comments must be received within 90 days of the *Federal Register* notice of availability.

Please keep this copy of the draft RMP/EIS, as you may wish to refer to it when you review the final document. Copies of the final EIS/proposed RMP will be sent to all those who provide comments on the draft RMP/EIS or request a copy.

All written comments should be sent to:

Penelope Smalley, Team Leader  
Bureau of Land Management  
Vernal District  
170 South 500 East  
Vernal, UT 84078

An open house and tours of the various areas of interest described in the draft RMP/EIS will be scheduled soon after you receive this document. We will send you notification of the exact dates.

Sincerely,

David E. Little  
District Manager

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# DIAMOND MOUNTAIN RESOURCE AREA

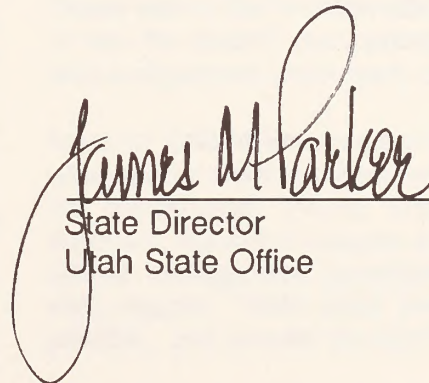
## DRAFT RESOURCE MANAGEMENT PLAN AND ENVIRONMENTAL IMPACT PLAN

Prepared by

Department of the Interior  
Bureau of Land Management  
Vernal District  
Fall 1991



District Manager  
Vernal District



State Director  
Utah State Office



# DIAMOND MOUNTAIN RESOURCE AREA

## RESOURCE MANAGEMENT PLAN AND ENVIRONMENTAL IMPACT PLAN

Draft (X)      Final ( )

The United States Department of the Interior, Bureau of Land Management

1. Type of Action: Administrative (X)    Legislative ( )
2. Abstract: This Resource Management Plan/Environmental Impact Statement describes and analyses the impacts of five alternatives for managing the public lands in the Diamond Mountain Resource Area. The alternatives provide management of all resources. Areas of Environmental Concern and Wild and Scenic Rivers are also recommended. Alternative E is BLM's preferred alternative.
3. Comments are requested from all interested and/or affected agencies, organizations and individuals. Comments must be received within 90 days of the *Federal Register* notice of availability.
4. For further information contact:

Penelope Smalley, Team Leader  
Bureau of Land Management  
Vernal District  
170 South 500 East  
Vernal, UT 84078  
(801) 789-1362





# SUMMARY

## HOW TO USE THIS DOCUMENT

### PUBLIC REVIEW

This draft Resource Management Plan and Environmental Impact Statement (RMP/EIS) documents the process by which the Diamond Mountain Resource Area (DMRA) has evaluated alternative management plans and identified the preferred plan. As a member of the public affected by this choice, your review will help the resource area to incorporate your concerns into the final RMP/EIS. Your comments will be most effective if they clearly point out areas where you wish to add information critical to the analysis process but has not been included, or where you feel information is incorrectly stated, or where you disagree with conclusions (please include your reasons for favoring a different conclusion).

*It is critical that the reader understand the management priority concept; it is the foundation of this RMP/EIS.*

### THE MANAGEMENT PRIORITY AREA CONCEPT

The Diamond Mountain RMP/EIS is based on the concept of management priority areas. It is critical that the reader understand the management priority concept; it is the foundation of this RMP/EIS. First, the capabilities of the land are evaluated in a resource inventory. Then objectives for alternative resource management plans are devised based on issues, management concerns, and scoping as well as analysis of management opportunities. Based on these alternatives' objectives, lands are placed into one of four geographic groupings where similar management would be applied. Although the geographic

groupings differ under each alternative, the management objectives for each grouping are quite similar across the alternatives:

LEVEL 1 identifies those lands requiring the most restrictive management. These lands would generally be closed to all activities except those specifically devised to enhance those values which placed the area in level 1.

LEVEL 2 identifies those lands that under the subject alternative require careful management. These lands would be open to activities that do not detract from those values which placed the area in level 2.

LEVEL 3 identifies those lands that under the subject alternative require active management. These lands would be open to most activities which may be constrained somewhat to protect those values which placed the lands in level 3.

LEVEL 4 identifies those lands that under the subject alternative require open management. These lands would be open to all legal uses and activities.

Specific management prescriptions were then matched to the management level for each alternative; all of the alternatives are compatible with the multiple use management directives of the BLM, but give emphasis to different resources.

Please refer to the five alternative maps in the map packet to view the graphic descriptions of management priority area assignments under each alternative.

Areas of Critical Environmental Concern (ACECs) and other special emphasis areas were also developed using the management priority area concept. The most important, significant features and resources which merit special management consistent with each alternative, were mapped. These areas were then combined, where possible, and exterior boundaries were drawn. In this



respect the Diamond Mountain Resource Management Plan may differ from previous RMPs in that the ACECs within DMRA are not covering a single high quality resource value, but in most cases cover multiple high quality resource values. Thus management prescriptions were established by alternative to handle multiple use management for each ACEC relating directly to the management levels outlined above. Within one ACEC, for example, there could be three different levels of management from strict protection to open management.

In general, the specific management prescriptions for resource values and uses within the ACEC are the same as management objectives outside the ACEC. However, to enhance or protect the combination of high value resources within these areas, some further specific refinements and/or clarifications were necessary. These refinements may have included additional timing restrictions, or closures to specific uses (for example, OHV, mineral entry, or agricultural leasing). Further clarifications deal with the extent and/or type of vegetation treatments, mitigation measures to ensure high quality visual resources, etc.

Dividing the resource area into different management priority areas makes it possible to anticipate types of resource development in any particular area. An oil and gas operator, for example, will know where oil and gas development will have the least restrictions and where more restriction would be required for development. Utility companies can look at the planning map and determine where a right-of-way will encounter the fewest restrictions. Areas where range or wildlife improvements can occur with the least threat of later conflict with other resource development will be easily determined. By inviting the public, resource users, and local, state, and other federal agencies to participate in this planning process, BLM has given interested parties the opportunity to participate in the land-use planning procedure. The Diamond Mountain Resource Management Plan will be the guiding influence for management decisions until amended or rewritten.

## **HOW THE DIAMOND MOUNTAIN RMP/EIS IS ORGANIZED**

This section of the RMP/EIS gives a brief description of the entire document. This is a good place to start your review and get an overall view of the RMP/EIS. The resources and programs are arranged alphabetically within this document.

### **Chapter 1. Purpose and Need**

This chapter describes the planning process and lists the issues developed by discussions with those affected by the RMP. The plan deals primarily with these concerns. Criteria by which the alternatives were evaluated are also listed in this section.

### **Chapter 2. Alternatives**

This chapter gives a detailed description of the proposed management under each of five alternatives. There are two sets of alternatives: areawide alternatives and alternatives for each of the special emphasis areas (as they apply to each plan alternative).

A preferred alternative is identified and the rationale for its identification is listed. This chapter is the heart of the resource management plan. The reader should spend time studying the alternatives, especially the preferred alternative.

### **Chapter 3. Affected Environment**

This chapter describes the Diamond Mountain Resource Area and its resources as they presently exist and as they relate to the alternatives presented. Refer to the Management Situation Analysis (MSA) for a detailed discussion of the resources and current management programs within the resource area. (A copy of the MSA is available for review in the Vernal District Office).

### **Chapter 4. Environmental Consequences**

This chapter analyzes the changes that may occur if each alternative were implemented, and attempts to assign the relative significance of each change, both beneficial and adverse. The analysis is area-wide, not management-area specific, although it does focus on important site-specific impacts in each special emphasis area. This chapter is the heart of the environmental impact analysis. The reader should check the information presented and add anything that was overlooked that may change the conclusions.

### **Chapter 5. Consultation and Coordination**

This chapter lists the agencies, organizations, and individuals who were consulted during the development of this document. Also included is a list of individuals contributing to this document and their qualifications.

### **Appendices**

These sections contain additional information you may need to understand the RMP/EIS.



## **Glossary, References, and Index**

These sections are provided to aid the reader in finding and understanding the material contained in this document.

## **Map Packet**

The large maps in the map packet depict important aspects of the RMP/EIS. The management priority areas are mapped for each alternative along with the special emphasis areas associated with each alternative. The status of all lands within the resource area are displayed on the ownership map. Grazing allotments and major roads are displayed on a separate map.

## **ALTERNATIVES**

This draft Diamond Mountain RMP and EIS addresses future management options for approximately 709,000 surface acres and 854,000 total acres of federal mineral estate administered by the Bureau of Land Management (BLM) through its Diamond Mountain Resource Area (DMRA) office in Vernal, Utah.

Although the exterior boundary of DMRA encompasses some 3.8 million acres of land in Daggett, Duchesne, and Uintah (portion) Counties of northeastern Utah, 81 percent of these lands are owned or managed by other entities, namely the Ashley National Forest and the Uintah and Ouray Indian Reservation (see Chapter 1).

When completed, the Diamond Mountain RMP will provide a comprehensive framework for managing public land and allocating resources in the resource area during the next fifteen or more years. However, this RMP/EIS document is primarily focused on three broad issues and the decisions needed to address each issue. The broad issues involve the management of natural resources such as vegetation, soils, and watershed; special emphasis areas including wild and scenic rivers and ACECs; and resource uses such as minerals, woodlands, and lands.

Five alternatives were considered in this document. One represents "no action" which means a continuation of current management direction. The other four alternatives provide a range of choices from those emphasizing environmental guardianship to those emphasizing resource uses.

The preferred alternative incorporates portions of the other four alternatives and generally represents a balance between environmental guardianship and resource use. The management actions, resource allocations, and environmental consequences characterizing each alternative are summarized in Chapter 2, pages 2.15 through 2.32.



*Conservation is a state of harmony between men and land.*

*All ethics so far evolved rest upon a single premise: that the individual is a member of a community of interdependent parts. His instincts prompt him to compete for his place in that community, but his ethics prompt him also to cooperate (perhaps in order that there may be a place to compete for).*

*The land ethic simply enlarges the boundaries of the community to include soils, waters, plants, and animals, or collectively: the land.*

*A land ethic, then, reflects the existence of an ecological conscience, and this in turn reflects a conviction of individual responsibility for the health of the land. Health is the capacity of the land for self-renewal. Conservation is our effort to understand and preserve this capacity.*

**-- Aldo Leopold**  
**in *A Sand County Almanac***





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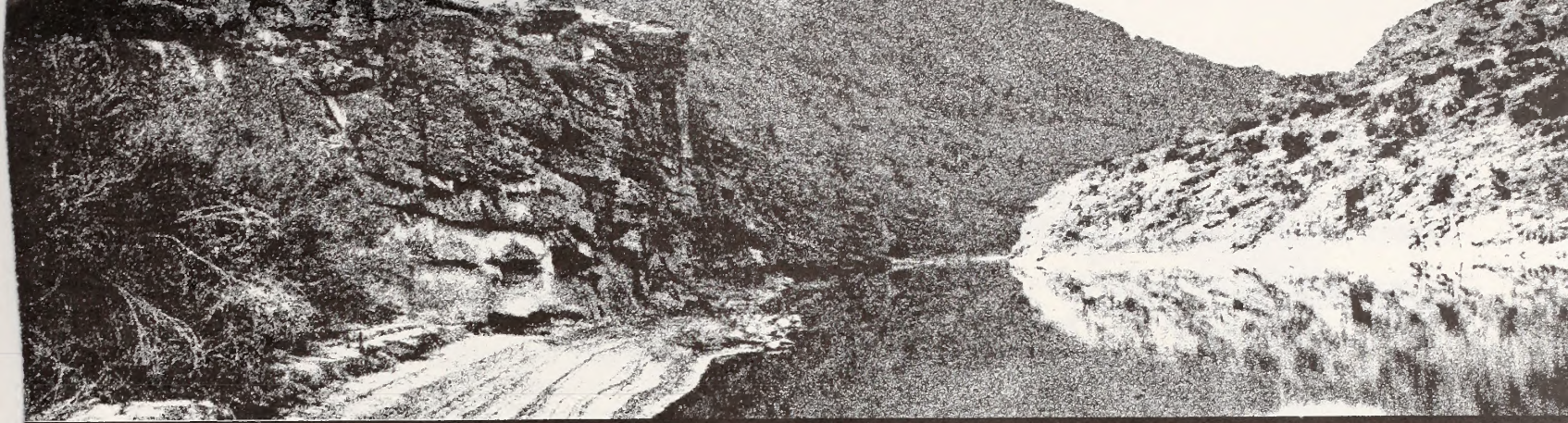
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## PURPOSE AND NEED 1

This Resource Management Plan/Environmental Impact Statement evaluates alternative land use plans for the management of public lands and resources administered by the Bureau of Land Management (BLM) in the Diamond Mountain Resource Area (DMRA) of the Vernal District, Utah. Each alternative analyzed in detail represents a complete and reasonable plan which could be used to guide the management of the Diamond Mountain Resource Area.

The Resource Management Plan (RMP) is a comprehensive land-use plan establishing land-use decisions (referred to as management priority areas) for specific areas. "Priority" means that a given resource or use receives management emphasis, and that excluded uses are designed to reduce conflicts.

The management priority areas depicted on the alternative maps in the map packet of this document may include areas of split-estate (non-federal surface over federal subsurface minerals or vice versa), private, state, or other nonfederal lands. However, the management priority areas apply only to surface and federal mineral estate on lands managed by BLM. On split-estate lands, management priority area designations indicate how BLM would manage the federal mineral estate; BLM would not dictate other surface uses unrelated to federal mineral development. None of the recommendations for management priority areas apply to private, state, or other lands or minerals not managed by BLM. In addition, valid existing rights take precedence over any management decisions depicted on the alternative maps. Nothing on the alternative maps should be interpreted as challenging those rights.

This resource management plan will provide a framework within which management will make future on-the-ground decisions. It is not an activity-specific plan intended to make specific program decisions for all individual resources; rather, it is designed to provide overall multiple-use objectives and management direction for all

the resources contained within the Diamond Mountain Resource Area. Therefore, it will be similar to a traditional master plan or comprehensive land-use plan. While it makes some program-specific decisions, it also identifies policy and criteria under which some future decisions will be made at the project level through an activity plan (i.e. allotment management plans, habitat management plans, etc.).

Dividing the resource area into different management priority areas makes it possible to anticipate types of resource development at a particular location. An oil and gas operator, for example, will know where oil and gas development will have the least restrictions and where more restrictions would be required for development. Utility companies can look at the planning map and determine where a right-of-way will encounter the fewest restrictions, thus reducing construction time and ultimately costs. Areas where range or wildlife improvements can occur with the least threat of later conflict with other resource values and development will be easily determined. By inviting the public, resource users, and local, state, and other federal agencies to participate in this planning process, BLM has given interested parties the opportunity to shape and direct the land-use planning procedure. The Diamond Mountain Resource Management Plan will be the guiding influence for management decisions until amended or rewritten.

The process for the development, approval, maintenance, and amendment of resource management plans and their associated environmental impact statements was initiated under the authority of section 202(f) of the Federal Land Policy and Management Act of 1976 (FLPMA) and section 202(c) of the National Environmental Policy Act of 1969 (NEPA). The current planning process is guided by Bureau of Land Management planning regulations in Title 43 of the Code of Federal Regulations, part 1600 (43 CFR 1600), and the Council on Environmental Quality Regulations (40 CFR 1500).



After its final approval, the Diamond Mountain RMP will be kept current through minor plan adjustments, amendments, or total plan rewrite as determined by demand, resource changes, or new information.

## **PURPOSE AND NEED**

The major purpose in preparing this RMP is to provide a comprehensive framework for managing and allocating uses of the public lands and resources in the Diamond Mountain Resource Area.

Resource management for the Diamond Mountain Resource Area is currently guided by three management framework plans (MFPs) and were amended or altered by various plans and documents listed later in this chapter. This RMP/EIS will consider and analyze the consequences of the current and alternative management of the resource area; attempt to resolve the resource issues; and provide direction for site-specific activity planning and implementation of future management actions. The RMP will supersede the existing management framework plans.

## **DESCRIPTION OF THE RESOURCE AREA**

The Diamond Mountain Resource Area Office, within the Vernal District of northeastern Utah, is responsible for management of BLM-administered lands and minerals in all of Daggett and Duchesne Counties and that portion of Uintah County northwest of the Green River (see Map 1-1). The Ashley National Forest, the Flaming Gorge National Recreation Area, and the Dinosaur National Monument, all fall within the borders of the Diamond Mountain Resource Area. However, lands and minerals within those entities are excluded from our planning authority. The surface estate within the Ouray National Waterfowl Refuge is excluded from this plan; however, the plan will cover management of those federal minerals under BLM jurisdiction within the refuge. Lands and minerals of the Uintah and Ouray Indian Reservation which fall within the DMRA borders are excluded from the plan. The exception is a few, isolated tracts where BLM has acquired administrative responsibility for minerals (or portions of the minerals) subsequent to the formation of the reservation (see ownership map in map packet). In total, DMRA is administratively responsible for 854,000 acres of surface and subsurface lands.

Land ownership patterns within the resource area range from large blocks of BLM-administered public land to small, disjointed blocks with several owners. Ownership is further complicated by split estate lands where the

Bureau administers a percentage of the minerals or perhaps only one mineral, while other owners hold the other mineral interests. Split estate lands cover 145,000 acres, or 17 percent, of the total BLM-administered lands within DMRA. Land ownership and surface administration responsibilities are displayed on Figure 1-1.

The responsibility for managing recreation use on the Green River is shared between DMRA, the Utah Division of Wildlife Resources (UDWR), and the Utah Division of Parks and Recreation for those parts of the river touching public lands from the Ashley National Forest to the Colorado border; from Dinosaur National Monument to the Uintah-Ouray Indian Reservation northern boundary; and from the Uintah-Ouray Indian Reservation southern boundary to the Carbon County line. Current management of the upper Green River in Browns Park is controlled by a 1983 interagency agreement involving BLM, National Park Service, U.S. Forest Service, and UDWR.

## **ISSUES AND MANAGEMENT CONCERNS ADDRESSED IN THE DIAMOND MOUNTAIN RMP/EIS**

### **INTRODUCTION**

The BLM planning regulations focus land-use planning on the identification and resolution of issues and management concerns arising over the use and management of public lands and resources. A planning issue can be defined as an unrealized opportunity, an unresolved conflict or problem, or a value being lost. In addition to issues, other land use problems of a less controversial nature are also evaluated. These are referred to as management concerns and are resolved in the same manner as issues to improve management of the public lands. Not all issues are related to resource management; therefore, not all issues are planning issues that can be resolved through a resource management plan. Some must be resolved administratively, i.e., revisions of national laws and policies, changes in national prioritization.

Three broad planning issues will be addressed by the Diamond Mountain Resource Management Plan. These are referred to as management concerns also. These issues and management concerns were developed with the use of input gathered from BLM personnel, the public, and other agencies. The issues and management concerns with their related planning questions, are listed below. The questions pertain to necessary decisions or

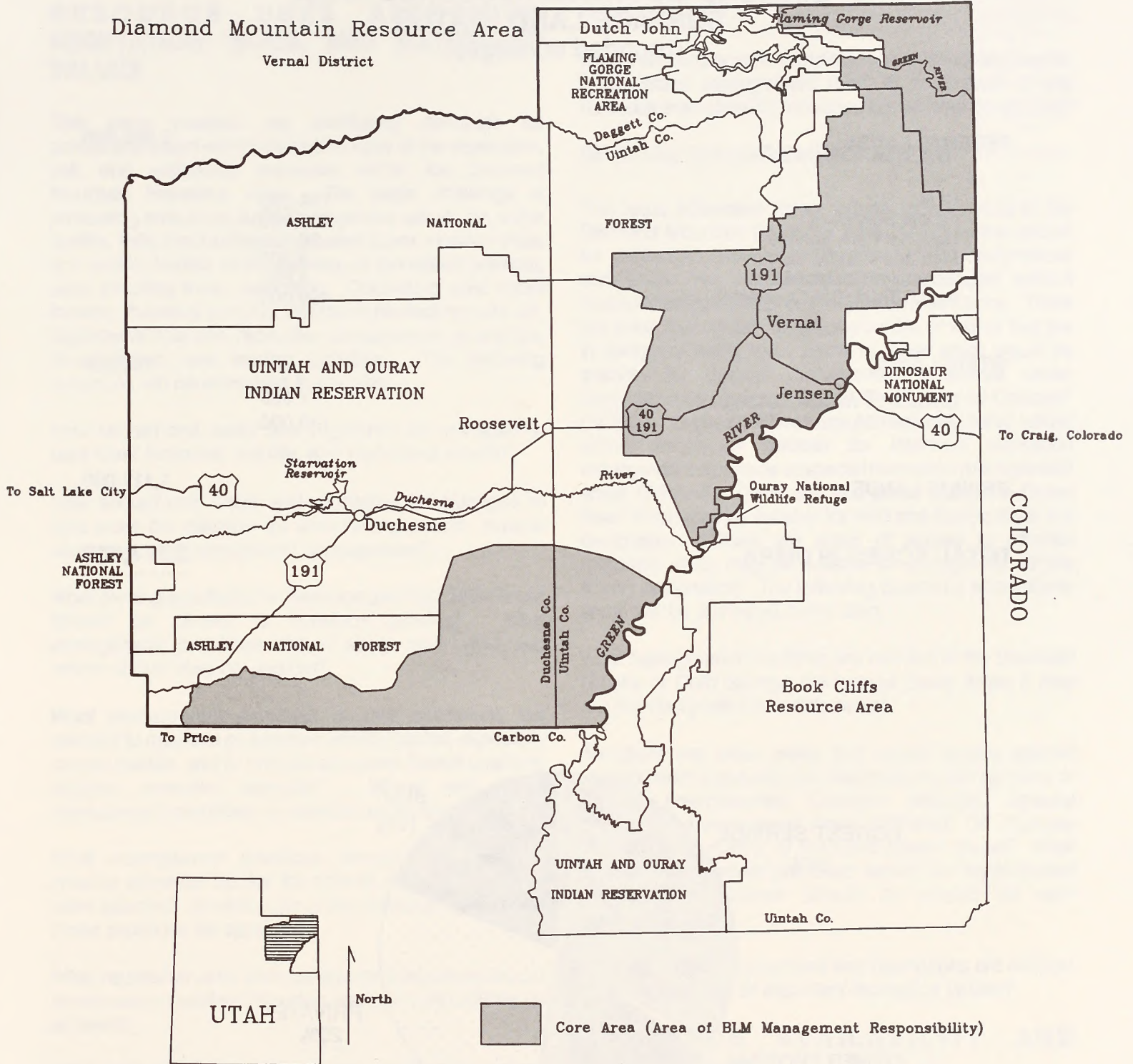


WYOMING

To Rock Springs, Wyoming

Diamond Mountain Resource Area

Vernal District



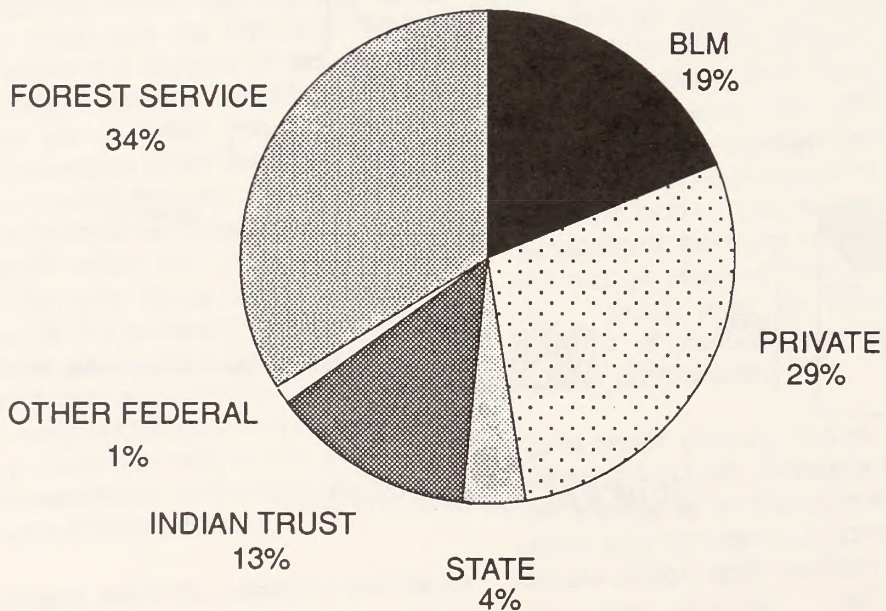
MAP I-1  
GENERAL LOCATION MAP



**FIGURE 1-1**

**DIAMOND MOUNTAIN RESOURCE AREA  
SURFACE LAND STATUS**  
(rounded acreage)

<b>FEDERAL LANDS</b>		<b>2,505,000</b>
BLM	709,000	
Forest Service	1,266,000	
National Park Service	28,700	
Fish and Wildlife Service	8,300	
Bureau of Reclamation	4,000	
Indian Trust (BIA Oversight)	489,000	
<b>STATE LANDS</b>		<b>160,000</b>
Division of Wildlife Resources	17,000	
Division of Lands and Forestry	143,000	
<b>PRIVATE LANDS</b>		<b>1,112,000</b>
<b>TOTAL ACRES IN DMRA</b>		<b><u>3,777,000</u></b>





resource allocations that must be addressed in this planning document and must include subsurface minerals.

## **RESOURCE USES AFFECTING VEGETATION, SOILS, AND WATERSHED VALUES**

This issue involves the conflicting demands for consumptive and nonconsumptive uses of the vegetation, soil, and watershed resources within the Diamond Mountain Resource Area. The basic challenge is protecting resources such as rangeland values, air, water quality, soils productivity, vegetation cover, riparian areas and wildlife habitat while allowing, to the extent possible, uses affecting these resources. Conflicting uses could include: livestock grazing, woodland product harvest, off-highway vehicle use, recreation development, oil and gas development, and mining activities. The following questions will be answered in the plan.

*How should soil, water and vegetation be managed to best meet livestock, wildlife, and watershed needs?*

*How should soil, water and vegetation be managed to best meet the demand for woodland products, mineral resources, and recreational opportunities?*

*What areas are suitable for livestock grazing? What areas should be closed to livestock grazing? What management practices should apply, and when and where should they be applied?*

*What management practices or use restrictions are needed to maintain or improve wildlife habitat, especially crucial habitat, and to provide adequate habitat quality to support sensitive species? Where will these management practices or restrictions be applied?*

*What management practices should be applied to provide essential habitat for special status wildlife and plant species? In what parts of the resource area should these practices be applied?*

*What vegetation uses and management practices should be allowed on wetland/riparian, and when should they be allowed?*

*What management practices are needed to reduce accelerated soil erosion?*

*What conditions of use should be applied to activities which cause, or have the potential to cause, adverse effects on air quality and surface and subsurface water quality and quantity?*

*Where should corrective actions be taken to improve water quality in the Green River drainage or other places where the quality of surface water or groundwater is unsatisfactory?*

*Where and under what conditions should fire be used as a vegetation management tool? In what parts of the resource area should prescribed use of fires be applied?*

## **SPECIAL MANAGEMENT AREAS**

This issue addresses areas, values, or resources in the Diamond Mountain Resource Area that meet the criteria for protection under special management designations and which may not be adequately managed without special management prescriptions or restrictions. There are areas that contain unique resources or values that are in danger of being lost. Some of these areas would be suitable for special management emphasis under designation as "Areas of Critical Environmental Concern" (ACECs). Some areas contain prime recreational values which would be suitable for intensive recreation management emphasis as special recreation management areas (SRMAs). There are also areas along the Green River which may be suitable for Wild and Scenic River Act designation. There are areas of appeal to off-road motorists which may be suitable for off-highway vehicle (OHV) designation. The following questions about these areas will be answered in the plan.

*What management practices are needed in the Diamond Breaks or Cold Springs Wilderness Study Areas if they are not designated as wilderness?*

*Are there any other areas that would require special management emphasis and designation such as Areas of Critical Environmental Concern (ACECs); Special Recreation Management Areas (SRMAs); Off Highway Vehicle Areas (OHV); or Wild and Scenic Rivers? What special management practices should be implemented and what restrictions should be placed on non-compatible uses?*

*What management practices and restrictions are needed to protect unique or important recreation values?*

## **RESOURCE AVAILABILITY AND ACCESSIBILITY**

The resource area contains multiple resources for which there is a demand for development. The development or use of oil and gas, other minerals, wood products, recreation opportunities, and tracts of public land should be managed in a manner which ensures resource availability while protecting resource values.



The value or usability of some resources is enhanced by improved accessibility. To be used, resources must be accessible (in terms of legal and/or physical access) and manageable (in terms of ability to apply constraints or requirements to benefit other resources).

Too much availability or accessibility could lead to excessive development or use which could degrade the value of such resources as visual resources, cultural/paleontological resources, wildlife habitat, vegetation, soils, air, and water. Therefore, availability and accessibility must be balanced to maintain or improve usability and ensure protection of limited resources. The following questions will be answered in the plan:

*Where should access be obtained and/or designated to provide recreational opportunities to currently inaccessible areas? Are there areas where vehicle access should be restricted or denied?*

*Where should corridors be designated for communications and utility facilities? What areas should be avoided?*

*Which public land tracts are considered suitable for disposal through transfer from BLM administration by state selection, exchange, sales, or Recreation and Public Purposes Act (R&PP) disposal? What lands should be made available for community development, expansion or facilities? What lands, if any, should be made available for waste management?*

*Which areas should be recommended for protective withdrawal?*

*Which land areas and mineral estates may be suitable for acquisition? To what areas or under what circumstances should physical or legal access, or both, be acquired?*

*Which areas are suitable for woodland product harvest and what amounts should be cut each year?*

*Which deposits of federal phosphate, tar sands, and "Gilsonite", within the resource area are suitable for leasing and development? What conditions should be applied on these leases?*

*What lease areas should be available for oil or gas exploration and development, including geophysical activities? Where should "no surface occupancy" or other conditions of use be applied? What areas should be closed to oil and gas exploration or development, including geophysical activities?*

*Where should sand, gravel, and other mineral material sites be developed or disallowed? What conditions should be applied to development of these sites?*

*Where are mining claims most likely to occur? Where should associated facilities (access, utilities) be located to support mineral development? Are there areas currently withdrawn from mineral locations which should be opened?*

## PLANNING CRITERIA

Planning criteria are the constraints or ground rules by which the RMP and associated EIS are developed. These are used to guide and direct the RMP process. Planning criteria can reflect legal matters, policy guidelines, administrative or managerial decisions, use of existing data, acknowledgment of data scarcity, and specific reasonable requests. The criteria is used at four stages of the planning process: 1) pre-plan, 2) resource inventory, 3) management situation analysis, and 4) alternative selection.

## OVERALL PLANNING CONSIDERATIONS

General planning considerations include:

- Laws, executive orders, and regulations.
- Directives prescribed in BLM manuals for land-use planning.
- BLM's Director and Utah State Director guidance applicable to the resource area.
- Results of public participation and coordination with other federal agencies, local governments, and Indian Tribes.
- Analysis of available data and information and the need for any additional inventories.

Management concerns, issues, and problems are discussed in the RMP when:

- Existing or proposed management of one resource significantly constrains or curtails existing or proposed use of another resource;
- Agency guidance requires land use allocations, not now in place, to be made through the planning process;



- Existing land use allocations conflict with current agency resource management policies or guidance;
- Existing resource management practices conflict with management plans, policies, and guidance of land management agencies, landowners, or
- There is significant documented public concern regarding the management of a specific resource.

Planning criteria, based on section 202 of the Federal Land Policy and Management Act (FLPMA), include:

- Use and observation of the principles of multiple use and sustained yield.
- Use of an interdisciplinary approach to integrate consideration of physical, natural, biological, and social-economic sciences.
- Give priority to the consideration of ACECs.
- Rely on existing inventories of public lands, their resources, and other values.
- Consider present and potential uses of the public lands.
- Consider the relative scarcity of the resource values involved and the availability of alternative means and sites to enhance those values.
- Weigh long-term benefits and costs against short-term benefits or costs.
- Provide for compliance with applicable pollution control laws.
- To the extent possible, coordinate land use inventory, planning and management of public lands with the land-use planning and management programs of other federal agencies and state and local governments.

## GENERAL PLANNING CRITERIA

Decisions in existing documents are revised and adjustments made to reflect current or anticipated resource use. The RMP will supersede the following documents:

- Oil and Gas Developments, Myton Bench Environmental Assessment, 1984

- Land Exchange Amendment to Diamond Mountain Management Framework Plan, 1986
- Off-Road Vehicle Designations, Vernal District, 1986 (DMRA Portion Only)
- Vernal District Oil and Gas Environmental Assessment, 1981 (DMRA Portion Only)
- Diamond Mountain Management Framework Plan, 1981
- Browns Park Management Framework Plan, 1981
- Ashley-Duchesne Management Framework Plan, 1984

The RMP will amend the following documents for forage allocations and assignment of leasing categories:

- Three Corners Grazing Impact Statement, 1979 (Updated by Rangeland Program Summary, 1987)
- Ashley Creek Grazing Impact Statement, 1982 (Updated by Rangeland Program Summary, 1989)
- Uintah Basin Synfuels Development EIS, 1983
- Utah Combined Hydrocarbon Leasing EIS, 1984

The RMP is developed for public lands and minerals management within the Diamond Mountain Resource Area as a whole. The RMP will be used as the basic planning document to guide management of and budget requests for the resource area over the next 15 years, or the year 2007, or until it is revised or rewritten.

The RMP develops criteria by which future lands placed under BLM management either through withdrawal revocation, exchange, or purchase, will be evaluated and brought under multiple use management.

The RMP does not address the following proposals:

- Wilderness designations already analyzed in the existing Colorado and Utah Wilderness Environmental Impact Statements
- Project BOLD (a Utah-BLM exchange proposal)
- USFS-BLM Interchange
- Uintah and Ouray Indian reservation boundary issues



[NOTE: The Tenth Circuit Court ruling dated September 17, 1985, regarding the Uintah and Ouray Indian Reservation boundary did not impose land ownership changes. Therefore, BLM's administration of the public lands has not been changed by the ruling. Future land use decisions will be made through the land-use planning process in accordance with current laws, regulations, and policies.

- Livestock grazing fees
- Mineral estate within National Forest System lands (BLM will continue to issue mineral leases within NFS lands pursuant to the planning guidance contained in the 1986 Ashley National Forest Land and Resource Management Plan.)

*Nothing in the management options identified would preclude valid existing rights.*

All alternatives recognize the existence of valid existing rights. Nothing in the management options identified would preclude those rights.

Restrictions on use of resources or limitations on use of federal lands (administered by BLM) are considered only where an analysis demonstrates a clear need and there is no practical way to avoid adverse impacts without them. Implementation of BLM activities and BLM permitted activities are controlled through stipulations and monitoring so they comply with applicable federal and state standards. Any restrictions identified in this plan (except those legislatively mandated) may be waived by the authorized officer following an approved site-specific analysis which results in a "no-effect" determination.

The RMP provides reasonable, feasible, and practical guidance for management of the public lands and resources within the entire resource area, without addressing unrealistic changes in personnel, budget, facilities, services, or scope of management.

National environmental issues are considered within the scope of this RMP by those resource or program discussions which best address the concern:

- Proper management of vegetation, with protection and enhancement of the vegetation resources, can positively effect current trends involving global climate changes and acid rain.
- Management planning which emphasizes intensive management of riparian habitat and saline or erodible soils can positively effect and improve water quality.
- Management planning which balances demand with available resources would anticipate changing needs from increased population pressures and/or resource demands.



## SPECIFIC PLANNING CRITERIA

### Cultural and Paleontological Resource Management

Cultural and paleontological resources within the DMRA are identified. Decisions outline protective measures and stabilization activities, including research projects. Significant properties including critical paleontological locations. Cultural and paleontological resource management strategies, including quantifiable implementation objectives, are formulated to address data collection, research design, projects, and long-term program goals. Areas of significant cultural and paleontological properties are identified where site-disturbing activities such as location of facilities, mineral sales and permits, range improvements, recreation activities, and wildlife projects, may have a detrimental effect.

### Fire Management

Fire suppression will be provided for BLM-administered lands where fire would adversely affect the following types of areas and values: wildland/urban interface areas, private property and structures, high intensity recreation



areas, fire-sensitive crucial wildlife habitat (i.e., deer winter range, sage grouse strutting and nesting grounds), significant cultural resource sites, critical watersheds, erodible soils, and riparian ecosystems utilized by special status animal species.

Conditional suppressions will be used in all other areas where the cost of suppression is greater than the cost of the resources being burned. The area manager or his/her representative makes the decision to use full or conditional suppression. Decisions are based on criteria such as fuel types, resource values, access, structure ownership and adjacent landowner policies. During times of high fire danger or when burning indices indicate that a fire could become too large to handle, full suppression will be utilized.

Prescribed fire (natural or intentionally ignited) will be used to enhance resource values for livestock grazing and wildlife habitat and to improve vegetation and watershed conditions in areas determined by criteria set out in this RMP. Prescribed fire may also be used to remove a build-up of hazardous fire fuels within the resource area.

## **Fish and Wildlife Habitat Management**

All existing and potential habitat for special status animal species and raptors is identified. Objectives for management and protection of these areas are identified. All areas requiring temporary or permanent closure or restrictions to livestock grazing and/or surface-disturbing activities are identified.

All wildlife management objectives established in existing planning documents were reviewed on a grazing-allotment basis. These objectives will be modified or new objectives developed for the purpose of improvement on priority habitats for:

- Fisheries,
- Big game, waterfowl, raptor, and upland game habitat, and
- Other high interest species habitat as identified by Utah Division of Wildlife Resources.

Big game habitat condition and carrying capacities were reviewed on a grazing allotment basis and compared to existing herd numbers and possible future objective herd numbers.

Constraints on land use or development and human influence are identified for purposes of habitat protection

and improvement. Land closures for livestock grazing or surface disturbance are identified in terms of wildlife objectives.

## **Land and Realty Management**

### **Land Ownership and Disposition**

Lands are considered for disposal when they are classified as suitable and the disposal would provide the maximum benefit for the general public. Before any actual disposal action takes place, a site-specific evaluation is made considering all environmental and management factors. Such disposal actions would be, but are not limited to, exchanges and sales.

### Exchanges

1. Public lands that do not have "known mineral values" may be offered in exchange without any mineral reservation. This will apply whether or not the nonfederal party in an exchange controls the minerals under his or her land.
2. If the public lands have some potential for mineral development, reserving the mineral interests is not mandatory so long as the values can be equalized by the payment of money and so long as the payment does not exceed 25% of the total value of the land. This is subject to Federal Land Exchange Facilitation Act of 1988 (FLEFA) regulation.
3. If the public lands in an exchange are determined to have "known mineral values" for locatable, leasable, or saleable minerals, it may be in the public interest to cancel the offer, depending on the significance of the deposits. If significant, the leasable minerals alone can be reserved.

### Sales

Mineral estate would be evaluated using the following criteria:

1. If the public lands proposed for sale are determined to have "known values" for locatable, leasable, or saleable minerals, one of the following courses of action may be taken:
  - a. Reject the offer to purchase or cancel the offer of sale.



- b. Dispose of the surface estate and reserve all or part of the mineral interests to the United States.
2. If the lands have no "known mineral values," the mineral interests could be disposed of pursuant to the authority of section 209(b) of FLPMA.

**Other Disposals.** Lands available for state selection, Recreation and Public Purposes Act patent, private/state exchange, or other disposal are identified in the RMP.

**Exchanges.** Land within the resource area are considered for exchange, on a case-by-case basis, where the acquired lands would contain higher values than the BLM lands being exchanged. In the case of exchanges within ACECs or other special emphasis areas, lands would be available only in the event there is a clear and overriding benefit to the public outweighing the identified ACEC or special resource values. Lands to be acquired through exchange would have at least one of the following characteristics:

- They would facilitate access to public lands and resources.
- They would facilitate implementation of RMP/EIS management actions.
- They would maintain or enhance public uses and values (priority would be given to acquiring riparian/wetlands, lands with high recreational and/or wildlife values, and lands with significant cultural sites and/or paleontological localities).
- They would enhance local social and economic values.
- They would contribute to a more manageable landownership pattern.

**Sales.** Lands which meet the following criteria may be made available for further study as public land sale areas:

- Lands which are difficult and uneconomical to manage,
- Lands which are no longer required for a previously designated purpose, or
- Disposal of such lands will serve important public objectives including, but not limited to, expansion of communities and economic development.

**Disposal of Mineral Estate.** Splitting ownership of surface and mineral estates will be avoided. However, if there are "known mineral values," as defined in 43 CFR 2720.0-5, the surface should be retained in federal ownership.

### Access

Access needed to support other RMP management decisions is identified. Generally, those areas of high recreational use, historical trespass areas, and large blocks of public land have priority consideration.

The form of acquisition will be determined by the prescribed management of the area. Cooperative access efforts will initially be considered between federal, state, and local governments, private organizations and individual landowners.

### Withdrawals

Proposed land withdrawals are identified along with the public land and/or mineral laws affected by the withdrawal, the purpose of the withdrawal, and other uses that would be allowed. Lands would be made available for other public purposes, to the fullest extent possible, consistent with the purpose of the withdrawal. Land and/or mineral withdrawals terminated through section 204(l) of FLPMA will come under the direction of this RMP.

### Rights-of-Way

Utility corridor locations were based on: anticipated or potential development needs for minerals, expanding populations centers, industrial developments and similar other considerations. A designated corridor will be the preferred location for major linear rights-of-way. All alternatives contain measures for protection of important resources (i.e., raptor protection on power lines, buffers between power lines and sage grouse nesting areas, cultural site avoidance, etc.).

Rights-of-way avoidance locations are identified along with terms and conditions that may apply to rights-of-way within the resource area. Future applications for rights-of-way outside established corridors would be handled case by case, according to decisions established in the plan. These rights-of-way may be granted only after a site-specific analysis and development of specific stipulations, in addition to those more general terms and conditions identified in the RMP.



Transportation corridors will not be addressed in this plan. To date only two proposals for transportation facilities across DMRA are being considered. They are the "Cisco-Ouray" highway presently under evaluation and consideration of an all-weather road in Browns Park connecting Little Hole to Colorado State Highway 318. The Browns Park road proposal does not connect with the Ashley National Forest's corridor approved in their Forest Management Plan (U.S. Forest Service, 1986). U.S. Highway 191 has been designated as a scenic corridor; no other major surface-disturbing activities are desired along this route. In addition, no transportation corridor exists across the Uintah and Ouray Indian Reservation to which any new BLM transportation corridors could connect.

Communication sites would generally be limited to designated mountain peaks with existing facilities. Applications for new facilities would be handled case by case.

### **Trespass**

Areas with current trespass problems or areas prone to trespass are identified along with a management strategy for correcting the unauthorized use.

### **Livestock Management**

Existing management decisions affecting livestock grazing, i.e. forage allocations, grazing strategies, management categories assignments, and rangeland improvements were reviewed. Changes to these existing decisions are based on livestock monitoring data collected since the date of these decisions. Various levels of livestock grazing, forage allocation, season of use, management categories, and rangeland improvements are considered on a grazing allotment basis.

### **Wild Horses**

Approximately 200 acres within DMRA are included in the Range Creek Herd Management Area (Herd No. UT641). The habitat is planned, managed, and administered by the Price River Resource Area, Moab District, Utah. Management goals are a herd size of approximately 40 horses, requiring about 490 AUMs. On a prorated basis, DMRA provides habitat for about 10% of the herd or about 49 AUMs of this management area. Since the herd unit within DMRA has not received any actual horse use over the last 10 years, wild horses will not be addressed further in this plan.

### **Minerals Management**

The RMP identifies BLM-administered lands open for the exploration and development of mineral resources, especially on those lands having known or demonstrable potential. Present and future public needs for mineral resources were considered. All alternatives shall contain measures for the protection of important natural and cultural resources.

Areas with significant potential for mineral exploration and development are identified. The plan identifies and categorizes areas with oil and gas (including coal bed methane and tight gas reservoirs) and solid mineral potential as to "open" (oil and gas Category 1), "open with special stipulations" (oil and gas Category 2), "open with no surface occupancy" (oil and gas Category 3), or "closed" (oil and gas Category 4) to leasing.

Areas under existing leases will be managed in accordance with the stipulation attached to the existing lease. However, during subsequent approval actions (e.g., APDs) additional restrictions could be applied to protect critical resource values identified in this plan (see Table 2-13). These additional restrictions would not preclude the existing lease rights.

Oil shale-bearing formations occur throughout the Uinta Basin, but deposits in DMRA are generally not of commercial value. It is likely that over the life of the RMP oil shale development, if it occurs, would occur outside the resource area.

Coal resources within DMRA are not of sufficient quantity or quality and/or mineability to warrant consideration of conventional development, leasing, or exploration. As such, both shale and coal resources will not be addressed further in this plan.

Public lands administered by BLM within the National Forest System are not addressed. For lands where BLM issues mineral leases under private surface, the plan identifies reasonable measures to avoid adverse (surface and subsurface) impacts that may result from federally authorized mineral lease activities.

### **Recreation Management**

Off-highway vehicle (OHV) use areas were identified and categorized as either "open", "limited use", or "closed," in order to maintain consistency with other resource objectives and provide opportunities for OHV users.



The RMP identifies a variety of recreational opportunities and activities. These would include, but are not be limited to: development of facilities such as campgrounds, picnic areas, sanitation stations, and interpretive sites as well as establishment of non-consumptive recreation programs such as back-country byways and watchable wildlife. These types of opportunities and activities are evaluated by the RMP. Areas for both motorized and non-motorized recreational opportunities are identified. All areas where special recreation management is needed are identified. Public needs and demands are considered in determining the types of facilities and opportunities required. All areas where use should be limited to protect resource values or meet other resource objectives are identified.

Intensive (developed) or extensive (primitive) recreation management areas are identified. Necessary facilities and opportunities within these areas are determined in order to enhance recreational experiences and protect public health and resource values.

Special natural features such as scenic areas, water-based and/or scarce recreation resources are identified with strategies for their protection and enhancement.

### **Scenic and Back-country Byways**

A 1986 study for the President's Commission on Americans' Outdoor, found that 43% of American adults identified driving for pleasure as a favorite leisure pursuit. Next to walking, pleasure driving is America's most popular form of recreation. In 1988, the Bureau made a commitment to support a national effort to participate in the National Scenic Byways program.

Although the Bureau's primary focus is to emphasize use of primitive back-country roads on public lands, it is additionally committed to designate major road systems that pass through scenic areas on public lands. The former road designations are referred to as back-country byways; the latter as scenic byways.

Within the RMP, a number of back-country byways are proposed for designation. These byways highlight the area's special scenic and recreation values and further serve to increase public awareness of their lands and resources. They provide alternatives to congested highways and effectively disperse motorists to remote, lesser-used routes. In cases where the proposed byway crosses other agency lands, the Bureau would seek the other agency's cooperation to jointly designate the route. Procedures for signing, interpretation, brochures, and maps related to designated byways would be identified later as specific management actions in support of the RMP.

The proposed back-country byways in the plan are not surfaced and may require 4-wheel drive vehicles or other specialized equipment such as dirt bikes or all-terrain vehicles to travel.

### **Riparian Management**

The RMP identifies and establishes ecological condition of inventoried riparian ecosystems within the resource area. Management prescriptions were designed to meet or exceed the current BLM policy of achieving 75 percent or more of riparian ecosystems in a "proper functioning condition" by 1997 (BLM, 1990).

The plan identifies management opportunities necessary to maintain or improve the existing ecological condition and habitat quality. It specifies the preferred method of vegetation manipulation, types of livestock grazing use strategies, and rangeland improvements. The plan also identifies riparian areas requiring temporary or permanent closures or restrictions on grazing use and/or surface-disturbing activities.

Management opportunities for these areas were identified and priorities assigned on a grazing allotment basis.

### **Soil, Water, and Air Management**

Watershed conditions and management objectives are identified for public lands within DMRA. The following resource values are identified and specifically considered in the plan:

- critical watersheds
- high erodible and saline soils
- floodplains and wetlands
- surface and groundwater quality maintenance.

Water quality (both surface and ground) is classified according to current Utah Water Quality Standards as agreed upon by the Environmental Protection Agency (see Appendix 9). Non-point Best Management Practices will be applied to management activities for recreation, mining, livestock, wildlife, lands, etc. The best water quality control technology, jointly determined by BLM and the Utah Water Pollution Control Committee will be applied as needed to meet water quality standards.

The plan considers the suitability of public lands within DMRA for rights-of-way and/or disposal (sale or exchange) to accommodate produced water problems. Criteria includes, but is not limited to, alternative types of



produced water facilities, geologic and hydrologic conditions, and estimated volume of produced water from existing, developing, and potential oil and gas fields.

Air quality conditions and current Utah air quality standards for DMRA are identified. Management objectives for air pollution activities, including, but not limited to, recreational uses, mining operations, major construction projects, and vegetation-control burning, are established. The best air quality control technology, provided by the Utah Bureau of Air Quality, will be applied as needed to meet air quality standards.

### **Special Emphasis Area Management**

All high resource value areas, including the 11 initial Areas of Critical Environmental Concern nominations, were evaluated. Those areas meeting the criteria for relevance and significance were considered in one or more of the alternatives. A record of the analysis process for both ACEC and Wild and Scenic River nominations is contained in Appendix 7.

Existing and future public needs and demands for the resource(s) present were considered, including but not limited to, existing mining claims, mineral leases, forest products, grazing permits and leases, and rights-of-way.

Impacts to all resources were identified when one or more resource is considered for precedence in an emphasis area. The decisions will strive to balance resource uses while ensuring the protection and preservation of the significant and relevant other resources present.

Some alternatives consider special designation for the lower and middle segments of the Green River. Both of these river segments are navigable rivers and the water and land up to the mean high water line is owned by the State of Utah. Therefore, should these designations be established, implementation of this plan would include a coordinated activity plan with the State of Utah and other appropriate landowners.

### **Areas of Critical Environmental Concern**

Areas of Critical Environmental Concern (ACEC) designations highlight areas where special management attention is needed to protect and prevent irreparable damage to important historic, cultural, and scenic values; fish and wildlife resources or other natural systems and processes; or to protect people from natural hazards. ACEC designation indicates that an area contains significant values or resources and requires the development of special management direction to protect them. The Federal Land Policy and Management Act

(FLPMA) of 1976 provides that designation of ACECs be given priority in the development of land use plans.

Appendix 7 describes the process by which DMRA analyzed ACEC nominations. The DMRA considers seven areas as meeting the criteria for a potential ACEC. All of these areas are recommended for designation under Alternative B. Under the preferred alternative, six of the ACECs under consideration would be recommended for designation. The existing Green River Scenic Corridor ACEC was validated and continues to receive special management attention under all alternatives. A second existing ACEC, the Red Creek Watershed ACEC, was reconsidered and recommended for continuation in four alternatives and discontinued in Alternative D.

### **Wild and Scenic Rivers**

Section 5d of the Wild and Scenic Rivers Act of 1968 directs the Bureau to identify and evaluate all river segments on public land as potential additions to the National Wild and Scenic Rivers System. Any segments determined by BLM to be suitable would be recommended to the President and eventually to Congress for designation.

Although many people perceive a wild and scenic river as a large, bouldery, cascading river, Congress provided a broader definition of the river types that should be considered for the national system. Section 16 of the act defines the term river as "a flowing body of water or estuary or a section, portion, or tributary thereof, including rivers, streams, creeks, runs, kills, rills, and small lakes."

All waters in DMRA were evaluated for potential addition to the national system. The three-step process is outline below:

1. Eligibility Determination - In order to be eligible for designation, a river must be "free-flowing" and possess one or more outstandingly remarkable values. Appendix 7 identifies how this determination was made for river segments in this resource area.
2. Classification - This step provides the river segment with a tentative classification of wild, scenic, or recreational, based on river condition and adjacent lands as they exist at the time of the study. Appendix 7 identifies the criteria used to determine classification and management guidelines for each classification.
3. Suitability Determination - In this final step, such factors as manageability, land ownership, and



conflicts with other resources are analyzed to determine which eligible river segments are suitable for designation into the national system. This analysis occurs in Chapter 4 and the determination is documented in Appendix 7.

In the MSA, the following six river segments were determined to be eligible for further study for inclusion in the National Wild and Scenic River System, with a provisional classification as follows:

1. Upper Green River (Little Hole to Colorado border) - scenic
2. Middle Green River (Dinosaur National Monument to Ouray) - recreational
3. Lower Green River (reservation boundary to Carbon County border) - scenic
4. Nine Mile Creek (Gate Canyon to the Green River) - scenic
5. Argyle Creek (headwaters to the Carbon County border) - recreational
6. Nine Mile Creek (Argyle Creek to the Carbon County border) - recreational

### Wilderness Study Areas

The Diamond Breaks and Cold Springs Wilderness Study Areas (WSAs) are managed under the Interim Management Policy until such time as they are either designated as wilderness by Congress or dropped from wilderness consideration. The location of these two WSAs are depicted on Map 1-2. The RMP shall identify management practices for the Diamond Breaks (UT-080-113; 3,900 acres) and Cold Springs (UT-080-103; 3,200 acres) WSAs should these areas be dropped from wilderness consideration. If these areas are designated as wilderness by Congress, a site-specific management plan will be prepared for each designated area in cooperation with the BLM Craig District, Colorado. Additional wilderness is not evaluated in this plan.

### Vegetation Management

Sensitive vegetation communities (crucial special status plant habitat, relict areas or areas in unsatisfactory ecological condition) are identified and strategies developed to maintain or improve them. All areas requiring temporary or permanent closures or restrictions of grazing use and/or surface disturbing activities are identified.

Goals for all vegetation communities are established on a grazing allotment basis. Each community is evaluated for possible manipulation to protect and enhance soils, vegetation, and watershed resources in light of objectives established for wildlife habitat, livestock management, woodland production, and mineral development.

All major vegetation communities within the resource area are identified. These include, but are not limited to, the following broad categories:

- Desert Shrub
- Sagebrush
- Pinyon-Juniper
- Mountain Browse
- Conifer
- Aspen
- Riparian/Wetland
- Badlands/Rock Outcrop

Initial forage allocations were reviewed from valid existing grazing EIS's and the 1989 Ashley Creek Rangeland Program Summary Update. If changes to these allocations are revealed through monitoring or additional animal species allocation priorities, the necessary allocation changes are incorporated into the RMP. Conflicts between wildlife and livestock forage use are identified in terms of range carrying capacity. At least one alternative gives wildlife first priority on critical winter ranges.

### Woodland Products Management

All lands to be available for woodland product harvest are identified. Criteria for annual firewood cutting are established on a sustained-yield basis. Christmas tree and cedar post cutting may be managed on either a sustained-yield basis or by supply and demand. The RMP determines which of these methods best meets resource objectives. All alternatives contain measures for protection of important woodland resources.

## THE PLANNING PROCESS

### ACTION STEPS IN THE PLANNING PROCESS

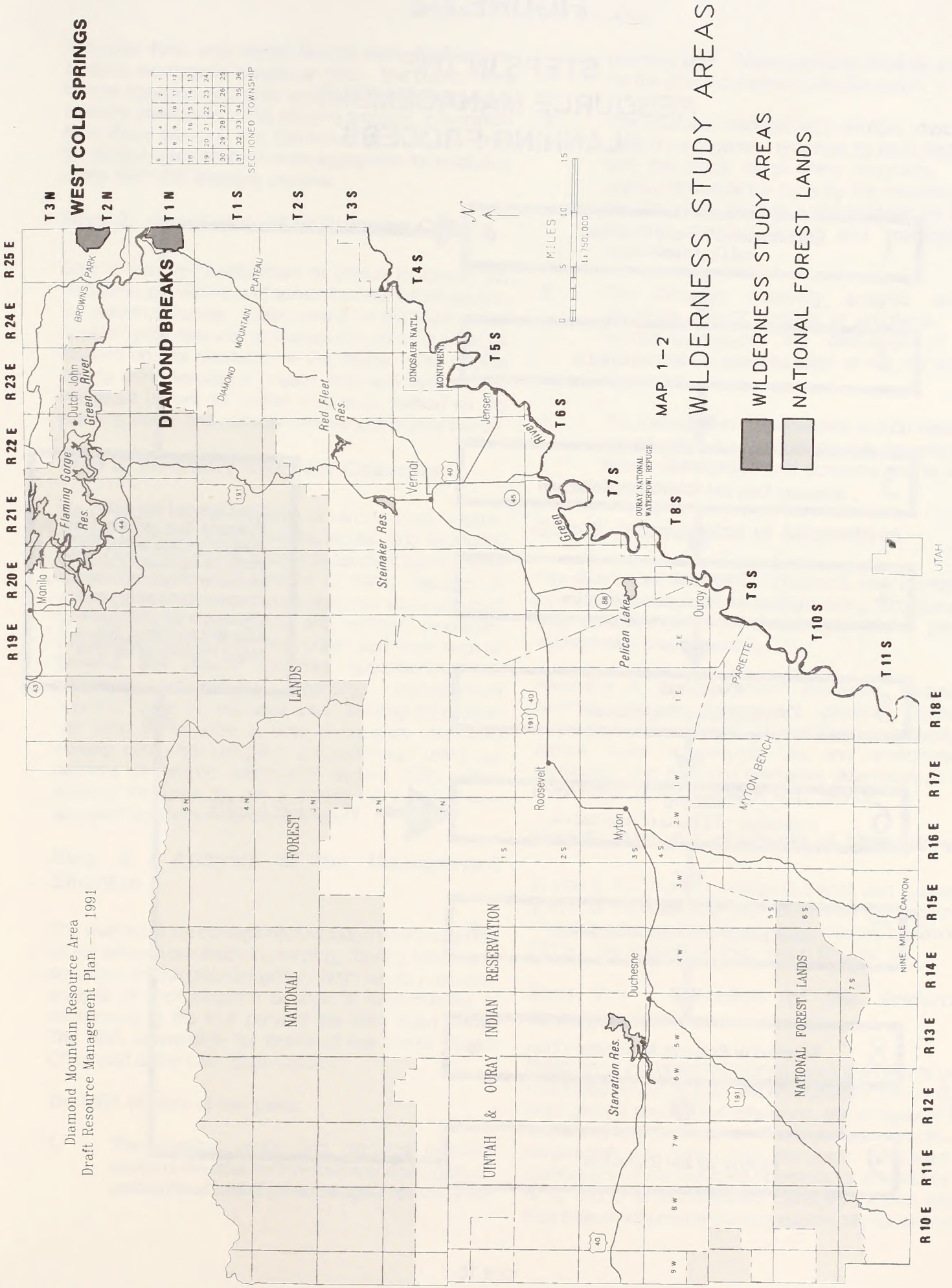
The resource management planning process consists of nine action steps, described below and illustrated in Figure 1-2.

#### Step 1: Identification of Issues and Management Concerns

Step 1 is intended to identify resource management concerns, conflicts, or opportunities which can be resolved through the planning process. The BLM managers and specialists from the Diamond Mountain



Diamond Mountain Resource Area  
Draft Resource Management Plan -- 1991



6	5	4	3	2	1
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36

SECTIONED TOWNSHIP

MAP 1-2

WILDERNESS STUDY AREAS

- WILDERNESS STUDY AREAS
- NATIONAL FOREST LANDS

R 10E R 11E R 12E R 13E R 14E R 15E R 16E R 17E R 18E

R 19E R 20E R 21E R 22E R 23E R 24E R 25E

T 3N  
T 2N  
T 1N  
T 1S  
T 2S  
T 3S

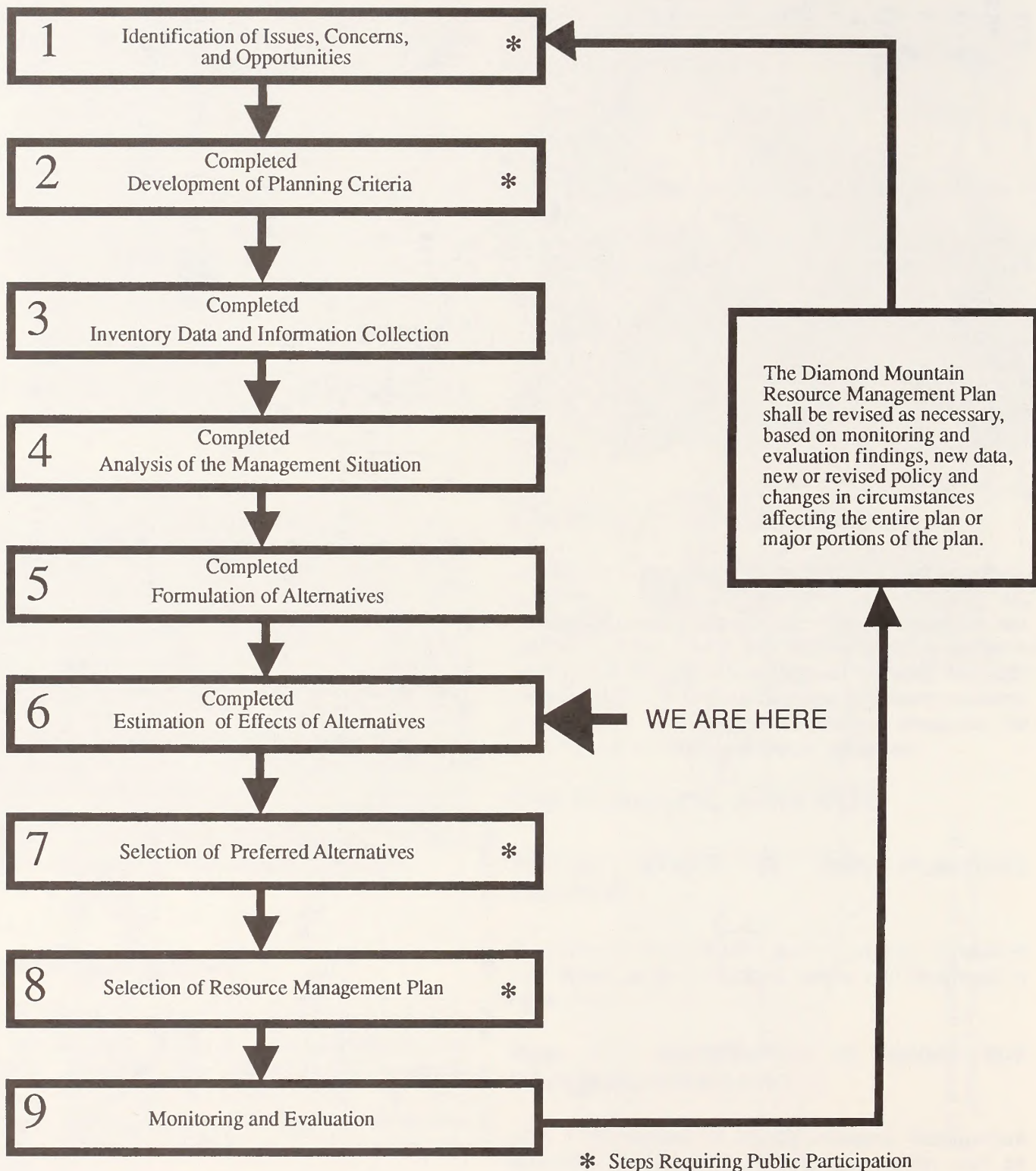
WEST COLD SPRINGS

UTAH



FIGURE 1-2

STEPS IN THE  
RESOURCE MANAGEMENT  
PLANNING PROCESS





Resource Area and Vernal District staffs held several scoping meetings in November 1989. The public, other federal agencies, and state and local governments were asked to participate in this scoping process. Information from these sources was combined by BLM into three broad land-use planning issues appropriate for resolution in the RMP/EIS planning process.

## **Step 2: Development of Planning Criteria**

Step 2 involves development of criteria to identify the standards, guidelines, and constraints that would apply to the planning process. These criteria are the "sideboards" applied by the resource specialists so their work could be focused on the resolution of the issues. The original criteria were developed in early 1990 and were sent to interested parties for review and were revised as the planning issues and management concerns were refined.

## **Step 3: Inventory and Data Collection**

Step 3 allows for the collection of various kinds of issue-related resource, environmental, social, and economic data. During this phase, special status plant species were inventoried during the summer of 1989. Records of various other federal and state agencies were examined for information on wildlife and cultural resources. Information was collected from public land users such as livestock and mineral operators, recreationists, and adjoining landowners regarding management opportunities in the resource area. Existing information was used for all other aspects of the plan. New and existing data were compiled and automated using our district's geographic information system (GIS). This enabled the team to use a priority-management-area approach to developing alternatives.

## **Step 4: Analysis of the Management Situation**

The analysis of the management situation (MSA) supports all the subsequent steps in planning. During 1990, each specialist on the interdisciplinary team wrote a detailed analysis of their program or area of responsibility, in relationship to the four parts of the MSA listed below. The MSA is available for review at the Vernal District Office and at the Utah State Office.

The MSA consists of four parts:

1. The physical profile and resource overview sections describe each resource and program, as well as the social and economic condition of the

planning area. These sections serve as a basis for the affected environment discussion.

2. The current management section describes current management practices by each resource and the status of on-going programs. This section serves as the basis for the description of the "no action" alternative and identifies the basis for the planning issues and management concerns.
3. The resource capability analysis section describes current conflicts or problems. This section relates to the discussion of the environmental consequences of the "no action" alternative.
4. The management opportunities section describe opportunities for BLM to resolve the planning issues and management concerns and to meet future needs.

## **Step 5: Formulation of Alternatives**

Five alternatives, described in Chapter 2, were formulated by an interdisciplinary team, using existing resource area data contained in the GIS database and a priority management area approach.

Alternative A, the "no action" alternative, means to continue present management practices basically unchanged. Alternatives B, C, and D place emphasis on various levels of resource use and environmental protection. The preferred alternative (Alternative E) is a combination of Alternatives A, B, C, and D.

## **Step 6: Analysis of Effects of Alternatives**

In step 6, the physical, biological, social, and economic effects of implementing each alternative are assessed. This step is the environmental impact analysis required by NEPA. The analysis is presented in Chapter 4.

## **Step 7: Selection of the Preferred Management Plan**

Selection of the preferred management plan in this draft was based on public input and coordination, current BLM management policies and directions, and analysis of the impacts of each alternative. The Utah State Director, in conjunction with other BLM managers, will select a combination of management objectives of Alternatives A, B, C, and D as the preferred management plan which they believe will provide the best opportunity for balanced



management and for resolving the issues in the resource area.

### **Step 8: Selection of the Proposed Resource Management Plan**

Based on the results of public review and comment received during the 90-day comment period, the Utah State Director will select a proposed resource management plan and publish it along with a final EIS. The selection and approval of the resource management plan is made only after a 30-day protest period. Any person who participated in the planning process and who has an interest which is, or may be adversely affected by adoption of the plan, may protest its approval. A protest may raise only those issues which were submitted for the record during the planning process.

### **Step 9: Monitoring and Evaluation**

Step 9 involves monitoring the selected plan after it is implemented and evaluating the results of its implementation. Data on long-term trends and resource conditions will be collected and analyzed to determine the effectiveness of the plan. Monitoring of the plan's effectiveness will continue indefinitely from the time the plan is implemented and may result in plan revisions as changing conditions dictate.



## **COMPUTER MAPPING**

To support this resource management planning effort, DMRA utilized a computer technology known as Geographic Information System (GIS). All of the maps in this document were produced using GIS. Acreage and other statistical tables are generated from the map data. Output maps generated from the system can be produced at any scale, and retain the accuracy of the original maps. Furthermore, the data stored on computer disks and tapes will not degenerate with use, and will be accessible for future use.

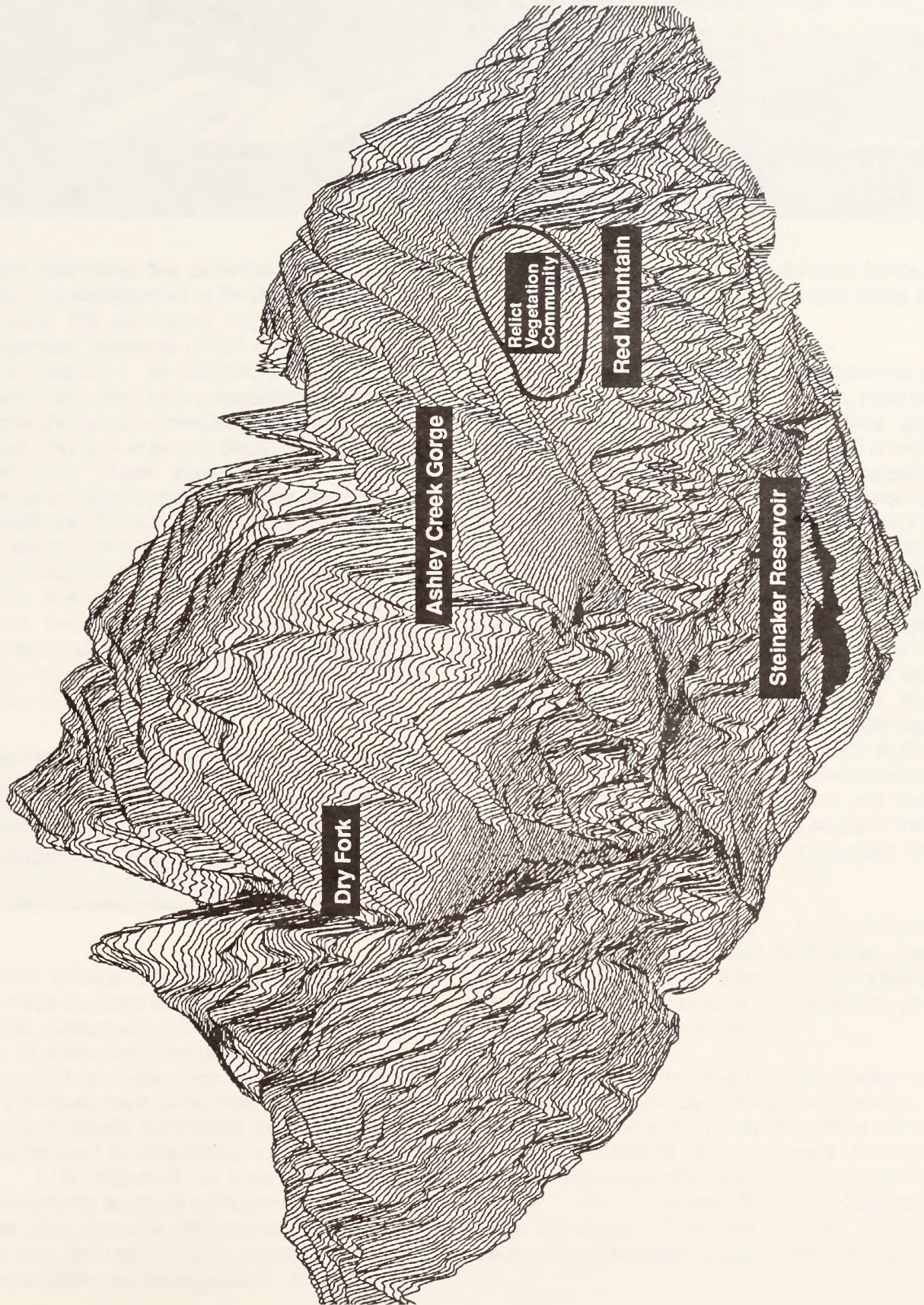
A GIS system consists of not only numbers organized into records and fields like a conventional database, but contains "layers" of mapped information. The layers consist of information that would normally be located and drawn on a map such as vegetation, land ownership, or road locations. The advantage of having information computerized in electronic layers is that it can be overlaid, manipulated, scale changed, or intersected to produce maps and statistical tables (see Figure 1-3). The information can also be changed or appended easily. For this document, some 60 layers of information drawn on nearly 2,000 overlays were entered into the system.

Many GIS-generated products have supported the RMP and its development. Statistical tables (area, length, frequency, etc.) were used to quantify existing resources and conflicts as well as eventual resource management decisions and allocations. Map graphics were produced to depict the existing data, resource conflicts, and management decisions throughout the process, and greatly facilitated the production of maps for printing. The analytical capabilities of GIS provided the resource specialist and managers with a new tool for designing and evaluating the five alternatives analyzed in this plan.

Of the federal, state, and local agencies with jurisdiction in the Uinta Basin, the Diamond Mountain Resource Area is the first to fully implement computer mapping. Virtually all the adjacent agencies have responded favorably to our efforts to coordinate our future mapping needs with them. The benefits will be greatly increased as we share data and equipment with adjacent jurisdictions.



**FIGURE 1-3**  
**THREE DIMENSIONAL MAPPING EXAMPLE**

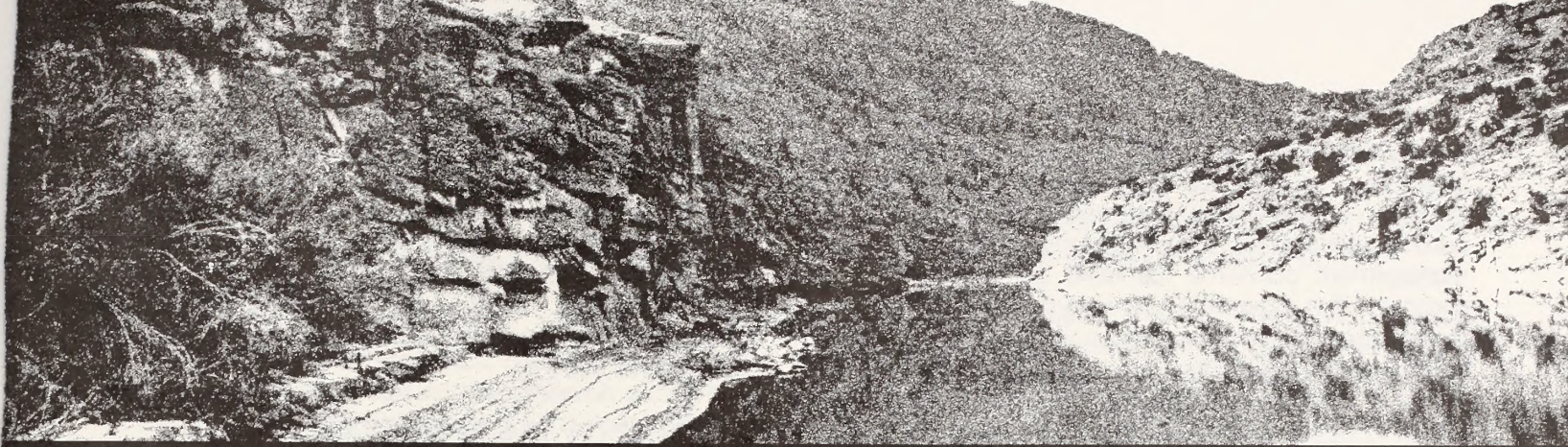


This example of a three-dimensional map of the Dry Fork Area enabled the resource area to plan siting of recreation projects. It was produced at an approximate scale of 1:80,000. It was rotated -50 degrees so that the viewer is observing the area from a southeasterly direction, approximately 15 degrees above the ground surface.









## ALTERNATIVES 2

This chapter describes five potential alternatives for multiple-use land management in the Diamond Mountain Resource Area. The alternatives respond to the issues and management concerns raised by the public, as discussed in Chapter 1. In addition, multiple-use land management is described for any special emphasis areas defined under the various alternatives. Management for these special emphasis areas are displayed on Tables 2-14 through 2-18. Each alternative is a complete, reasonable, and implementable resource management plan, in which the different management practices are described, and the different ways of achieving balanced resource management under different management priorities are discussed. The team, guided by the management theme of each alternative (see the alternative descriptions below), made full use of public consultation, coordination with other agencies, and evaluation by District and State Office specialists.

*... assigning management priority areas for particular resources does not, in most cases, exclude other resources.*

Definitions for management priority areas identified on alternative maps are listed in the Summary section, "How to Use This Document", at the beginning of this document. The alternative narratives list the resources and criteria used to create each management priority area. The individual maps of the alternatives included in the map packet visually summarize the decisions, and they should be used in conjunction with the alternative narratives. It is important to note that assigning management priority areas for particular resources does not, in most cases, exclude other resources. Managing more than one resource in each priority area is the essence of multiple-use management. It is critical to

understand the management priority area concept and the compatibility of resource values within those priority areas.

Management priority area boundaries depicted on the alternative maps have not, in many cases, been located on the ground. Before specific activity planning decisions are made or project locations are determined, locations of the management priority area boundaries will be determined, to the extent necessary, based on the resource information used to place the boundary on the alternative maps. For example, a priority management area may be based on critical watersheds, crucial wildlife habitat, and sensitive riparian areas. The boundary could be determined by a combination of elevation, vegetation types, topography, and drainage patterns. In the case of a proposed management action designed to enhance wildlife habitat, a professional judgement may be necessary to determine where actual wildlife use was taking place. Major changes to decisions in the plan would require an amendment. Management priority area boundaries or definitions of compatible and excluded uses may also be adjusted within the scope of this plan, based on new resource data or proposals for site-specific actions.

An alternative's name attempts to briefly describe the management emphasis of each alternative. They are intended to assist the reader in associating the alternatives with the specific management priorities contained in those alternatives.

The five alternatives discussed in this chapter cover a broad range of resource management options. The Current Management Alternative (No Action Alternative, Alternative A) describes the management of the planning area as it exists today and how this management would continue. The Ecological Systems (Alternative B), Forage Production (Alternative C), and Development Opportunities (Alternative D) alternatives portray multiple-



use management under different sets of management priorities. The Preferred Alternative (Alternative E) is the optimum combination of management options, given current priorities, for resolution of the planning issues and management concerns identified during the planning process. This alternative was identified after considering the environmental consequences of the other alternatives, balancing the land uses and resource values of the resource area, and considering the short- and long-term public interest and benefits of implementing each alternative.

The alternatives have been developed in accordance with the Federal Land Policy and Management Act (FLPMA) of 1976 and National Environmental Policy Act (NEPA) regulations of 1969; principles of multiple use and sustained yield; and other applicable laws, regulations, and standards.

Each alternative is designed to provide BLM managers with a framework within which to make multiple-use decisions and to develop site-specific activity plans or actions.

In order to understand the full spectrum of proposed resource and management decisions for any alternative, the alternative map located in the map packet and the following "Management Guidance Common to All Alternatives" plus the relevant decisions listed in Table 2-13 should be consulted. For the decisions applicable to any special emphasis area, refer to the alternative map and the "Management Guidance Common to All Alternatives" plus the relevant decisions outlined in Tables 2-14 through 2-18, "Management Prescriptions for Special Emphasis Areas" for each alternative. These proposed decisions are the management actions analyzed in Chapter 4.

## **MANAGEMENT GUIDANCE COMMON TO ALL ALTERNATIVES**

Although it is impractical to relate the full extent of existing and continuing management guidelines, those that apply to programs receiving substantial public interest are summarized in this section. More management guidance is included in the Management Situation Analysis. The MSA is incorporated here by reference.

In compliance with National Environmental Policy Act and Council on Environmental Quality regulations, BLM will prepare site-specific environmental reviews before actions proposed in this RMP/EIS are implemented. The environmental reviews provide site-specific assessments of the impacts of implementing these actions. As

appropriate, these reviews are documented in categorical exclusion reviews, environmental assessments and decision records, or environmental impact statements. The review determines mitigation needed to reduce or eliminate the adverse impacts of implementing a proposed action. To the extent practical, subsequent environmental reviews will utilize the information already presented in this EIS.

## **AIR QUALITY MANAGEMENT**

Objectives of BLM's air/climate resource program are: to maintain or improve air quality within National Ambient Air Quality Standards, to achieve state implementation goals for non-attainment areas, and prevention of significant deterioration requirements for attainment areas; to reduce emissions from point/non-point pollution sources, and to improve BLM's ability to understand and predict the effects of changing climatic regimes and atmospheric conditions that may cause ecological changes in climate-stressed environments.

The control of airborne dust and pollution are addressed in Utah Air Conservation Regulations R446-1. The requirements of these regulations govern various uses on public lands. BLM would address these requirements by designing projects and permitted uses that comply with R446-1.

UAC Regulations R446-1-4.5.3 prohibits the use, maintenance, or construction of roadways without taking appropriate dust abatement measures. BLM would comply with this regulation through special stipulations as a requirement on new projects and through the use of dust abatement control techniques in problem areas.

Control measures on mining activities are addressed in UAC Regulations R446-1-4.5.4. The need for dust abatement would be addressed in mining plans of operation and environmental assessments or impact statements.

UAC Regulations R446-1-2.4.4 directs users to follow permitting procedures before setting any fire, including prescribed burns. The Utah Division of Air Quality must be contacted before any prescribed burns. The Memorandum of Understanding between BLM, U.S. Forest Service, and Utah Division of Air Quality requires BLM to report size, date of burn, fuel type, and estimated air emissions from each prescribed burn.

Any actions that may result in a temporary reduction of existing air quality (i.e., prescribed burns, large construction projects) visible from Dinosaur National Monument will be coordinated with the National Park



Service and Utah Division of Air Quality before action is initiated.

## CULTURAL AND PALEONTOLOGICAL MANAGEMENT

An array of laws and regulations mandate the protection and management of cultural resources on public lands. Three of the most important laws are the National Historic Preservation Act (NHPA) of 1966, as amended; the Archeological Resources Protection Act (ARPA) of 1979, as amended; and the American Indian Religious Freedom Act (AIRFA) of 1978. Executive Order 11593 also provides necessary guidance. Under NHPA, criteria for inclusion of sites and districts to the *National Register of Historic Places* are defined. Comment and coordination with the State Historic Preservation Officer (SHPO) is also authorized under this act. Measures to avoid or mitigate those impacts are developed in consultation with the Utah SHPO and the Advisory Council on Historic Preservation.

ARPA prohibits the attempt or actual excavation, removal, damage, or trafficking of archeological resources from public land by unauthorized persons and provides for the authorized removal and excavation of cultural resources through a permitting process. Under ARPA, civil penalties may be assessed for unauthorized removal of antiquities from public lands.

E.O. 11593 requires the Secretary of the Interior to prepare plans to determine the nature and extent of archeological resources and schedule land surveys in areas likely to contain the most scientifically valuable archeological resources.

NHPA requires that consultation occur with the SHPO regarding identification of historic properties, evaluating significance, determination of effect, as well as mitigating measures of a proposed action. Utah BLM has a Memorandum of Understanding (1990) with the SHPO to trigger such a consultation process without a formal request when a permitted consultant submits an inventory report.

AIRFA requires that BLM consider native people's rights to express their traditional religious beliefs including access to sacred sites and collection of objects and resources important to religious ceremonies and traditional lifeways. BLM coordinates with the Ute Tribe for the protection of these values.

Cultural sites will be organized into three dynamic management categories: conservation, public values, and information potential. Such a categorization will afford focused attention and documented management on those

sites in greatest need of stabilization, protection, or active management. This includes, but is not limited to, the Nine Mile Area, the Carter Military Trail, Myton-Price Road, and the Vernal to Rock Springs, Wyoming, road.

In Utah, BLM operates under a policy which guides inventory and data recovery procedures for sites on all public lands. This policy was coordinated with SHPO, the Utah Professional Archeological Council, and independent contractors.

National BLM policy is to have a cultural resource specialist analyze the consequences of BLM actions on properties affected by its decisions. Cultural reviews describe results of previous inventories and evaluate the probability of cultural resource occurrence in the project area. Usually a field inventory is then conducted. Should significant, in terms of *National Register* eligibility, cultural resources be found during the inventory, impacts to them would be mitigated, generally through avoidance. Should it be determined the cultural resources cannot be avoided, consultation with the SHPO would be initiated. If the cultural resources values are found to be *National Register* eligible, a program of mitigation would be developed through consultation between BLM, SHPO, and the Advisory Council on Historic Preservation in accordance with the NHPA and 36 CFR 800. Responsibility for inventory, evaluation, and mitigation of impacts to cultural resources rests with BLM. Through this process, all cultural resources of *National Register* quality would be protected or impacts to them mitigated.

Two laws mandate protection of paleontological resources: FLPMA and the American Antiquities Act of 1906. Protection of paleontological localities is also incorporated into various acts concerning other resources.





BLM policy is to have a specialist review all surface-disturbing activities on public lands. Paleontological reviews describe results of previous inventories and evaluate the probability of resource occurrences in the project area. Usually a field inventory is conducted when the project occurs in a paleontologically sensitive area (see Map 3-3). Determination of a locality's paleontological significance will be made by BLM following consultation with BLM's paleontological advisory group. Should significant resources be found during the inventory, impacts to them would be mitigated, generally through avoidance. (See Appendix 1 for mitigation procedures for paleontological resources.) Should it be determined the paleontological resources cannot be avoided, a program of mitigation would be developed through consultation between BLM and the Utah State Paleontologist. Responsibility for inventory, evaluation, and mitigation of impacts to paleontological resources rests with BLM. Through this process, all significant paleontological resources would be protected or impacts to them mitigated.

The DMRA cultural resource management objectives are to protect the information potential of sites, enhance the public values of sites, and manage sites, when applicable, for conservation. As a continuation of the planning process, DMRA will prepare cultural resource management plans, in which cultural resources will be allocated to specific use categories assuring management for their most appropriate uses. Certain sites will be selected for cultural resources project plans that will implement specific activities to achieve the objectives and uses of the RMP and cultural resource management plans.

The 1989 "Jarvie Historic Site Management Plan" contains actions for the protection, stabilization, and reconstruction of the site. The 1979 "Desolation and Gray Canyons of the Green River Management Plan", contains management actions to protect the Desolation Canyon National Historic Landmark within DMRA (Sand Wash to the Carbon County border - 1 mile on either side of the Green River).

## **FIRE MANAGEMENT**

Approved in November 1989, the "Vernal District Fire Management Activity Plan" describes the current district policy for fire management in DMRA. The plan may be reviewed at the Vernal District Office.

### **Overall Fire Management Goals**

- To allow fire to maintain its natural role in the ecosystem, to prevent buildup of hazardous fuels

that could cause large unacceptable fires detrimental to natural resources.

- To implement management and suppression techniques that retain the values of wilderness, wilderness study areas, and other special emphasis areas.
- To implement full suppression when fires have reached a 1/4- to 1/2-mile protection zone around private land or structures, or when human life or property is threatened.

### **Fire Suppression Objectives**

Suppression objectives for fires occurring in the brush-grassland vegetation fuel type (NFDRS Fuel Model T) are to hold 85 percent of the fires to 50 acres or less, unless modified by a prescribed burn plan.

Suppression objectives for fires occurring in pinyon-juniper woodlands (NFDRS Fuel Model L) are to hold 85 percent of the fires to 10 acres or less, unless modified by a prescribed burn plan.

### **Priority Suppression Areas**

Priority areas where fires suppression is required to prevent unacceptable resource damage are:

- Sage grouse strutting grounds
- Crucial deer winter range in Browns Park
- Cottonwood vegetation

### **Prescribed Fire**

The use of prescribed fire to achieve management objectives would be subject to development of a site-specific prescribed fire plan and NEPA review prior to initiating the action. These plans would allow naturally or human-induced fires to burn when approved prescriptions are established for specific burn areas and when burning conditions meet the approved burn prescriptions. Suitable areas where this type of treatment may be considered include pinyon-juniper woodlands in Browns Park and Nine Mile Canyon and decadent stands of brush throughout the resource area.

### **Constraints**

The following restrict and constrain fire suppression activities on public lands.



- **Wilderness Study Areas.** All suppression activities in WSAs and ACECs will be conducted in compliance with BLM Interim Management Policy (IMP) on minimum tool use and limited use of motorized equipment.
- **Special Status Species Habitat.** Sensitive habitat for special status species must be protected. Suppression tactics will be utilized limiting the damage or disturbance to such habitat.
- **Cultural Properties.** All sites must be protected from disturbance. If heavy equipment use is anticipated to construct fire lines, an archeologist, if available, will work in conjunction with heavy equipment to protect the site.
- **Air Quality.** Any prescribed burning which may temporarily reduce air quality, visible from Dinosaur National Monument, will be coordinated with the National Park Service and Utah Division of Air quality before ignition.

### **Emergency Fire Rehabilitation**

A site-specific emergency fire rehabilitation plan will be prepared by an interdisciplinary team for each burn requiring emergency rehabilitation. This plan will be designed to protect soil, water, vegetation resources, or to prevent unacceptable on-site or off-site damages.

When wildfire occurs within DMRA, procedures for rehabilitation outlined in BLM Manual Handbook H-1742-1 will be implemented. These procedures include formation of an interdisciplinary team to assess both on- and off-site resource damage and potential for future damage. The team would also prescribe measures necessary to minimize resource losses following wildfire. Available resource inventory data and land use planning objectives would be used in this assessment. Consideration would be given to sensitive resource values in preparation of the rehabilitation plan, including wilderness, special emphasis areas, critical soils, cultural resources, and special status species habitat. Rehabilitation measures may include, but would not be limited to seeding, water barring of firelines, scattering of litter, construction of water catchments, or diversion structures, and control of grazing by livestock and wildlife. The need for emergency rehabilitation measures would be discretionary dependent on the size of the area burned and the expected natural revegetation.



## **FISH AND WILDLIFE HABITAT MANAGEMENT**

Management of fish and wildlife habitat on public lands is the responsibility of BLM. Management of the resident fish and wildlife species are the responsibility of the Utah Division of Wildlife Resources (UDWR). The lead for management of migratory and federally listed threatened and endangered fish and wildlife and species is the responsibility of U.S. Fish & Wildlife Service (USF&WS).

Legislation including FLPMA, the Endangered Species Act, the Public Rangelands Improvement Act, and Sikes Act have directed BLM to manage habitat to meet wildlife needs in the face of increasing demands for basic energy supplies, building materials, food products, and recreational opportunities. BLM's responsibility is to recognize opportunities to maintain, improve, and expand wildlife habitat for both consumptive and nonconsumptive use and identify critical wildlife resources deserving special attention. BLM is also directed to assist state agencies in completing fish and wildlife resource plans.

Habitat management within the resource area is prioritized as follows: special status animal species, Management Indicator Species (MIS), and riparian (including fisheries).

Recently developed documents also provide program guidance to BLM's wildlife habitat management program. These documents include "Fish and Wildlife 2000", Waterfowl Habitat Management on Public Lands: A Strategy for the Future; and the "Raptor Habitat Management Plan". These documents are available for public review at the Vernal District Office.

### **Special Status Animal Species**

All BLM-authorized land use actions that may affect listed threatened or endangered species, must undergo Section 7 consultation with USF&WS on a case-by-case basis under the Endangered Species Act of 1973, as amended. This could include such actions as mineral development, recreational developments (campgrounds, hiking, and biking trails, byways, turnouts), grazing plans, road construction, rights-of-way, communication sites, rangeland improvements, and vegetation treatments.

Management of special status species is guided by the Endangered Species Act, subsequent regulations and policy, HMPs, and recovery plans in cooperation with state and federal agencies and affected parties.

The Endangered Species Act (ESA) of 1973, is the authority to conserve endangered and threatened species on public lands. Section 4(f) of ESA directs the Secretary



of the Interior to develop and implement recovery plans for the conservation and survival of endangered species. Section 7(a)(1) of ESA requires each federal agency to carry out proactive measures to recover listed species and Section 7(a)(2) requires each federal agency to avoid jeopardizing the continued existence of listed species through their actions.

Any federally authorized, funded, or implemented actions that may affect listed or proposed species are reviewed in consultation with U.S. Fish and Wildlife Service (USF&WS).

BLM policy for special status candidate species is contained in BLM Manual Section 6840. BLM must carry out management consistent with multiple use for conservation of candidate species (category 1 and 2 only) and their habitats and must ensure that actions authorized, funded, or carried out do not contribute to the need to list any of these species as threatened or endangered. These actions are also conducted on split-estate lands if the surface management agency does not have adequate data. It is also policy to systematically gather data on candidate species to determine if a species needs to be listed.

It is the aim of management actions contained in the RMP to assist in the recovery of these populations and to remove the species from special status designation. No actions will be authorized in suitable habitat for threatened and endangered species if it would adversely affect the habitat. However, where suitable habitat has been inventoried for threatened and endangered species, the scale of mapping may have caused inclusions of small areas of unsuitable habitat. Therefore, it may be possible to permit activities within the mapped area if a site-specific inventory demonstrates that suitable habitat for threatened and endangered species would not be adversely affected.

Protection and management of all special status species will continue. Inventory for federal and state candidate species will continue, and monitoring programs will be implemented on known populations of listed and candidate species. Where monitoring finds threats to these populations, actions will be taken to protect the species and its habitat. Activity plans will be written on any federally-listed species not presently covered by a recovery plan.

Presently DMRA provides habitat or potential habitat for 21 special status animal species. Management of these habitats is coordinated with the UDWR and USF&WS as appropriate.

Species listed as native Utah wildlife species of special concern are managed in cooperation with UDWR.

Actions proposed in this RMP adhere to objectives stated in the USF&WS's bald eagle, peregrine falcon, whooping crane, Colorado squawfish, humpback chub, bonytail chub, and black-footed ferret recovery plans. The razorback sucker, likely to be listed as a federally endangered species, does not have a recovery plan; however, actions will consider the protection and recovery of the razorback sucker and its habitat. When revising or developing resource activity plans, specific objectives and actions stated in the recovery plans will be incorporated.

Besides these seven listed species, the resource area provides habitat for an additional fourteen candidate animal species. BLM policy (BLM Manual 6840, 9/16/88) manages these species with the same protection it affords the seven listed species, as directed by the Endangered Species Act of 1973 (16 U.S.C 1531 et seq.), as amended, Section 7(a)(2).

New powerlines will be built to "electrocution-proof" specifications (BLM Handbook 2800), and existing powerlines will be modified to improve raptor habitat.

## **Animal Damage Control**

Animal damage control on public lands is guided by U.S. Department of the Interior policy under a Memoranda of Understanding with the Animal Plant Health Inspection Service's Animal Damage Control section (ADC) and the State of Utah (BLM, 1991). The ADC has the responsibility for overseeing the program and supervises all control activities. BLM has approval authority for all specific control actions on public lands under the annual ADC plan.

DMRA is further guided by the 1991 "Vernal District Animal Damage Control Plan" (a copy is available for review in the Vernal District Office).

## **Habitat Management**

Habitat management plans (HMPs) are developed in an effort to improve wildlife habitat. DMRA's existing HMPs, Browns Park, Myton, and Diamond Mountain-Ashley Creek, will continue to be implemented. Existing HMPs are on file and open to public review at the Vernal District Office. HMPs are periodically evaluated to determine if management direction and actions are adequate and if HMP objectives are being met. BLM updates and revises HMPs jointly with UDWR and USF&WS, considering



monitoring data, changes in policies and direction, and wildlife and other resource program needs.

Management actions outlined in the current HMPs improve habitat such as raptors, antelope, deer, and elk, and to accommodate reintroduction of bighorn sheep, river otter, and upland game birds. DMRA would provide adequate habitat for predators, fisheries, upland game and non-game species.

The Browns Park HMP allows for reintroductions of bighorn sheep and river otter. Some of these reintroductions have taken place. These objectives are being reassessed within the RMP. The management actions outlined in the Myton HMP for waterfowl and upland antelope habitats are adequate and would be implemented under all alternatives. In crucial antelope habitat the objective will be to maintain existing water sources, and where possible and practical, provide new ones at a density of approximately one per square mile.

The Vernal District "Rocky Mountain Bighorn Sheep Guidance Plan" places significant emphasis on bighorn sheep and their habitat. This plan incorporates management and protection requirements to be considered whenever activities are proposed within the habitat. Permanent human occupation or dwellings will not be allowed within bighorn sheep habitat. If activities do affect the habitat, mitigation will be required to provide habitat improvements to compensate for acres disturbed by the activity.

Detailed estimates of current and potential big game forage needs are contained in Appendix 2. Monitoring of habitat will continue to be the basis for modifying future management.

Wildlife habitat will continue to be enhanced throughout the resource area by creating water facilities and designing vegetation treatments outlined in this RMP and specified in the HMPs.

Rangeland management practices and rangeland improvements will be designed or modified to maintain or improve wildlife habitat. Livestock grazing management will incorporate the needs of key plant species important to wildlife and safe to use by wildlife in accordance with BLM standards (BLM Manual Supplement 6516 and BLM Handbook H-1741-1).

Actions involving the habitat of non-special status raptor species will be reviewed for the consideration of protection zones.

All new fences will be built to allow for wildlife passage in accordance with BLM fence standards contained within

BLM Handbook 1741-1. Any existing fences obstructing wildlife movements on public land will be brought into conformance with these standards, or if not meeting the intended purpose, removed. Fence adjustments involving public and private lands will be coordinated with landowners in the area.

Wildlife escape devices will be installed on all new and existing water tanks or troughs built in DMRA.

To the extent possible, new roads will not be built into crucial wildlife habitats. Roads, except county and state rights-of-way, may be permanently or seasonally closed where management problems exist or are expected, or when roads are no longer necessary.

## HAZARDOUS MATERIALS MANAGEMENT

The three laws most commonly associated with hazardous materials include the Resource Conservation and Recovery Act (RCRA) (1976), the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) (1980), otherwise known as the Super Fund Act; and the Super Fund Amendment Reauthorization Act (SARA) (1986). BLM responsibilities under these acts include conformance with RCRA enforcement regulations pertaining to the storage, handling, and disposal of hazardous materials; and reporting, removal, and remediation of unpermitted hazardous substances release under the provisions of CERCLA.

Actions by Bureau employees on hazardous material matters are limited to reporting hazardous incidents, maintaining site security, and coordinating procedural steps. The Utah State Division of Solid and Hazardous Wastes has the overall responsibility, under agreement with Environmental Protection Agency (EPA), to ensure that all hazardous materials incidents are properly abated on federal lands. EPA may defer clean up actions to BLM on minor incidents. In these situations, EPA will provide technical assistance, and BLM's role is to assure that either a responsible party or a contractor cleans up the site.

All proposed actions occurring on public land will be analyzed for their potential to release hazardous materials into the environment. Appropriate stipulations will be incorporated into permitting documents to ensure prevention of hazardous incidents.

The Vernal District's "Hazardous Materials Contingency Plan Handbook" (1988) covers public lands in DMRA. It is subordinate to plans developed by EPA Utah State Division of Solid and Hazardous Wastes, and the BLM



Utah State Office. This document is available for review in the Vernal District Office.

This district plan provides the guidance for district and DMRA employees: to act in the event of a hazardous materials incident, to ensure public and employee health and safety, protect the environment, and comply with state and federal laws. If there is no identifiable responsible party or they refuse to take action, BLM will act to effect a clean up. Cleanup actions are to include limiting access to the site to ensure safety of Bureau employees and the public, contracting for the cleanup/removal of the materials, and gathering evidence to assist in future litigation of the responsible parties. At no time will BLM employees remove or transport hazardous materials.

Existing landfills on public land leased from the BLM will be either closed or transferred. Closure plans will be prepared for each site and guidance in the plan will be followed. In order to minimize impacts to local governments, BLM will work with them to find alternative sites.

Any unauthorized disposal sites on public lands will be cleaned up and hazardous wastes removed to an approved disposal area.

## LANDS

### Land Ownership and Disposition

*The goal of any title adjustment is to keep the mineral and surface estates intact*

Lands within the resource area will be considered for exchange, sale, state selection, R&PP patent, and other disposals, on a case-by-case basis where objectives outlined under "Planning Criteria" in Chapter 1 are satisfied. The goal of any title adjustment is to keep the mineral and surface estates intact wherever possible.

Any land proposed for disposal will be evaluated for significant cultural and paleontological resources, special status species, hazardous materials, floodplain/flood hazards, minerals, and prime and unique farmland. Mitigation will be accomplished before the land is transferred. In addition, any disposal will be coordinated fully with adjoining landowners, local governments, and anyone with a valid existing right on the land (i.e., grazing permittee, mineral lessee).

## Corridors and Land Use Authorizations

The designated corridors under the approved RMP would be the preferred route for all major utility systems. Corridors will be one-quarter (1/4) mile in width, unless constrained by environmental features, terrain, and unavoidable resource protection areas. This would prevent the proliferation of major utility systems across public land and will reduce adverse environmental impacts to sensitive resources.

Land use authorizations (rights-of-way, leases, permits, easements) will continue to be issued on a case-by-case basis and in accordance with the approved RMP. Whenever possible, facilities will be confined to existing utility and transportation routes emphasizing less visible alignment, minimizing width requirements, and maximizing multiple occupancy. Communication site plans will be developed for all existing sites designated for future facility development. Agricultural leases will be considered only when the lease is compatible with or enhances the land's identified resource values.

Under the Recreation and Public Purposes (R&PP) Act, BLM has the authority to lease or patent public land to local governments or nonprofit entities for public parks and recreation sites, building sites, schools, or for other public purposes. Leases and patents under R&PP regulations will be issued in accordance with the approved RMP. To ensure public purpose development of public land slated for R&PP transfer, BLM may require the land first to be leased for a period of time before a patent is issued.

Landfills, hazardous waste disposal sites, and produced water disposal pits will not be authorized under rights-of-way or the R&PP Act. If BLM lands are needed for these purposes, title adjustment may be considered.

## Trespass

BLM will pursue the resolution of long-term trespass and abatement of new trespass. DMRA is committed to an effective realty trespass abatement program including trespass prevention, detection, and resolution. Agricultural leases and permits will only be used as a short-term trespass resolution unless the objectives of the approved RMP require continued BLM management.

## Withdrawals and Classifications

BLM's ability to transfer land proposed for disposal in the RMP/EIS may be constrained by the existence of withdrawals. In cases where a withdrawal closes lands identified for disposal, BLM will recommend the



withdrawal be either revoked, modified, or terminated in accordance with Section 204 of FLPMA. Not all withdrawals preclude the disposal of the withdrawn land, but in most cases, BLM will not dispose of withdrawn land until the withdrawal designation has been terminated. FLPMA Sec. 204(l)(1) requires that all withdrawals affecting public land be administratively reviewed. Land unencumbered through the withdrawal review process will then come under the guidance of RMP/EIS decisions.

All actions proposed in this RMP that are not prohibited by specific terms of a withdrawal or classification will be carried out. Actions prohibited by the terms of a withdrawal or classification will not be implemented unless such withdrawals are revoked, amended, or classifications terminated.

Land and mineral withdrawals and/or classifications will be reviewed periodically for consistency with the RMP. Withdrawals and classifications may be modified, or revoked on an individual case-by-case basis to implement the objectives of the RMP.



## LIVESTOCK MANAGEMENT

DMRA's grazing program is managed under provisions of the Taylor Grazing Act of 1934, FLPMA, and Public Rangelands Improvement Act (PRIA) of 1978. These acts authorize the issuance of grazing permits, use supervision, unauthorized use detection and abatement, livestock grazing management, range improvement facilities and treatments, and other actions.

DMRA's current management of rangeland resources is guided by the Ashley Creek (1982) and the Three Corners (1979) Grazing EISs and their associated rangeland program summaries. These statements did not clearly analyze the forage needs for objective (desired future) wildlife levels. Analyses were based on current wildlife populations, thus dating their usefulness.

The grazing EISs respond to NEPA and FLPMA requirements and cover all public land under the RMP. These EISs provide guidance for DMRA's grazing management program with the following objectives:

- To restore and improve rangeland condition and productivity,
- To provide for use and development of rangeland,
- To maintain and improve habitat for wildlife,
- To direct future rangeland management actions, and
- To promote sustained yield and multiple use.

All DMRA grazing allotments have been assigned to one of three management categories on the basis of present resource condition and management needs, forage potential, conflicts with other resource uses, and economic potential for improvement. (For a more detailed description of DMRA's current rangeland management program and opportunities for improvements, see Appendix 8.)

Categorization established priorities for distributing rangeland management funds to achieve cost-effective improvement of rangeland conditions and production. The three categories are "M" - Maintain, "I" - Improve, and "C" - Custodial. The current 38 "M" category allotments are managed to maintain satisfactory conditions, 39 "I" allotments are managed to improve unsatisfactory conditions, and 31 "C" allotments receive custodial management to prevent resource deterioration. Efforts are concentrated in allotments where monitoring and evaluation find management actions are needed to improve the basic resource to resolve serious resource-use conflicts, or to reach forage production potential. BLM recategorized allotments due to changes in objectives or potential for improvement. (See "Allotment Categorization" section in Appendix 8 for criteria used and documentation made for current allotment management categorizations.)

BLM will manage rangelands in accordance with the grazing prescriptions, rangeland improvements, and management actions set forth in this RMP (see Appendix 8, "Rangeland Improvements Opportunities"). Allotment Management Plans (AMPs) will be developed or revised to reflect any needed changes as determined through monitoring studies and allotment evaluation. Methods are also prescribed to control undesirable plants or to control vegetation-damaging insect infestations.

All fences will be designed and built for compatibility with wildlife and other multiple resource objectives. Livestock water facilities will be built or modified to provide safe access for wildlife.



## MINERALS MANAGEMENT

Mineral exploration and development is encouraged on public land in keeping with the BLM's multiple-use concept.

### Leasable Minerals

The Mineral Leasing Act of 1920, and federal regulations (43 CFR 3100-3500), provide the legal and regulatory framework for issuing mineral leases. These regulations apply where public interest exists for the development of oil, gas, phosphate, "gilsonite", and tar sands. Where required, stipulations will be attached to leases to mitigate impacts to sensitive species, cultural areas, and other resources susceptible to impacts from leasing-related activities. Where these sensitive resources occur on split estate, surface protection stipulations would be attached to the lease only with the landowner's approval.

### Locatable Minerals

The General Mining Law of 1872 and federal regulations 43 CFR 3802 and 3809 provide for mineral exploration and development in conjunction with other resource management. Lands within the resource area that are not withdrawn are available for mineral location. However, on those lands identified as special emphasis areas or as having valuable resources, DMRA will work with mining claimants to assure that unnecessary or undue degradation of valuable resources and areas does not occur.

### Mineral Materials

The Material Sale Act of 1947 and federal regulations (43 CFR 3600) provide for the disposal and regulation of mineral materials. Sales of mineral materials to the public will be administered by establishment of community pits on a case-by-case basis. Saleable minerals are sold at market prices. Free use permits will continue to be issued to state and federal agencies, local communities, and nonprofit organizations.

Flagstone near the Wrinkles Road area, near Nine Mile Canyon, will continue to be available to the public.

## RECREATION MANAGEMENT

Recreation programs are managed according to multiple use principles unless otherwise specified by law or BLM policy. The mission of the program is to ensure the continued availability of quality outdoor recreation opportunities and experiences that are not readily

available from other sources. Recreation use as well as capital investments in facilities are managed to protect the health and safety of visitors; to protect natural, cultural, and other resources; to encourage public enjoyment of public lands; and to resolve user conflicts. All recreation sites within DMRA are closed to firearm use.

A range of outdoor recreation opportunities such as hiking, camping, rock collecting, sight seeing, hunting, recreation vehicle camping, mountain bicycling, climbing, picnicking, and recreation 4-wheeling, will continue to be provided. Developed recreation sites, interpretive sites, trails, and roads will continue to be maintained and developed where needed to enhance recreation opportunities and allow public use.

BLM manual guidance (BLM Handbook H8310-1) sets up the Recreation Opportunity Spectrum (ROS) in which lands are classified as urban, rural, roaded-natural, semi-primitive motorized, semi-primitive nonmotorized, and primitive. DMRA was classified under ROS in 1989. Potential impacts to these ROS classifications are analyzed in an environmental review by BLM for planned activities. Special protection measures or construction methodologies may be required so the ROS classification remains unchanged.

Only nonmotorized activities would take place within the semi-primitive, nonmotorized areas. These areas would be closed to OHV use and motorized surface-disturbing activities (e.g., heavy motorized equipment).

The Bureau has placed emphasis on the recreational opportunities with the "Recreation 2000" and the "Legacy 99" programs. These programs deal with expanding the recreational opportunities on public lands to meet the needs of the public, and with upgrading and maintaining existing facilities.

If cave resources are identified on public lands, appropriate action will be taken to inventory and protect them from damage.

## RIPARIAN MANAGEMENT

Legal authority for BLM management of riparian areas is based on numerous laws and Executive Orders, including the Taylor Grazing Act of 1934, Endangered Species Act of 1973, FLPMA, the Emergency Wetland Resources Act of 1986, Water Quality Act of 1987, Clean Water Act of 1987, Executive Order 11988 (Floodplain Management) and Executive Order 11990 (Protection of Wetlands). On January 22, 1987, BLM issued its national riparian area management policy which defined the term riparian area, set management objectives, and outlined specific policy



direction. This policy is the basis for BLM Manual 1737 (Riparian-Wetland Area Management), the Bureau wide "Riparian-Wetland Initiative for the 1990s" and the 1988 BLM Utah and Vernal District riparian policies (see Appendix 6).

The overall objective is to achieve an advanced (late-climax seral stage) ecological status, except where resource management would require an earlier ecological status for such purposes as vegetation diversity.

In addition, BLM's strategy plans outline seven implementation strategies to meet the objective:

**Inventory/Classification** - Collect, compile, and evaluate baseline information to determine current status, potential, and condition.

**Activity Plan Preparation/Revision** - Develop/revise plans that involve riparian-wetland areas prescribing actions to meet management objectives. The goal of the program is to implement management, protection, and restoration efforts to achieve 75 percent or more of the riparian ecosystems are in a late seral or potential natural stage by 2007.

**Project Development/Maintenance** - Complete projects such as fences, water developments, tree planting, and habitat improvement structures to create, improve and/or maintain riparian-wetland conditions. Maintain projects to continue their beneficial use.

**Monitoring** - Monitor to determine if management action is meeting specific objectives for riparian-wetland areas.

**Protection/Mitigation** - Avoid or mitigate the impact of surface-disturbing activities on riparian-wetland areas. Riparian habitat will be protected by limiting surface-disturbing activities to established right-of-way corridors and crossings and by restricting grazing. Where grazing is allowed on riparian areas, the objective is to maintain a minimum herbage stubble height of 3 inches after livestock grazing to provide sufficient herbaceous biomass to meet requirements of plant vigor, maintenance, bank protection, and sediment entrapment. Cottonwood and willow growth along major riparian areas and other water sources is targeted for restoration and reestablishment.

**Acquisition/Expansion** - Acquire and expand riparian-wetland areas through exchange, donation, or purchase.

**Public Outreach** - The development and presentation of workshops to the citizens of Utah including school children, livestock interests, and conservation groups.

The intent of the workshops will be to educate the public and to gain their support for BLM riparian management efforts.

These strategies will be implemented on an interdisciplinary team basis. Since numerous highly valued resources depend on riparian-wetlands, it is important that specialists such as hydrologists, wildlife biologists, soil scientists, range conservationists, and recreation planners work cooperatively to develop management strategies to allow areas to be used and yet meet the identified objective.

DMRA will continue working with the Uintah Basin Riparian Coalition (a chapter of the Utah Riparian Coalition). This organization's major goal is to provide a forum for discussion, education, and consistent consideration of the impacts of riparian management.

## SOIL AND WATER MANAGEMENT

Several laws provide authority for managing soil and water on public land. FLPMA requires that public lands be managed to protect scientific, environmental, and water resources. It also requires land use plans to comply with pollution control laws, including state and federal water or other pollution standards.

FLPMA requires compliance with the Soil Conservation and Domestic Allotment Act of 1935; the Watershed Protection and Flood Control Act of 1954; the Colorado River Basin Salinity Control Act of 1974; Wild and Scenic Rivers Act of 1968; the Federal Pollution Control Act of 1972, as amended; Water Quality Act of 1987; and the Safe Drinking Water Act of 1977. BLM Manual 7000 and several executive orders provide field guidance in managing soil and water.

### Soils

Management practices are designed to meet vegetation standards which will maintain or improve watershed conditions. Mitigation would feature upgrading maintenance of existing BLM roads, closing and rehabilitating roads no longer necessary, and maintaining or increasing vegetation cover to reduce critical erosion conditions.

Activity plans are written for areas having moderate to critical erosion conditions or other problems and where more attention is needed than is provided through other program activity plans. Currently, plans exist for the Pariette Wetlands, the Red Creek Watershed, and the Castle Peak Salinity Reduction Project.



Executive Order 11988 directs federal agencies to "avoid to the extent possible the long- and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct and indirect support of floodplain development whenever there is a practicable alternative" (44 CFR 60, 1978).

BLM would continue to retain land within 100-year floodplains, as per Executive Order 11988, except under the following conditions:

- When federal, state, public, or private institutions and parties have demonstrated the ability to maintain, restore, and protect the floodplain on a continuous basis.
- Where transfer of lands, minerals, or subsurface estates is mandated by legislation or executive order.

BLM procedures may also require more mitigation, which would be discussed in an environmental assessment prepared for specific projects or actions.

## Water

Objectives of the water resource program are: to ensure the physical presence and legal availability of water on public lands, to ensure that those waters meet or exceed established federal and state water quality standards for specific uses, and mitigate activities to prevent water quality degradation.

The water resource program is divided into four sections: Water Inventory, Water Rights, Water Quality, and Water Power Inventory.

**Water Inventory** - Current BLM policy is to inventory all water sources on public lands it administers and to document and store this data in its Watershed Data Management System. The objective in DMRA is to complete the data base and keep it up-to-date and accurate, giving priority to water sources associated with riparian areas.

**Water Rights** - Current BLM policy is to file for water rights on all water sources on public and acquired lands in accordance with State of Utah water laws. Special emphasis is placed on securing instream flow water rights for selected streams. BLM files for water rights for recreation use, riparian habitat, watershed protection, wildlife, livestock, and other uses.

**Water Quality** - Water quality is monitored to assess resource impacts from specific activities and to obtain baseline resource information. Areas receiving priority for monitoring include riparian areas, recreational sources, and critical watersheds. Produced water from oil and gas wells would continue to be disposed of by reinjection or by removal to nonfederal disposal pits.

The Colorado River Basin Salinity Control Act of 1974, as amended, directs the U.S. Department of the Interior to identify necessary improvements and to develop a program to reduce salinity and water pollution in waters obligated to Mexico.

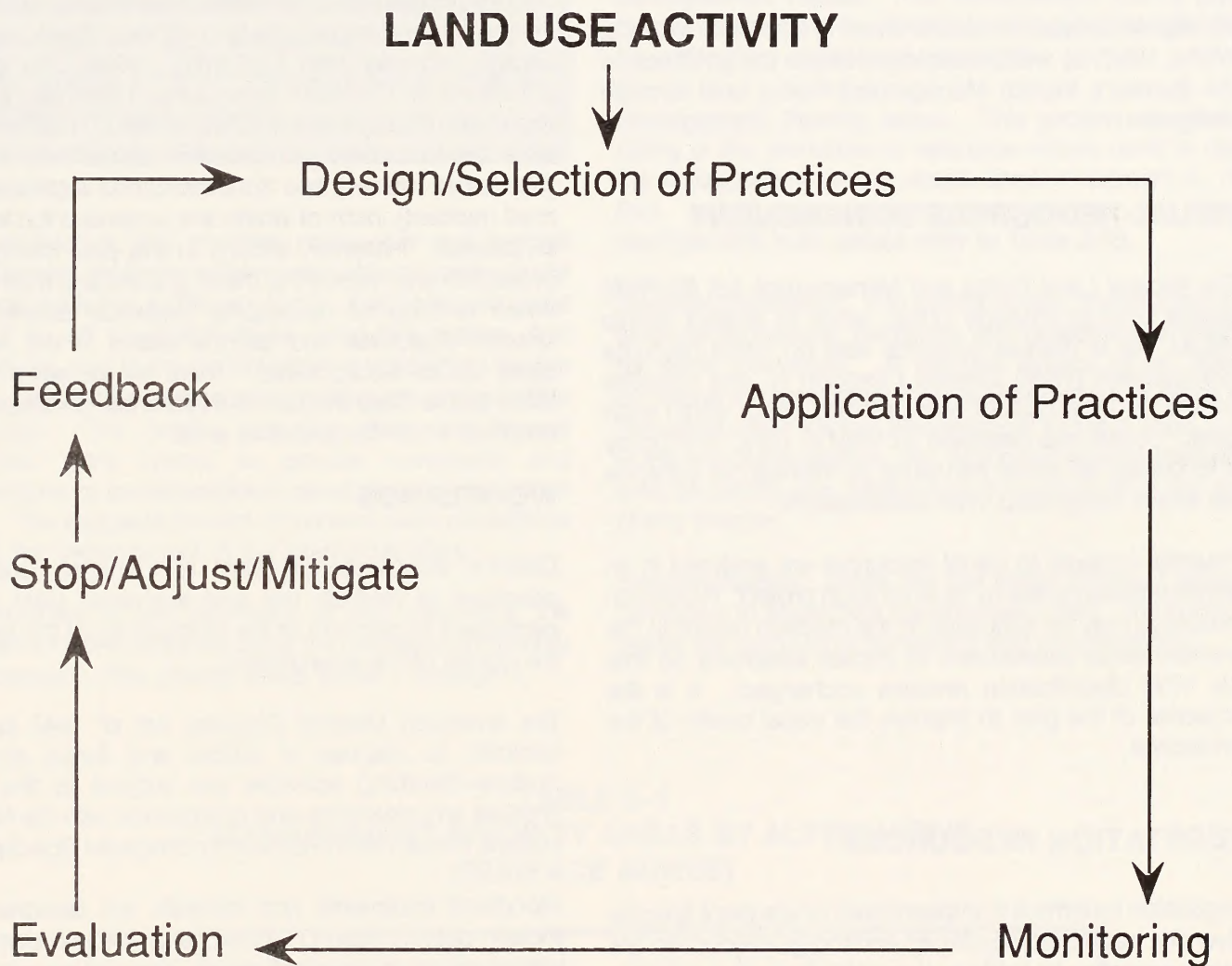
Watershed condition shall be maintained or improved by application of Best Management Practices (BMPs) using current Utah State Water Quality Standards for turbidity and total suspended solids. Instream flows on perennial or intermittent drainages will be maintained or enhanced to protect fishery values. Sediment and salinity production will be reduced on critical watersheds through intensive management and construction measures to reduce water degradation of the Green and Colorado Rivers. Protection of water rights and water power withdrawals shall be provided to meet water quality standards.

BLM manages non-point sources of pollution as defined by Section 319 of the Water Quality Act of 1987 (P.L. 100-4). Utah's Department of Environmental Quality, Division of Water Quality, is designated by the Environmental Protection Agency (EPA) to coordinate management of non-point source pollution control on public lands in Utah. The Division of Water Quality reports water quality status to EPA annually. The BLM Non-point Management Strategy calls for design and selection of practices that protect beneficial uses, application of practices, monitoring, evaluation of effectiveness, mitigation of problems, and adjustment of practices (see Figure 2-1). This strategy is incorporated into BLM management plans through mitigating measures identified in project planning and NEPA review. BLM will coordinate with the Division of Water Quality (refer to Appendix 9 for current water quality standards).





**FIGURE 2-1**  
**BLM NON-POINT POLLUTION SOURCE STRATEGY**





Water Power Inventory - BLM will inventory all water power and reservoir resource values on public lands. Lands identified as having water power values (as defined by the objectives of the approved RMP) will be protected by a water power withdrawal. Lands already withdrawn that lack water power values or are inconsistent with the objectives of the approved RMP will be reviewed and recommended for termination.

## SPECIAL EMPHASIS AREAS MANAGEMENT

All eligible special emphasis areas in this RMP (ACECs, WSAs, W&SRs) will be managed under the guidance of the Bureau's Interim Management Policy until formally designated.

## VISUAL RESOURCES MANAGEMENT

The Federal Land Policy and Management Act (FLPMA) directs BLM to manage public lands to protect scenic values. BLM manual guidance sets up visual resource management (VRM) Classes I through IV, and provides criteria for what type of changes may occur within each class. DMRA was classified for VRM in 1979. The policy is to design all visual intrusions to maintain or enhance the area's designated VRM classification.

Potential impacts to visual resources are analyzed in an environmental review by BLM for each project. Protection measures may be stipulated in the decision record in the environmental assessment or impact statement so that the VRM classification remains unchanged. It is the objective of the plan to improve the visual quality of the landscape.

## VEGETATION RESOURCES

Vegetation treatment is implemented where plant species diversity, watershed conditions and forage production are below potential; to achieve a desired ecological stage or plant community; to control noxious weed or insect infestations; or to meet activity plan objectives. Such treatments include mechanical treatments (chaining), chemical treatment (herbicide applications), biological treatments (grazing), prescribed fire, reseeding, and construction of control structures (see Appendix 7). Vegetation treatment projects are subject to NEPA review prior to initiating any action and are guided by the 1991 bureauwide vegetation treatment EIS. Temporary adjustments in use due to effects of drought would be made to livestock and wildlife as shown needed by monitoring.

Vegetation resources will be managed according to desired ecological stages or plant communities by allotment at the activity plan level.

## Special Status Plant Species

General guidance governing management of the 20 special status plant species is the same as that outlined for special status animals in the "Fish and Wildlife" section outlined earlier in this chapter.

Actions proposed in this RMP adhere to objectives stated in the *Sclerocactus glaucus* (Uinta Basin hookless cactus) recovery plan (USF&WS, 1990). No recovery plans exist for *Lepidium barnebyanum* (Barneby's pepper cress) and *Glaucocarpum suffrutescens* (Toadflax cress), both listed as endangered; and for *Spiranthes diluvialis* (Ute ladies tresses) and *Schoenocrombe argillacea* (clay reed mustard), both of which are proposed for listing as threatened. However, actions in this plan consider the protection and recovery of these species and their habitat. When revising or developing resource activity plans, specific objectives and actions stated in the recovery plans will be incorporated. There are no plant species listed by the State of Utah as threatened, endangered, or sensitive within the resource area.

## WOODLANDS

DMRA's woodlands program is managed under the principles of multiple use and sustained yield without permanent impairment of the productivity of the land and the quality of the environment.

The amended Material Disposal Act of 1947 provides authority to dispose of timber and forest products. Surface-disturbing activities are subject to the NEPA process and clearance and compliance with the National Historic Preservation Act and Endangered Species Act.

Woodland treatments and harvests are designed in a mosaic pattern, leaving inclusions of live and dead trees within treated or harvested areas. Irregular boundaries of treatment and harvest areas would reduce the detrimental impacts to the scenic values.

Consideration will be given on a case-by-case basis to reestablishing conifer types in areas that historically supported conifer species but because of past abuses, currently support other vegetation types.

In periods of low vegetation or seed production, the resource area is closed to the collection of seeds, pinenuts, ornamental trees, shrubs, and non-barrel cactus. Collection of barrel cacti species will not be permitted.



## AREAWIDE ALTERNATIVE DESCRIPTIONS

The five alternatives presented here provide different solutions to the planning issues (see Chapter 1). Each alternative provides a complete multiple-use plan suitable for guiding management of DMRA's public lands and resources.

*The decisions listed in this section are the management actions analyzed in Chapter 4 that would be implemented if the particular alternative was chosen.*

Each alternative plan provides reasonable and feasible management decisions within reasonable budgetary limits although each has a different focus. Each plan would be subject to all applicable laws, executive orders, and regulations, and to the continuation of valid rights for use of the public lands or resources existing when the RMP is approved. The public, including state and federal agencies, were invited to provide comments and suggestions for consideration in developing the alternative plans. The suggestions and comments were considered during the development of the alternative plans.

As discussed in the Summary of this document, the alternatives were designed using the management priority area concept. The priority areas, levels 1 through 4,

under each alternative were developed by combining various areas, features, and mapped resources that would require a specific level of management under that alternative's objectives. The amount of land contained in each priority level and the percentage of the whole is displayed in Tables 2-1 and 2-2.

As you read each alternative description, please refer to that alternative's map located in the map packet. The descriptions follow the format listed below:

**Management Theme.** The management theme gives overall direction to the decisions and provides direction for addressing unforeseen proposals.

**Management Priority Areas.** This section provides a listing of the resources or resource values used to map the management priority areas, levels 1 through 4. To find exact management prescriptions for each management level, please refer to Table 2-13.

**Decision Summary.** This section briefly summarizes the land use allocations, decisions, and objectives proposed for each alternative. A detailed outline of all major decisions for lands other than special emphasis areas as proposed under the five alternatives is found in Table 2-13 at the end of this section. For proposed special emphasis area decisions, see Tables 2-14 through 2-18 at the end of this chapter.

**Support Needs.** These are the major followup actions necessary to implement the proposed plan. The support needs will guide BLM budgeting and programming.

**TABLE 2-1  
MANAGEMENT PRIORITY AREAS BY ALTERNATIVE  
(SURFACE ACRES)**

	A		B		C		D		E	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
Level 1	0		96,000	13	0	0	0	0	6,100	< 1
Level 2	44,400	6	318,600	45	10,500	1	4,500	< 1	81,000	11
Level 3	343,000	48	210,300	30	678,000	96	520,200	73	488,500	69
Level 4	321,600	46	84,100	12	20,500	3	184,300	26	133,400	19
TOTAL	709,000	100	709,000	100	709,000	100	709,000	100	709,000	100

Source: Vernal District Geographical Information System



**TABLE 2-2  
MANAGEMENT PRIORITY AREAS BY ALTERNATIVE  
(SURFACE AND SUBSURFACE ACRES)**

	A		B		C		D		E	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
Level 1	0	0	113,000	13	0	0	0	0	6,100	< 1
Level 2	56,500	7	354,500	42	12,600	1	6,600	< 1	84,000	9
Level 3	374,500	44	262,100	30	774,700	91	588,200	69	569,000	67
Level 4	423,000	49	124,400	15	66,700	8	259,200	30	194,900	23
TOTAL	854,000	100	854,000	100	854,000	100	854,000	100	854,000	100

Source: Vernal District Geographical Information System

### ALTERNATIVE A (Current Management)

#### Management Theme

This alternative is a continuation of current management, including current level, intensity, direction, or systems of resource use and protection. It is not a static condition or point in time, but allows for logical progression. Management direction is primarily from the Ashley-Duchesne, Browns Park, and Diamond Mountain Management Framework Plans (MFPs) and subsequent decisions in EAs or EISs (listed in the "Planning Criteria" section of Chapter 1 of this document).

#### Management Priority Areas

The management priority areas were mapped using the current MFP decisions combined with the existing category system for oil and gas leasing and special tar sand areas.

##### Level 1 (Closed)

- No lands identified.

##### Level 2 (Restricted Use)

*44,400 surface acres*

*12,100 federal split estate acres*

*56,500 surface and subsurface acres*

- Upper Green River (½ mile or line of sight)
- John Jarvie National Historic District
- Developed recreation sites (Pelican Lake, Dry Fork, Bridge Hollow, Indian Crossing, Red Creek, Sand Wash, and Swallow Canyon)
- Rainbow Park road
- Sage grouse strutting grounds

- Riparian habitat and water sources (includes a 600-foot protection buffer)

##### Level 3 (Limited Safeguards)

*343,000 surface acres*

*31,500 federal split estate acres*

*374,500 surface and subsurface*

- Crucial deer and elk winter range
- Red Mountain proper (8,950 acres)
- Crouse Canyon
- Red Creek ACEC
- Middle Green River
- Lower Green River
- Sites eligible for or listed on the *National Register of Historic Places*
- I & M category allotments
- Bighorn sheep habitat in Browns Park and Island Park
- Six Mile Draw roadless area
- Antelope fawning areas
- Sage grouse nesting areas
- Special status plant and animal habitat
- Critical soils (highly erodible, saline)
- Floodplains
- Municipal watersheds
- Highway 191 Scenic Byway (Drive Through the Ages)
- Wrinkles Road Area

##### Level 4 (Unrestricted Use)

*321,600 surface acres*

*101,400 federal split estate acres*

*423,000 surface and subsurface acres*

- All other BLM-managed lands and resources



## Decision Summary for Alternative A

The two existing ACECs, Red Creek and the Green River Scenic Corridor, would continue. In addition, special management without special emphasis designation would continue in Crouse Canyon, Pariette Wetlands, Nine Mile Canyon, and Red Mountain. See Table 2-14 for a description of management actions proposed for these areas under current management. These areas, although nominated for ACEC designation, are receiving adequate management emphasis without an ACEC designation.

The recommendation to designate the upper Green River for inclusion in the National Wild and Scenic River System would be continued. No other waterways would be recommended; however, the lands along the middle and the lower segments of the Green River would be managed so as not to jeopardize their Wild and Scenic River qualities.

These special areas would be managed with an emphasis on recreational opportunities, historic values, waterfowl production, and riparian habitat. All activities planned, under current management, would consider these values first and strive to maintain the values in their present or an improved condition.

Lands would be available for rights-of-way, permits, leases, and transfers in support of active programs and to improve manageability. Lands program actions would avoid level 2 lands plus the Six-Mile Draw roadless area, sage grouse strutting grounds, Red Mountain, municipal watersheds, and the Highway 191 Scenic Byway.

Protective withdrawals would be recommended for the Green River Scenic Corridor and the developed and potential recreation sites. Until these withdrawals are completed, mining activity other than casual use would require a plan of operations within the existing ACECs. Development would be restricted by measures designed to protect the river and recreation sites' values as well as reduce undue and unnecessary degradation of environmental features.

Under current management, livestock preference would continue at 50,299 AUMs. For both big game and non-game wildlife, the current maximum use of 35,000 AUMs would be provided. Additional AUMs (approximately 50 percent of the current year's growth) are retained for soil protection, wildlife cover, plant vigor, vegetation community stability, and watershed maintenance.

Livestock grazing would be allowed on 705,500 public acres (more than 99 percent of the resource area).

Developed recreation sites and the floodplain along the upper Green River are closed to grazing (3,500 acres).

Mineral program activities would be allowed on 93 percent (approximately 797,500 acres of federal mineral estate) of the resource area with either special or standard restrictions. Special restrictions principally involve seasonal closures due to wildlife, soils and watershed concerns. Six percent (or 56,500 acres of federal mineral estate) of the resource area is open to mineral program activities with a no-surface-occupancy stipulation to protect the Green River Scenic Corridor, Pariette Wetlands, riparian habitat, sage grouse strutting grounds, and developed recreation sites. None of the resource area is closed to mineral program activities. Appendix 4 shows the stipulations included in current oil and gas leases.

Table 2-3 shows the category assignments for low, moderate, and high development potential minerals within DMRA.

**TABLE 2-3:  
OIL & GAS CATEGORY  
ASSIGNMENTS BY MINERAL  
POTENTIAL FOR ALTERNATIVE A**

Management Categories	Low Potential	Moderate Potential	High Potential	Total	%
OPEN (Category 1) Standard Stipulations	54,000	201,000	168,000	423,000	50
OPEN (Category 2) Timing Limitation/ Controlled Surface Use Stipulations	148,200	164,200	62,100	374,500	44
OPEN (Category 3) No Surface Occupancy Stipulations	21,800	23,800	10,900	56,500	6
TOTALS	224,000	389,000	241,000	854,000	100

Source: Vernal District GIS

The resource area would continue to be managed to provide a variety of dispersed recreation opportunities. Recreation management emphasis would include developing trails for hiking, mountain bicycles, and horseback riding; off-highway vehicle use; designating back-country byways; developed recreation facilities; and interpreting natural and cultural resources. Other recreation facilities identified in this alternative include: developing four new facilities (near Jones Hole, Brough Reservoir, Cottonwood Grove, and Horseshoe Bend),



expanding Dry Fork Canyon, and maintaining Sand Wash at its present size.

The Pelican Lake SRMA would continue to be managed to support the water-related recreation activities at the lake. The Browns Park SRMA would continue to be managed to provide a variety of recreation opportunities and to protect the unique wildlife and scenic values and camping at developed or primitive recreation sites along the upper Green River.

The recent study entitled "Recreation Use Capacity of the Green River Corridor Below Flaming Gorge Dam" (Pratt, et al., 1991) has determined use will continue to increase and present facilities may not be sufficient. In response to this study, this alternative would develop recreation facilities at Cottonwood Grove; expand existing facilities at Bridge Hollow; maintain Pugmire Pocket, Red Creek, Indian Crossing, Jackson Creek, and Swallow Canyon facilities at their present size.

Off-highway vehicle use would be allowed on the entire resource area. Although approximately 52,800 acres (or 7 percent) of the resource area is limited to designated roads and trails, and 13,800 acres (2 percent) is limited to existing roads and trails. Such a restriction would not apply to state or county roadways.

Riparian habitat determined to be in early and mid ecological stages (approximately 9,500 public acres or 13 percent) would receive priority management consideration under Alternative A. Improvements necessary to meet the Bureau's riparian policy objectives involve establishing grazing systems and implementing rangeland improvements. A 600-foot protection zone would be established around all riparian areas in the resource area. Surface-disturbing activities would be allowed within the zone if designed to enhance riparian values or there is no practical alternative.

Floodplains and areas with critical erosion potential or characterized by high salt content would be managed to minimize flood damage and/or sediment loading of the Green River by maximizing ground cover where feasible. Administrative actions including proper road design and maintenance would be implemented. Surface-disturbing activities and OHV use would be halted during periods of saturated soils (the time most conducive to sediment loading).

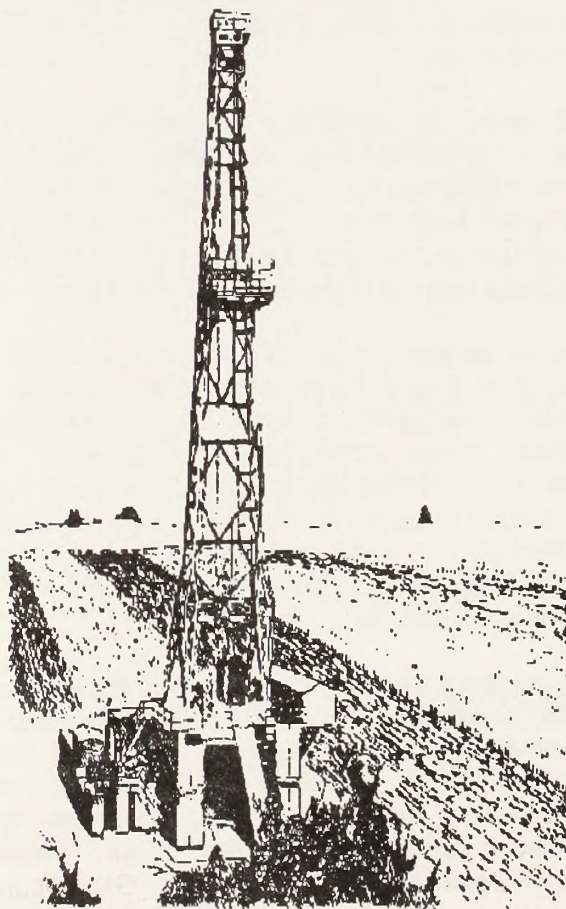
Wildlife habitat would be protected or enhanced by implementing seasonal closures in specific areas for specific wildlife species (refer to Table 2-4).

Identified habitat determined suitable or having potential as wildlife transplant or reintroduction areas would be maintained until a specific release proposal were received from UDWR. Site-specific analyses would be prepared to evaluate the impacts of the proposed release on other wildlife species and resource programs.

Except for areas under specific fire management prescriptions, all wildfires would be aggressively suppressed.

Based on demand, 202,700 acres of public land (99 percent of the productive woodlands) would be open to the sale and/or harvest of woodland products. About 2,300 cords per year could be harvested.

Seasonal restriction established for protection of various resources listed as level 3 lands are summarized in Table 2-4.





**TABLE 2-4  
ALTERNATIVE A SEASONAL RESTRICTIONS**

RESOURCES PROTECTED	MONTHS RESTRICTION IS APPLIED											
	J	F	M	A	M	J	J	A	S	O	N	D
Crucial deer and elk winter range	X	X	X	X	X	X						X
Antelope fawning areas					X	X						
Sage grouse nesting habitat				X	X	X						
Ferruginous hawk nesting habitat			X	X	X	X	X					
Eagle and Swainson's Hawk nesting habitat		X	X	X	X	X						
Peregrine falcon nesting habitat				X	X	X	X					
Bighorn sheep lambing areas				X	X	X						
Bighorn sheep wintering and rutting areas	X	X	X	X	X				X	X	X	X
Highly erodible and high saline soils			X	X					X	X		
Floodplains			X	X					X	X		
Black-footed ferrets - when reintroduced			X	X	X	X	X	X				

Source: Table 2-13

### Support Needs

Prepare a cultural resource management plan covering the resource area. Prepare site-specific management plans for Browns Park and Red Mountain-Dry Fork specifically. Prepare a cultural resource management plan jointly with the Moab District for Nine Mile Canyon.

Prepare an off-highway vehicle designation and implementation plan.

Coordinate wildlife reintroductions with USF&WS, UDWR, and other agencies or groups as appropriate.

Develop a Habitat Management Plan for Nine Mile Canyon. Revise and update the three existing plans as necessary.

Prepare activity plans on the federally-listed animal and plant species currently lacking recovery plans: Razorback sucker, *Lepidium barnebyanum*, *Glaucocarpum suffrutescens*, *Spiranthes diluvialis*, and *Schoenocrombe argillacea*. The overall objective being to manage the habitat to the level where delisting is deemed appropriate.

Prepare new allotment management plans for: Big Wash Draw, Brush Creek, Bull Canyon, Clay Basin Meadows, Devils Canyon, Dry Fork, Eight Mile Flat, Five Mile, Jackson-Crouse-Dry Hollow, and Little Hole. Revise existing AMPs covering Antelope Powers, Cottonwood Springs, Goslin Mountain, Green River Bottoms, Horseshoe Bend, Hoy Mountain, Little Desert, Red Creek Flat, Shiner-Diamond Mountain, S.J. Hatch, Taylor Flat, and Watson Allotments.

Enhance overall vegetation production and diversity to meet livestock, wildlife, soils, and watershed management objectives with vegetation treatments (involving 19,400 public acres), rangeland improvements, and management actions.

Revise existing Green River Scenic Corridor Management Plan to incorporate appropriate management recommendations outlined in the 1991 "Recreation Use Capacity of the Green River Corridor Below Flaming Gorge Dam". Revise Pelican Campground SRMA recreation management plan as necessary. Prepare an interpretive plan for the designated Nine Mile Back-country Byway.



Classify lands, as necessary, for solid leasable minerals.

## ALTERNATIVE B (Ecological Systems)

### Management Theme

This alternative will maintain or improve the condition of the existing ecological systems. Commodity production and intensive land uses will be more restricted and closely monitored. Wildlife habitat would be improved, scenic quality enhanced, and sensitive vegetation and other ecological systems protected or enhanced.

### Management Priority Areas

The management priority areas were mapped using current information and inventories in the Vernal District GIS system combined with the team's analysis of the resource values and geographical features requiring emphasis under this alternative objective.

#### Level 1 (Closed)

*96,000 surface acres*  
*17,000 federal split estate acres*  
*113,000 surface acres and subsurface*

- Developed recreation sites
- Upper Green River and its floodplain
- Riparian habitat (with a 700-foot protection zone)
- Highly erodible soils
- Municipal watersheds
- Relict vegetation communities (Red Mountain, Castle Cove, Lears Canyon)
- John Jarvie National Historic District
- Sites listed or eligible for listing on the *National Register of Historic Places* (with a 200-foot protection zone)

#### Level 2 (Restricted Use)

*318,600 surface acres*  
*35,900 federal split estate acres*  
*354,500 surface acres and subsurface*

- Deer and elk crucial winter habitat
- Ferruginous hawk nest sites (with a one-mile protection zone)
- Eagle nest sites (with a half-mile protection zone)
- High saline soils
- Areas known to have a high density of cultural properties
- Geologic formations having highly significant fossil localities or finds, including trackways

- Sage grouse strutting grounds (including a half-mile protection zone)
- Half-mile or line of sight of Nine Mile Creek, Argyle Creek, Lower Green River, Middle Green River
- Desolation Canyon National Historic Landmark
- Green River Scenic Corridor ACEC
- Floodplains
- Semi-primitive nonmotorized areas

#### Level 3 (Limited Safeguards)

*210,300 surface acres*  
*51,800 federal split estate acres*  
*262,100 surface and subsurface acres*

- Crucial antelope fawning areas
- Crucial bighorn sheep wintering, breeding, and reproductive areas
- Sage grouse nesting areas (six-mile radius from strutting grounds in sagebrush vegetation type)
- VRM Class II areas
- Potential black-footed ferret transplant areas: Antelope Flat, Eight Mile Flat, Shiner, Sunshine Bench, Twelve Mile
- Critical watersheds

#### Level 4 (Open)

*84,100 surface acres*  
*40,300 subsurface acres*  
*124,400 surface and subsurface acres*

- All other BLM-managed lands and resources

### Decision Summary for Alternative B

The two existing ACECs, Red Creek and the Green River Scenic Corridor, would be continued. Under Alternative B, eight additional ACECs would be designated: Red Mountain-Dry Fork, Lears Canyon, Nine Mile Canyon, the Lower Green River, the Middle Green River, the Browns Park Complex, and Pariette Wetlands. The recommendation to designate the Upper Green River for inclusion in the National Wild and Scenic River System would continue. In addition, two segments of Nine Mile Creek, two segments of the Green River, and on segment on Argyle Creek would be recommended for inclusion in the National Wild and Scenic River System. All these ACEC nominations are consistent with the general objectives for this alternative which is to enhance ecological systems. Refer to Table 2-15 for management actions proposed for these areas under this alternative.



Utility corridors would be designated as depicted on the Alternative B map (see map packet) to allow crossing the Browns Park Complex, Red Mountain-Dry Fork, and the Lower and Middle Green River. Elsewhere in level 2 lands, an avoidance area for lands program actions would be established. Outside the corridor in level 1 lands, an exclusion area for lands program actions would be established.

Withdrawals would be recommended on all level 1 and 2 lands to protect critical resources and features from degradation by mining activity. Until these lands are withdrawn, mining activity other than casual use in existing special emphasis areas would require a mining plan of operations. Development would be restricted by stipulations designed to protect the resources and values from undue and unnecessary degradation.

Under this alternative, forage would be managed towards wildlife objective levels which would require a maximum of 46,000 AUMs (this includes both big game and non-game species). Additional AUMs (approximately 50 percent of the current year's growth) are retained for soil protection, plant vigor, vegetation community stability, wildlife cover, and watershed maintenance. Additional AUMs created from vegetation treatment would be provided to wildlife or retained for watershed. Livestock preference would remain at 50,299 unless monitoring indicates it cannot be met, then livestock preference would be reduced. Vegetation would be managed to attain the ecological condition that results in at least 70 percent in a late or climax seral stage.

Livestock grazing would be allowed on 617,100 public acres (87 percent of the resource area). Developed recreation sites, the upper Green River and its floodplain, sage grouse strutting and known nest sites, within 10 miles of any potential bighorn sheep habitat, riparian areas in early or mid seral ecological stage, relict vegetation communities, NRHP listed or eligible sites, and municipal watersheds are all closed to livestock grazing.

Mineral program activities would be allowed on 46 percent (386,500 acres of federal mineral estate) of the resource area with either standard or special restrictions. Special restrictions principally involve seasonal closures due to wildlife, soils, and watershed concerns. Another 54 percent (467,500 acres) of the resource area is open to leasing with a no-surface-occupancy stipulation to protect crucial wildlife range, critical soils, Wild and Scenic River values, high potential cultural and paleontological areas, floodplains, and semi-primitive nonmotorized areas. Refer to Table 2-5 for the category assignments proposed under this alternative.

**TABLE 2-5:  
OIL & GAS CATEGORY ASSIGNMENTS  
BY MINERAL POTENTIAL  
FOR ALTERNATIVE B**

Management Categories	Low Potential	Moderate Potential	High Potential	Total	%
OPEN (Category 1) Standard Stipulations	47,200	52,100	25,100	124,400	15
OPEN (Category 2) Timing Limitation/ Controlled Surface Use Stipulations	41,700	108,700	111,700	262,100	31
OPEN (Category 3) No Surface Occupancy Stipulations	135,100	228,200	104,200	467,500	54
TOTALS	224,000	389,000	241,000	854,000	100

Source: Vernal District GIS

The resource area would be managed to emphasize primitive recreation opportunities. Hiking, horseback and mountain bicycle trails, and interpretive sites would be developed. Facilities necessary to maintain public health and safety would be constructed. Existing developed recreation sites would be maintained, but no additional facilities would be constructed.

The Pelican Lake SRMA would continue to be managed to support the water-related recreation activities at the lake. The Browns Park SRMA would continue to be managed to provide a variety of recreation opportunities and to protect the unique wildlife and scenic values; and camping would continue at developed or primitive recreation sites along the Upper Green River.

Under this alternative, lands in levels 1 and 2 would be essentially closed to surface-disturbing activities; only maintenance of existing facilities or development of pre-existing permits or leases, improvements for the express purpose of maintaining or enhancing the wildlife, soil, watershed, cultural, or scenic values or construction within designated crossings and corridors would be allowed.

Off-highway vehicle use would be allowed on 553,300 acres (78 percent of the resource area). Of this area, 47 percent is limited to designated roads and trails with seasonal restrictions. Semi-primitive nonmotorized areas, riparian habitat, critical soils, municipal watersheds, special status plants habitat, relict vegetation communities, and cultural sites listed or eligible for listing on NRHP (155,700 acres or 22 percent) would be closed to OHV use. These restrictions and closures would not apply to state and county roadways.



Riparian habitat in early and mid ecological stages would receive priority management consideration under this alternative. Improvements deemed necessary to meet the Bureau's riparian policy objectives involve establishing grazing systems and implementing rangeland improvements. A 700-foot protection zone would be established around all riparian areas in the resource area. Surface-disturbing activities and livestock grazing would not be allowed within this zone.

Floodplains, municipal watershed, and areas with critical erosion potential or characterized by high salt content would be managed to minimize flood damage and/or sediment loading of the Green River by maximizing ground cover where feasible. Administrative actions including proper road design and maintenance would be implemented. Surface-disturbing activities and OHV use would be halted during periods of saturated soils (the time most conducive to sediment loading) on high saline soils and floodplains; highly erodible soils and municipal watersheds would be closed to OHV use and surface-disturbing activities.

Wildlife habitat would be protected and/or enhanced by implementing seasonal closures in specific areas for specific wildlife species (refer to Table 2-6). In certain areas these closures would overlap and could extend the period of closure resulting in essentially closing that area to any surface-disturbing activities.

Management actions, improvement projects, and vegetation treatments would be developed expressly to enhance or maintain the identified resources and values present. Specifically, riparian zones in early or mid ecological stage are targeted for improvement. In addition, enhancing and maintaining high potential cultural areas, special status plant habitat, and critical soil and watershed areas; providing additional wildlife habitat; and improving the existing habitat quality are also goals.

Identified habitat determined suitable or having potential as wildlife transplant or reintroduction areas would be maintained until a specific release proposal were received from UDWR. Site-specific analyses would be prepared to evaluate the impacts of the proposed release on other wildlife species and resource programs.

Except for areas under specific fire management prescriptions, all wildfires would be aggressively suppressed.

Based on an allowable cut of 1,100 cords per year, 51,300 acres of public land (25 percent of productive woodlands) would be open to the sale and/or harvest of woodland products.

Seasonal restrictions established for protection of various resources listed as level 3 lands under Alternative B are summarized in Table 2-6.

**TABLE 2-6  
ALTERNATIVE B SEASONAL RESTRICTIONS**

RESOURCES PROTECTED	MONTHS RESTRICTION IS APPLIED											
	J	F	M	A	M	J	J	A	S	O	N	D
Antelope fawning areas					X	X						
Sage grouse nesting habitat			X	X	X	X						
Peregrine falcon nesting habitat		X	X	X	X	X	X	X				
Bighorn sheep lambing areas				X	X	X						
Bighorn sheep wintering and rutting habitat	X	X	X	X	X				X	X	X	X
High saline soils			X	X					X	X		
Floodplains			X	X					X	X		
Black-footed ferret - when reintroduced			X	X	X	X	X	X				

Source: Table 2-13



## Support Needs

Prepare a cultural resource management plan covering the resource area. Develop site-specific management plans for Browns Park Complex and the Red Mountain-Dry Fork complex areas. Develop a cultural resource management plan jointly with the Moab District for Nine Mile Canyon.

Prepare an off-highway vehicle designation and implementation plan.

Coordinate wildlife reintroductions with USF&WS, UDWR, and other agencies or groups as appropriate.

Develop a Habitat Management Plan for Nine Mile Canyon. Revise and update the three existing plans as necessary.

Prepare activity plans on the federally-listed animal and plant species currently lacking recovery plans: Razorback sucker, *Lepidium barnebyanum*, *Glaucocharis suffrutescens*, *Spiranthes diluvialis*, and *Schoenocrombe argillacea*. The overall objective being to manage the habitat to the level where delisting is deemed appropriate.

Prepare new allotment management plans for: Big Wash Draw, Brush Creek, Bull Canyon, Clay Basin Meadows, Devils Canyon, Dry Fork, Eight Mile Flat, Five Mile, Jackson-Crouse-Dry Hollow, and Little Hole. Revise existing AMPs covering Antelope Powers, Cottonwood Springs, Goslin Mountain, Green River Bottoms, Horseshoe Bend, Hoy Mountain, Little Desert, Red Creek Flat, Shiner-Diamond Mountain, S.J. Hatch, Taylor Flat, and Watson Allotments.

Enhance overall vegetation production and diversity to meet wildlife, soils and watershed management objectives through a combination of vegetation treatments (involving 8,050 public acres), rangeland improvement projects, and management actions.

Complete a coordinated activity plan for the lower and middle segments of the Green River.

Revise existing SRMA recreation management plans as necessary and develop recreation management plans for Nine Mile Canyon and the Red Mountain-Dry Fork Complex areas. Prepare an interpretive plan for the designated Nine Mile Back-country Byway.

Classify lands, as necessary, for solid leasable minerals.

## ALTERNATIVE C

### Management Theme

This alternative will maximize forage production for livestock while maintaining/enhancing critical renewable resource systems and values within the resource area. Under this alternative the intent is to ensure existing livestock preference is maintained and wildlife numbers remain at current levels.

### Management Priority Areas

#### Level 1 (Closed)

- No lands identified

#### Level 2 (Restricted Use)

*10,500 surface acres*

*2,100 federal split estate acres*

*12,600 surface and subsurface acres*

- Upper Green River and its floodplain
- Relict vegetation communities (Castle Cove, Lears Canyon and Red Mountain)
- Sage grouse strutting grounds (no protection zone)
- Developed recreation sites
- Desolation Canyon National Historic Landmark
- John Jarvie National Historic District
- Sites eligible for or listed on the *National Register of Historic Places*

#### Level 3 (Limited Safeguards)

*678,000 surface acres*

*96,700 federal split estate acres*

*774,700 surface and subsurface acres*

- Sage grouse nesting areas (1000-foot radius from strutting grounds)
- Crucial deer and elk winter habitat
- Antelope Flat antelope fawning area
- Crucial antelope habitat
- Riparian habitat at Pariette Wetlands
- Riparian habitat other than Pariette (330-foot protection zone)
- Highly saline and/or erodible soils
- Municipal watersheds
- Critical watersheds
- VRM Class II areas
- Special status plant species habitat (federally-listed only)



- Raptor nest sites
- Potential recreation sites
- Areas known to have a high density of cultural properties

**Level 4 (Open)**

20,500 surface acres  
 46,200 federal split estate acres  
 66,700 surface and subsurface acres

- All remaining BLM-managed lands and resources

**Decision Summary for Alternative C**

Under this alternative the two existing ACECs, the Green River Scenic Corridor and Red Creek Watershed, would continue. The three relict vegetation communities, totalling 3,740 federal acres, would be designated as areas of critical environmental concern (refer to Table 2-16). The two existing ACECs have been found to possess values consistent with the general management objectives of this alternative. The relict vegetation communities provide baseline data from which to compare the effectiveness of vegetation management strategies implemented elsewhere in the resource area.

No waterways within the resource area would be considered for inclusion in the Wild and Scenic Rivers System. The current recommendation to designate the Upper Green River for inclusion in the Wild and Scenic River System would be withdrawn.

All lands would be available for rights-of-way, permits and transfers. Utility corridors would be established across the resource area as shown on Alternative Map C (see map packet). If possible avoid placing rights-of-way or other support facilities on 10,500 acres of level 2 lands.

Approximately 10,500 acres (less than 2 percent of the resource area) would be recommended for protective withdrawals to preclude mineral or agricultural entry. Until these lands are withdrawn, mining activities in these areas would require a mine plan. Development would be restricted by stipulations designed to protect the Upper Green River's developed recreation sites' values within the parameter of the 1872 General Mining Law.

Livestock grazing preference would be established at 50,299 AUMs, while maintaining a maximum of 27,600 AUMs for wildlife use. Additional AUMs realized through management changes and/or vegetation treatments would be assigned to livestock. Any adjustments in forage assignments to either livestock or wildlife would be based on analysis of monitoring data. Additional AUMs

(approximately 50 percent of the current year's growth) are retained for soil protection, wildlife cover, plant vigor, vegetation community stability, and watershed maintenance.

Approximately 704,500 acres (99 percent) would be open to livestock grazing with standard or seasonal/animal number restrictions. The remaining 4,500 acres would be closed to livestock grazing to protect developed recreation sites and relict vegetation communities.

Rangeland improvements and grazing prescriptions would be designed and implemented to increase forage production and diversity to sustain livestock grazing preference.

Under this alternative no lands would be closed to mineral exploration and development; however 12,600 surface and subsurface federal acres (less than 2 percent of the federal mineral estate) would be open to mineral leasing and mineral material sales with a no-surface-occupancy stipulation. Table 2-7 depicts the category assignments proposed under this alternative.

**TABLE 2-7:  
 OIL & GAS CATEGORY ASSIGNMENTS BY  
 MINERAL POTENTIAL FOR ALTERNATIVE C**

Management Categories	Low Potential	Moderate Potential	High Potential	Total	%
OPEN (Category 1) Standard Stipulations	20,900	33,900	11,900	66,700	8
OPEN (Category 2) Timing Limitation/ Controlled Surface Use Stipulations	196,900	349,900	227,900	774,700	91
OPEN (Category 3) No Surface Occupancy Stipulations	6,200	5,200	1,200	12,600	1
TOTALS	224,000	389,000	241,000	854,000	100

Source: Vernal District GIS

Recreation development would continue, however at a less intense rate. Existing developed recreation sites would be maintained. No new major facilities would be constructed outside the Green River Scenic Corridor. Primitive recreational facilities (fire-ring, vault toilet and/or picnic tables) could be constructed to meet the extensive recreation demand on 698,000 acres (or 99 percent) of the resource area.



The entire resource area would be open to restricted OHV use. Such use would be restricted to designated roads and trails. Such a decision would minimize vegetation disturbance and possible harassment of livestock by OHVs and their users. This restriction would not apply to BLM permitted uses requiring off-road travel (i.e., normal grazing operations, oil and gas maintenance operations, etc.), and would not apply to county or state roadways.

This alternative would not designate semi-primitive nonmotorized areas due to the restriction against motorized activities in areas identified as suitable for future vegetation treatment.

Riparian habitat management would meet the Bureau policy by: establishing a 330-foot protection zone around riparian areas, and designing and implementing grazing systems and rangeland improvements to enhance riparian values. Livestock grazing and surface-disturbing activities would be allowed within the protection zone if such actions would enhance and/or maintain the riparian habitat.

Floodplains and areas with critical erosion potential, or characterized by high salt content would be managed to

minimize flood damage and/or sediment loading of the Green River by maximizing ground cover where feasible. Administrative actions would include proper road design and maintenance (i.e., maximize use of existing road networks, proper water barring techniques, etc.).

Wildlife habitat would be maintained and/or enhanced to meet the current demands of wildlife. Reintroductions of bighorn sheep and/or black-footed ferrets would not be allowed due to the restrictions to livestock. Wildlife transplants would be allowed if livestock preference would not be adversely affected.

Except for areas under specific fire management prescriptions, all wildfires would be aggressively suppressed. Based on an allowable cut of 4,300 acres per year, 203,300 acres (100 percent) of productive woodlands within the resource area would be open to the sale and/or harvest of woodland products.

Seasonal restrictions established for protection of various resources listed as level 3 lands under Alternative C are summarized in Table 2-8.

**TABLE 2-8  
ALTERNATIVE C SEASONAL RESTRICTIONS**

RESOURCES PROTECTED	MONTHS RESTRICTION IS APPLIED											
	J	F	M	A	M	J	J	A	S	O	N	D
Crucial deer and elk winter range	X	X	X	X								X
Antelope fawning habitat					X	X						
Sage grouse nesting habitat				X	X	X						
Ferruginous hawk nesting habitat			X	X	X	X	X					
Eagle and Swainson's Hawk nesting habitat		X	X	X	X	X	X					
Peregrine falcon nesting habitat				X	X	X	X					
Bighorn sheep lambing areas				X	X	X						
Bighorn sheep wintering and rutting habitat	X	X	X	X	X				X	X	X	X
Highly erosive and high saline soils			X	X					X	X		
Floodplains			X	X					X	X		

Source: Table 2-13



## Support Needs

Prepare a cultural resource management plan for the resource area.

Prepare an off-highway vehicle designation and implementation plan.

Coordinate wildlife transplants with USF&WS, UDWR and other agencies or groups as appropriate.

Develop a habitat management plan for Nine Mile Canyon. Revise and update the three existing plans as necessary.

Prepare activity plans on the federally-listed animal and plant species currently lacking recovery plan: Razorback sucker, *Lepidium barnebyanum*, *Glaucocharpum suffrutescens*, *Spiranthes diluvialis* and *Schoenocrombe argillacea*. The overall objective being to manage the habitat to the level where delisting is deemed appropriate.

Prepare new allotment management plans for: Big Wash Draw, Brush Creek, Bull Canyon, Clay Basin Meadows, Devils Canyon, Dry Fork, Eight Mile Flat, Five Mile Jackson-Crouse-Dry Hollow and Little Hole. Revise existing AMPs covering Antelope Powers, Cottonwood Springs, Goslin Mountain, Green River Bottoms, Horseshoe Bend, Hoy Mountain, Little Desert, Red Creek Flat, Shiner-Diamond Mountain, S.J. Hatch, Taylor Flat and Watson allotments.

Enhance overall vegetation production and diversity to meet wildlife, soils, and watershed management objectives by treating approximately 24,350 public acres over a 20-year period.

Revise SRMA recreation management plans as necessary. Prepare an interpretive plan for the designated Nine Mile Back-country Byway.

Classify lands, as necessary, for solid leasable minerals.

## ALTERNATIVE D

### Management Theme

This alternative will allow for maximum mineral development opportunities, with minimal undue hardship, while maintaining/enhancing critical renewable resource systems and values within the resource area. It is based on the team members' analysis of existing information and projections of a reasonable future scenario for

development of minerals in the resource area during the life of this plan.

## Management Priority Areas

### Level 1 (Closed)

- No lands identified

### Level 2 (Restricted Use)

4,500 surface acres

2,100 federal split estate acres

6,600 surface and subsurface acres

- Sage grouse strutting grounds (no protection zone)
- Developed recreation sites (includes the Pelican Lake body of water)
- Desolation Canyon National Historic Landmark
- John Jarvie National Historic District

### Level 3 (Limited Safeguards)

520,200 surface acres

68,000 federal split estate acres

588,200 surface and subsurface acres

- Upper Green River and its floodplain
- Half-mile or line-of-sight of the Green River in Browns Park
- Sage grouse nesting areas (1000-foot radius from strutting grounds)
- Raptor nest sites
- Antelope Flat fawning area
- Crucial deer and elk winter habitat
- Potential bighorn sheep reintroduction areas: Browns Park, Island Park and Nine Mile Canyon
- Riparian habitat at Pariette Wetlands
- Riparian habitat outside Pariette Wetlands (330-foot protection zone)
- Highly saline and/or erodible soils
- Sites eligible for or listed on the *National Register of Historic Places*
- VRM Class II areas
- Special status plant species habitat (federally-listed only)

### Level 4 (Open)

184,300 surface acres

74,900 federal split estate acres

259,200 surface and subsurface acres



- All remaining BLM-managed lands and resources

### Decision Summary for Alternative D

Only one existing ACEC, the Green River Scenic Corridor, would be continued under this alternative. The existing ACEC designation for the Red Creek watershed would be removed. The watershed values in this area would be protected under the general management objectives outlined for this alternative. No other special emphasis areas are considered under this alternative. The Green River Scenic Corridor ACEC is the only nomination consistent with the general management objectives of this alternative. (Refer to Table 2-17).

The recommendation to designate the Upper Green River for inclusion in the Wild and Scenic River System would be withdrawn. No other waterways would be recommended for designation.

Lands would be available for rights-of-way, permits and transfers in support of the minerals program and improve manageability. Utility corridors would be established across the resource area as shown on Alternative Map D (see map packet). If possible avoid placing rights-of-way or other support facilities on 6,600 public acres (includes 2,100 federal subsurface mineral acres), affecting less than 1 percent of the total BLM-administered lands within the resource area.

Protective withdrawals precluding mineral entry under the 1872 General Mining Law would not be recommended.

Current livestock grazing preference of 50,299 AUMs would continue under this alternative. Wildlife would remain at current levels, allowing a maximum of 27,600 AUMs. Additional forage obtained through vegetation treatment would be assigned to livestock on a temporary, nonrenewable basis until needed by wildlife.

Livestock grazing would be allowed on approximately 703,200 public acres (99 percent of the resource area). Developed recreation sites, NRHP listed sites, and National Historic Landmarks would be closed to livestock grazing.

Mineral program activities would be allowed on 99 percent of the mineral estate (847,000 acres of federal mineral estate) with either standard or special restrictions. Special restrictions involve primarily seasonal closures due to wildlife, soils and watershed concerns. The remainder of the mineral estate (6,600 acres) would be open to mineral program activities with a no-surface-occupancy stipulation. Table 2-9 depicts the category assignments proposed under this alternative.

**TABLE 2-9:  
OIL & GAS CATEGORY ASSIGNMENTS  
BY MINERAL POTENTIAL  
FOR ALTERNATIVE D**

Management Categories	Low Potential	Moderate Potential	High Potential	Total	%
OPEN (Category 1) Standard Stipulations	98,100	102,100	59,000	259,200	30
OPEN (Category 2) Timing Limitation/ Controlled Surface Use Stipulations	124,100	283,000	181,100	588,200	69
OPEN (Category 3) No Surface Occupancy Stipulations	1,800	3,900	900	6,600	1
<b>TOTALS</b>	<b>224,000</b>	<b>387,000</b>	<b>241,000</b>	<b>854,000</b>	<b>100</b>

Source: Vernal District GIS

Recreation development would be allowed within the resource area so long as their affect on the mineral program is negligible. New facilities would be constructed for Jones Hole and Brough Reservoir. Existing facilities at Dry Fork Canyon, and Pelican Lake would be expanded. Sand Wash Recreation Site would be maintained at its present size.

To support the increased recreation demand along the Upper Green River, a new facility at Cottonwood Grove would be developed, the existing facility at Bridge Hollow would be expanded, and the remaining facilities would be maintained at their present size. Only minimum new facilities needed to protect human health and safety would be provided.

All federal surface acres within the resource area would be open to OHV use. Approximately 4,500 federal acres (<1 percent of the resource area) would be open with restrictions to designated roads and trails. These seasonal closures would not necessarily apply to BLM permitted activities associated with ongoing mineral activities, nor to state and county roadways.

Riparian habitat management objectives would follow the existing Bureau riparian policy. Establish a 330-foot protection zone around existing riparian areas precluding new surface disturbance. Surface-disturbing activities would be allowed within this zone if there is no practical alternative, impacts would be short term (less than five years) or that the disturbance would enhance the riparian area.



Floodplains and areas with critical erosion potential, or characterized by high salt content would be managed to minimize flood damage and/or sediment loading of the Green River by maximizing ground cover where feasible. Administrative actions would include proper road design and maintenance (i.e., maximize use of existing road networks, proper water barring techniques) and minimize vegetation removal in areas of low revegetation potential.

Wildlife habitat would be maintained and/or enhanced within the existing identified boundaries. The intent of this objective is to minimize wildlife restrictions to mineral exploration and development activities.

Identified habitat determined suitable or having potential as bighorn sheep reintroduction areas would be maintained until a specific release proposal was received

from UDWR. Site-specific analyses would be prepared to evaluate the impacts of the proposed release on the mineral and other resource programs as well as other wildlife species.

Based on an allowable cut of 4,300 cords per year, 203,300 acres (100 percent) of productive woodlands within the resource area would be open to the sale and/or harvest of woodland products.

Seasonal restrictions established for protection of various resources listed as level 3 lands under Alternative D are summarized in Table 2-10.

**TABLE 2-10  
ALTERNATIVE D SEASONAL RESTRICTIONS**

RESOURCES PROTECTED	MONTHS RESTRICTION IS APPLIED											
	J	F	M	A	M	J	J	A	S	O	N	D
Crucial deer and elk winter range	X	X	X	X								X
Antelope fawning areas					X	X						
Sage grouse nesting habitat				X	X	X						
Ferruginous hawk nesting habitat			X	X	X	X	X					
Eagle and Swainson's Hawk nesting habitat		X	X	X	X	X						
Peregrine falcon nesting habitat				X	X	X	X					
Bighorn sheep lambing areas				X	X	X						
Bighorn sheep wintering and rutting habitat	X	X	X	X	X				X	X	X	X
Highly erosive and high saline soils			X	X					X	X		
Floodplains			X	X					X	X		

Source: Table 2-13

**Support Needs**

Prepare a cultural resource management plan for the resource area.

Prepare an off-highway vehicle designation and implementation plan.

Coordinate wildlife transplants and reintroductions with USF&WS, UDWR and other agencies or groups as appropriate.

Develop a habitat management plan for Nine Mile Canyon. Revise and update the three existing plans as necessary.



Prepare activity plans on the federally-listed animal and plant species currently lacking recovery plans: Razorback sucker, *Lepidium barnebyanum*, *Glaucocarpum suffrutescens*, *Spiranthes diluvialis* and *Schoenocrombe argillacea*. The overall objective being to manage the habitat to the level where delisting is deemed appropriate.

Prepare new allotment management plans for: Big Wash Draw, Brush Creek, Bull Canyon, Clay Basin Meadows, Devils Canyon, Dry Fork, Eight Mile Flat, Five Mile Jackson-Crouse-Dry Hollow and Little Hole. Revise existing AMPs covering Antelope Powers, Cottonwood Springs, Goslin Mountain, Green River Bottoms, Horseshoe Bend, Hoy Mountain, Little Desert, Red Creek Flat, Shiner-Diamond Mountain, S.J. Hatch, Taylor Flat and Watson Allotments.

Enhance overall vegetation production and diversity to meet wildlife, soils, and watershed management objectives by treating approximately 19,400 public acres over a 20-year period.

Revise existing SRMA recreation management plans as necessary. Prepare an interpretive plan for the designated Nine Mile Back-country Byway.

Classify lands, as necessary, for solid leasable minerals.

## ALTERNATIVE E

### Management Theme

This alternative is the best mix of management actions presented in the other four alternatives. It will provide for the development of resources while protecting or enhancing environmental values. Priority will be given to special emphasis areas while allowing development by resource uses on as much of the resource area as possible. This alternative consists of a mix of management objectives from the other alternatives.

### Management Priority Areas

#### Level 1 (Closed)

6,100 surface acres  
0 federal split estate acres  
 6,100 surface and subsurface acres

- Upper Green River and its floodplain
- Relict vegetation communities at Castle Cove, Lears Canyon and Red Mountain

#### Level 2 (Restricted Use)

81,000 surface acres  
3,000 federal split estate acres  
 84,000 surface and subsurface acres

- Crucial deer winter habitat in Browns Park
- Sage grouse strutting grounds (with a 1,000-foot protective buffer)
- Line-of-sight or up to a half-mile of the Green River in Browns Park and along the Lower Green River, between Ouray, Utah, and the Uintah-Carbon County line
- Nine Mile Creek floodplain
- Riparian habitat in Browns Park excluding the Green River, (330-foot protective buffer)
- Special status plant species habitat (federally-listed species only)
- Semi-primitive non motorized areas
- Pelican Lake Special Recreation Management Area
- Developed recreation sites
- Desolation Canyon National Historic Landmark
- John Jarvie National Historic District
- Sites eligible for or listed on the *National Register of Historic Places*

#### Level 3 (Limited Safeguards)

488,500 surface acres  
80,500 federal split estate acres  
 569,000 surface and subsurface acres

- Remaining area within Browns Park Complex
- Crucial sage grouse nesting habitat (2 mile radius of strutting grounds)
- Raptor nest sites with protection zone
- Crucial deer and elk winter habitat
- Antelope Flat fawning area
- Potential bighorn sheep reintroduction areas: Browns Park, Island Park and Nine Mile Canyon
- Potential black-footed ferret transplant areas: Antelope Flat, Shiner, Sunshine Bench, Twelve Mile, and Eight-Mile Flat
- Riparian habitat outside Browns Park (330-foot protective buffer)
- Highly saline and/or erodible soils
- Municipal watersheds
- Critical watersheds
- Potential recreation sites
- VRM Class II areas
- Remaining special status plant species habitat



**Level 4 (Open)**

133,400 surface acres  
 61,500 federal mineral estate acres  
 194,900 surface and subsurface acres

- All remaining BLM-managed lands and resources

**Decision Summary for Alternative E**

The two existing ACECs, Red Creek and the Green River Scenic Corridor, would be continued. Under Alternative E, five (5) new ACECs would be designated: Browns Park Complex (incorporating the existing Green River Scenic Corridor), Lears Canyon, Lower Green River, Nine Mile Canyon, Pariette Wetlands and Red Mountain-Dry Fork areas. These ACEC nominations are consistent with the general management objectives for this alternative which is to enhance natural resources while considering varied uses. Refer to Table 2-18.

The recommendation to designate the Upper Green River for inclusion in the Wild and Scenic River System would be continued. The Lower Green River (Ouray, Utah, to the Uintah-Carbon County line) would be recommended for designation as a scenic river under the Wild and Scenic Rivers Act.

Utility corridors would be established in the resource area as depicted on this alternative's map (see map packet). A pass-through would be established near the head of Little Swallow Canyon area on Level 1 lands in Browns Park where four pipelines currently cross the Green River.

Withdrawals would be recommended on proposed Wild and Scenic River segments on the Green River and in developed and potential recreation areas (totalling 32,300 public acres). Until these lands are withdrawn, mining entries on ACECs and Wild and Scenic River suitable waters would require a plan of mining operations, except for casual use. Development would be restricted by stipulations designed to protect the river segment and recreation sites values from undue and unnecessary degradation within parameters of the 1872 General Mining Law.

Fee title and interests in lands (e.g., water rights) would be acquired with priority placed on inholdings or lands adjacent to special emphasis areas or lands containing resources or values accentuated in this alternative (e.g., riparian habitat). Legal access, either motorized or non motorized would be acquired to inaccessible public lands or through private/state lands containing existing transportation routes.

Under this alternative the objective would be to continue current livestock grazing preference at 50,299 AUMs and provide a maximum of 40,000 AUMs of wildlife forage. Needed wildlife forage increases would be realized by rangeland improvements, land acquisitions, and improved grazing management. Temporary, non renewable use of additional AUMs by livestock would be allowed until needed by wildlife. Livestock and wildlife monitoring data would be the basis for any necessary change in forage assignments. Approximately 55 percent of the current year's growth would be reserved for maintaining plant vigor and production, vegetation community stability, maintaining/improving soil and watershed conditions, and providing habitat and cover for wildlife.

Livestock grazing would be allowed on 701,000 public acres (99 percent of the resource area). Developed recreation sites, relict vegetation communities and the Green River floodplain in Browns Park would be closed to livestock grazing.

Leasable mineral activities would be allowed on 90 percent of the resource area (includes both surface and federal subsurface acres) with either standard or special restrictions. Special restrictions involve principally seasonal closures due to wildlife, soils and watershed concerns. Approximately 10 percent of the resource area would be open to leasing with a no-surface-occupancy stipulation to protect riparian, scenic or wildlife values. Table 2-11 depicts the category assignments proposed under this alternative.

**TABLE 2-11:  
 OIL & GAS CATEGORY ASSIGNMENTS  
 BY MINERAL POTENTIAL  
 FOR ALTERNATIVE E**

Management Categories	Low Potential	Moderate Potential	High Potential	Total	%
OPEN (Category 1) Standard Stipulations	68,300	74,300	52,300	194,900	23
OPEN (Category 2) Timing Limitation/ Controlled Surface Use Stipulations	121,000	278,000	170,000	569,000	67
OPEN (Category 3) No Surface Occupancy Stipulations	34,700	36,700	18,700	90,100	10
<b>TOTALS</b>	<b>224,000</b>	<b>389,000</b>	<b>241,000</b>	<b>854,000</b>	<b>100</b>

Source: Vernal District EIS



Manage the resource area to provide a variety of dispersed recreation opportunities. Recreation management emphasis will include: developing approximately 35 miles of trails for hiking, mountain bicycles and horseback riding; designating scenic byways; and interpreting natural and cultural resources. Other recreation facilities identified in this alternative include: developing five new facilities (near Jones Hole, Brough Reservoir, Red Mountain, Cottonwood Grove, and Horseshoe Bend), expanding Dry Fork Canyon site, and maintaining Sand Wash at its present size. Identified potential recreation areas would be developed on a "primitive" level, i.e., providing fire rings and/or chemical toilets, as needed.

The Pelican Lake SRMA would continue to be managed to support the water-related recreation activities at the lake. The developed recreation site would be expanded to serve anticipated increased users. The Browns Park SRMA would continue to be managed to provide for a variety of recreation opportunities and to protect the unique wildlife and scenic values found there.

The recent study entitled "Recreation Use Capacity of the Green River Corridor Below Flaming Gorge Dam" (Pratt, et al., 1991) has determined use will continue to increase and present facilities may not be sufficient. In response to this study, this alternative would develop recreation facilities at Cottonwood Grove; expand existing facilities at Bridge Hollow and Indian Crossing; maintain Pugmire Pocket, Red Creek, and Swallow Canyon facilities at their present size; and allow development of limited recreation facilities at identified potential sites as needed to protect health and human safety.

Off-highway vehicle use would be allowed on 526,500 acres (roughly 84 percent of the resource area) with no or seasonal restrictions for wildlife and/or soils protection. Critical soils (97,000 acres) would be open to OHV use on existing roads and trails, and 42,300 acres would be open to OHV use on designated roads and trails. Semi-primitive, nonmotorized areas (approximately 43,200 acres, or 6 percent of the resource area) would be closed to OHV use. Such restrictions and closures would not apply to state and county roadways.

Riparian habitat in early and mid ecological stages would receive priority management consideration under this alternative. Improvements deemed necessary to meet the Bureau's riparian policy objectives involve establishing grazing systems and implementing rangeland improvements. A 330-foot protection zone would be established around all riparian areas in the resource area. Surface-disturbing activities and temporary livestock grazing would be allowed within this zone only if

specifically designed to protect and/or enhance the riparian values.

Floodplains and areas with critical erosion potential or characterized by high salt content would be managed to minimize flood damage and/or sediment loading of the Green River by maximizing ground cover where feasible. Administrative actions including proper road design and maintenance would be implemented. Surface-disturbing activities and OHV use would be halted during periods of saturated soils (the time most conducive to sediment loading).

Wildlife habitat would be protected and/or enhanced by implementing seasonal closures in specific areas for specific wildlife species (refer to Table 2-12). Vegetation treatments would be designed and implemented on 19,400 federal acres to provide additional forage and/or enhance habitat qualities.

Identified habitat determined suitable or having potential as wildlife transplant or reintroduction areas would be maintained until a specific release proposal was received from UDWR. Site-specific analyses would be prepared to evaluate the impacts of the proposed release on other wildlife species and resource programs.

Except for areas under specific fire management prescriptions, all wildfires would be aggressively suppressed.

Based on an allowable cut of 3,700 cords per year, 172,800 acres (85 percent) of productive woodlands within the resource area would be open to the sale and/or harvest of woodland products.

Seasonal restrictions established for protection of various resources listed as level 3 lands under Alternative E are summarized in Table 2-12.





**TABLE 2-12:  
ALTERNATIVE E SEASONAL RESTRICTIONS**

RESOURCES PROTECTED	MONTHS RESTRICTION IS APPLIED											
	J	F	M	A	M	J	J	A	S	O	N	D
Crucial deer and elk winter range	X	X	X	X								X
Antelope fawning areas					X	X						
Sage grouse nesting habitat			X	X	X	X						
Ferruginous hawk nesting habitat			X	X	X	X	X					
Eagle and Swainson's Hawk nesting habitat		X	X	X	X	X	X					
Peregrine falcon nesting habitat		X	X	X	X	X	X	X				
Bighorn sheep lambing areas				X	X	X						
Bighorn sheep wintering and rutting habitat	X	X	X	X	X				X	X	X	X
Highly erosive and high saline soils			X	X					X	X		
Floodplains			X	X					X	X		
Black-footed ferrets - when reintroduced			X	X	X	X	X	X				

Source: Table 2-13

**Support Needs**

Prepare a cultural resource management plan for the resource area. Develop site-specific management plans for Browns Park Complex, and the Red Mountain-Dry Fork Complex areas. Prepare a cultural resource management plan jointly with Moab District for the Nine Mile Canyon.

Prepare an off-highway vehicle designation and implementation plan.

Coordinate wildlife reintroductions with USF&WS, UDWR and other agencies or groups as appropriate.

Develop a Habitat Management Plan for Nine Mile Canyon. Revise and update the three existing plans as necessary.

Prepare activity plans on the federally-listed animal and plant species currently lacking recovery plans: Razorback sucker, *Lepidium barnebyanum*, *Glaucocarpum suffrutescens*, *Spiranthes diluvialis* and *Schoenocrombe argillacea*. The overall objective being to manage the habitat to the level where delisting is deemed appropriate.

Prepare new allotment management plans for: Big Wash Draw, Brush Creek, Bull Canyon, Clay Basin Meadows, Devils Canyon, Dry Fork, Eight Mile Flat, Five Mile Jackson-Crouse-Dry Hollow and Little Hole. Revise existing AMPs covering Antelope Powers, Cottonwood Springs, Goslin Mountain, Green River Bottoms, Horseshoe Bend, Hoy Mountain, Little Desert, Red Creek Flat, Shiner-Diamond Mountain, S.J. Hatch, Taylor Flat and Watson allotments.

Enhance overall vegetation production and diversity to meet wildlife, soils and watershed management objectives by treating approximately 19,400 public acres over a 20-year period.

Complete a coordinated activity plan for the Lower Green River.

Revise existing SMRA recreation management plans as necessary and develop recreation management plans for the Red Mountain-Dry Fork Complex areas. Prepare an interpretive plan for the designated Nine Mile Back-country Byway.

Classify lands, as necessary, for solid leasable minerals.



## PROPOSED DECISIONS

Table 2-13 presents all major decisions proposed under the alternatives. These decisions would apply to all lands outside of special emphasis areas established for the specific alternatives. To understand the entire scope of these proposals, please refer to "Management Common to All Alternatives" in association with Table 2-13.

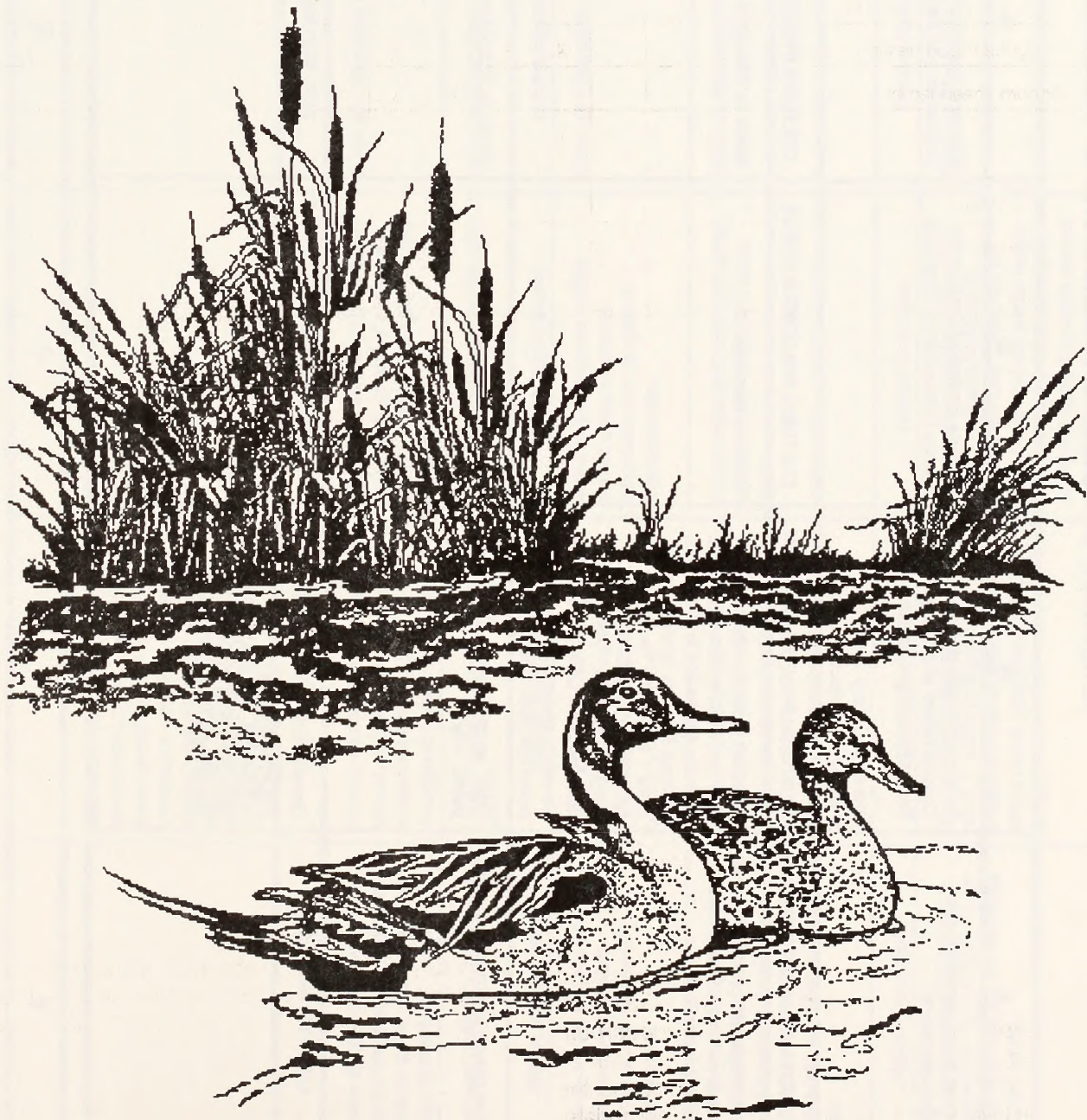




TABLE 2-13:  
AREAWIDE MANAGEMENT DECISIONS BY ALTERNATIVE

A	B	C	D	E
<p>Current Management (the no action alternative)</p>	<p>Enhance Ecological Systems and Cultural Values and Compatible Recreational Opportunities</p>	<p>Manage Ecological Systems for Forage Production for Livestock</p>	<p>Enhance Opportunities for Mineral Exploration and Development</p>	<p>Maintain or Improve Natural Resources While Managing a Combination of Varied Uses and Considering Their Effects on Environmental Interrelationships (the preferred alternative)</p>
<p>CULTURAL/PALEONTOLOGICAL</p>	<p>CULTURAL/PALEONTOLOGICAL</p>	<p>CULTURAL/PALEONTOLOGICAL</p>	<p>CULTURAL/PALEONTOLOGICAL</p>	<p>CULTURAL/PALEONTOLOGICAL</p>
<p>Do not establish protection zones around cultural sites and paleo geologic formations.</p>	<p>Establish protection zones which limit or restrict surface disturbing activities (up to 200 feet) around National Register quality sites in Level 1 lands and on the Desolation Canyon National Historic Landmark. No surface disturbance or OHV use on high sensitivity archeological and paleontological areas.</p>	<p>Same as Alternative A</p>	<p>Same as Alternative A</p>	<p>Same as Alternative A</p>
<p>Allow casual use fossil collecting.</p>	<p>Open lands to fossil collection by permit only.</p>	<p>Same as Alternative A</p>	<p>Same as Alternative A</p>	<p>Allow surface collection of invertebrate and flora fossils. Lands would be open to casual use vertebrate fossil collection using hand tools only in designated areas, after BLM approval.</p>
	<p>Develop interpretive facilities at the Old Rock Saloon. Develop a self-guided tour of important historic structures and locations in the Browns Park Complex.</p>			<p>Develop interpretive facilities at the Old Rock Saloon and Nine Mile Canyon archeological sites. Develop a facility in Nine Mile Canyon to interpret and control use of the district. Develop a self-guided tour for important historic structures and locations in Browns Park Area.</p>



**TABLE 2-13 (Continued):  
AREAWIDE MANAGEMENT DECISIONS BY ALTERNATIVE**

A	B	C	D	E
	Allocate cultural sites (including ethnographic properties) into three classifications: (1) information potential, (2) public values, and (3) conservation. See Appendix 1 for a listing of which types of sites would be allocated to each classification.			Same as Alternative B
<b>FISH AND WILDLIFE</b>	<b>FISH AND WILDLIFE</b>	<b>FISH AND WILDLIFE</b>	<b>FISH AND WILDLIFE</b>	<b>FISH AND WILDLIFE</b>
Provide 35,000 AUMs for wildlife. Refer to "Vegetation" section for criteria to make changes to forage distribution.	Provide 46,000 AUMs for wildlife habitat. Refer to "Vegetation" section for criteria to make changes to forage distribution.	Provide 27,600 AUMs for wildlife. Refer to "Vegetation" section for criteria to make changes to forage distribution.	Same as Alternative C	Provide 40,000 AUMs for wildlife habitat. Refer to "Vegetation" section for criteria to make changes to forage distribution.
Allow bear baiting by permit only.	Do not issue any bear baiting permits.	Allow bear baiting by permit only.	Same as Alternative C	Same as Alternative B
<b>Habitat Improvement</b>	<b>Habitat Improvement</b>	<b>Habitat Improvement</b>	<b>Habitat Improvement</b>	<b>Habitat Improvement</b>
Improve and/or expand wildlife habitat using vegetation treatments and rangeland improvements.	Maximize wildlife habitat using vegetation treatments, rangeland improvements and alternative grazing prescriptions.	Maintain and improve wildlife habitat using vegetation treatments and rangeland improvements.	Same as Alternative C	Improve and/or expand wildlife habitat using vegetation treatments, rangeland improvements and alternative grazing prescriptions.
Within vegetation treatment areas (>10 acres in size), improve habitat for cavity dwelling and perching birds and animals by leaving one snag per each 10 acres.	Within vegetation treatment areas (>10 acres in size), improve habitat for cavity dwelling and perching birds and animals by leaving one snag per each 10 acres with a minimum of 5 live trees around each snag.	Within vegetation treatment areas, totally remove all live and dead trees.	Same as Alternative B	Same as Alternative B
<b>Habitat Protection</b>	<b>Habitat Protection</b>	<b>Habitat Protection</b>	<b>Habitat Protection</b>	<b>Habitat Protection</b>
Restrict all surface disturbing activities from Dec 1-June 15 on crucial deer and elk winter range (194,000 acres).	Do not allow activities that would result in adverse impacts to wildlife on crucial deer and elk winter range year round (194,000 acres).	Do not allow activities that would result in adverse impacts to wildlife from Dec 1-April 30 on crucial deer and elk winter range (194,000 acres). This restriction would not apply if animals are not present or impacts could be mitigated through other management actions.	Same as Alternative C	Same as Alternative C



**TABLE 2-13 (Continued):  
AREAWIDE MANAGEMENT DECISIONS BY ALTERNATIVE**

A	B	C	D	E
<p>Restrict all surface disturbing activities on 7,800 acres of antelope fawning areas on Antelope Flat from May 1-June 30.</p>	<p>Do not allow surface disturbing activities and OHV use on 7,800 acres of antelope fawning areas on Antelope Flat from May-June 30.</p>	<p>Do not allow activities that would result in adverse impacts to wildlife from May 1-June 20 on 7,800 acres of antelope fawning areas on Antelope Flat. Would not apply if animals are not present or impacts could be mitigated through other management actions.</p>	<p>Same as Alternative C</p>	<p>Do not allow activities that would result in adverse impacts to wildlife from May 1-June 30 on 7,800 acres of antelope fawning areas on Antelope Flat. Would not apply if animals are not present or impacts could be mitigated through other management actions.</p>
<p>Do not allow new surface disturbing activities within one mile of active bighorn sheep winter and rutting areas (3,900 acres) between Sept 1-May 15 and active lambing areas (800 acres) between April 15-June 30. This restriction would not apply to maintenance and operations of existing programs and facilities.</p>	<p>Do not allow new surface disturbing activities within one mile of active bighorn sheep winter and rutting areas (3,900 acres) between Sept 1-May 15 and active lambing areas (800 acres) between April 15-June 30.</p>	<p>Same as Alternative A</p>	<p>Same as Alternative A</p>	<p>Same as Alternative A</p>
<p>Restrict all surface disturbing activities within 1,000 feet of sage grouse strutting grounds (2,800 acres in level 3).</p>	<p>Do not allow grazing, OHV use, and surface disturbing activities within 2,640 feet of sage grouse strutting grounds or identified nesting sites (9,700 acres in level 2).</p>	<p>Do not allow surface disturbing activities or OHV use on sage grouse strutting grounds (800 acres in level 2). This restriction would not apply if impacts could be mitigated through other management actions.</p>	<p>Do not allow surface disturbing activities on sage grouse strutting grounds (800 acres in level 2). This restriction would not apply if impacts could be mitigated through other management actions.</p>	<p>Do not allow OHV use or surface disturbing activities within 1,000 feet of sage grouse strutting grounds (2,800 acres in level 2). This restriction would not apply if impacts could be mitigated through other management actions.</p>
<p>Restrict all surface disturbing activities on sage grouse nesting areas (within 1.5 miles of the strutting grounds) from Apr 1-Jun 30 (57,000 acres in level 3 lands).</p>	<p>Do not allow grazing, OHV use, and surface disturbing activities within sage grouse nesting areas (6 mile radius of sage grouse strutting ground within the sagebrush vegetation type) between Mar 1-June 30 (173,000 acres in level 3 lands).</p>	<p>Do not allow OHV use and surface disturbing activities within sage grouse nesting areas (1000 foot radius of sage grouse strutting ground within the sagebrush vegetation type) between Apr 1-June 30 (2,800 acres in level 3 lands). Would not apply if animals are not present or impacts could be mitigated through other management actions.</p>	<p>Do not allow surface disturbing activities within sage grouse nesting areas (1000 foot radius of sage grouse strutting grounds within the sagebrush vegetation type) between Apr 1-June 30 (2,800 acres in level 3 lands). Would not apply if animals are not present or impacts could be mitigated through other management actions.</p>	<p>Do not allow OHV use and surface disturbing activities within sage grouse nesting areas (2 mile radius of sage grouse strutting grounds within the sagebrush vegetation type) from March 1-June 30 (88,500 acres in level 3 lands). Would not apply if animals are not present or impacts could be mitigated through other management actions.</p>



**TABLE 2-13 (Continued):  
AREAWIDE MANAGEMENT DECISIONS BY ALTERNATIVE**

A	B	C	D	E
<p>Do not allow new surface disturbing activities within 1/4 mile from all active golden eagle nests from Feb 15-Jun 15 (5,500 acres in level 3). These restrictions do not apply to maintenance and operations of existing programs and facilities.</p>	<p>Establish year-round raptor protection zones in which no construction, OHV use and surface disturbing activities (including noise) that would result in adverse impacts will be allowed within 1/2 mile of active golden eagle nests (19,400 acres in level 2).</p>	<p>Do not allow new surface disturbing activities or OHV use within 1/4 mile from all active golden eagle nests from Feb 15-Jun 15 (5,500 acres in level 3 lands).</p>	<p>Same as Alternative A</p>	<p>Establish raptor protection zones in which no construction or disturbing activities (does not apply to rafting or grazing) will be allowed within 1/2 mile of active golden eagle nests from Feb 1-Jul 15 (19,400 acres in level 3). Safeguard protection zone year-round from permanent loss of nest site usability due to disturbance from daily activity or routine operations. Would not apply if impacts can be mitigated through other management actions.</p>
<p>Modify fences in areas where wildlife are adversely affected.</p>	<p>Remove unnecessary fences that restrict wildlife migration. New fences will be constructed used only when the vegetation resource would be improved.</p>	<p>Modify fences to wildlife specifications as long as they control livestock.</p>	<p>Same as Alternative A</p>	<p>Modify fences on public lands where wildlife are adversely affected. With wildlife restricting fences bordering public lands work with owners towards modifying such fences to improve natural movement of wildlife.</p>
<p><b>Special Status Species</b></p>	<p><b>Special Status Species</b></p>	<p><b>Special Status Species</b></p>	<p><b>Special Status Species</b></p>	<p><b>Special Status Species</b></p>
<p>Do not allow new surface disturbing activities within 1/2 mile of an active ferruginous hawk nests sites from Mar 1-Jul 15 (700 acres in level 3). These restrictions do not apply to maintenance and operations of existing programs and facilities.</p>	<p>Establish year-round raptor protection zones in which no construction or surface disturbing activities (including noise) that would result in adverse impacts will be allowed within 1 mile of active ferruginous hawk nests (3,300 acres in level 2).</p>	<p>Same as Alternative A</p>	<p>Same as Alternative A</p>	<p>Establish raptor protection zones in which no construction or disturbing activities (does not apply to rafting or grazing) will be allowed within 1/2 mile of active ferruginous hawk nests from Mar 1-Jul 15 (700 acres in level 3). Safeguard protection zone year-round from permanent loss of nest site usability due to disturbance from daily activity or routine operations. Would not apply if impacts can be mitigated through other management actions.</p>



**TABLE 2-13 (Continued):  
AREAWIDE MANAGEMENT DECISIONS BY ALTERNATIVE**

A	B	C	D	E
<p>Do not allow new surface disturbing activities within 1/4 mile from all active bald eagle nests from Feb 15-Jun 15 (5,500 acres in level 3). These restrictions do not apply to maintenance and operations of existing programs and facilities.</p>	<p>Establish year-round raptor protection zones in which no construction, OHV use and surface disturbing activities (including noise) that would result in adverse impacts will be allowed within 1/2 mile of active bald eagle nests (19,400 acres in level 2).</p>	<p>Do not allow new surface disturbing activities or OHV use within 1/4 mile from all active bald eagle nests from Feb 15-Jun 15 (5,500 acres in level 3 lands).</p>	<p>Same as Alternative A</p>	<p>Establish raptor protection zones in which no construction or disturbing activities (does not apply to rafting or grazing) will be allowed within 1/2 mile of active bald eagle and Swainson's hawk nests from Feb 1-Jul 15 (19,400 acres in level 3). Safeguard protection zone year-round from permanent loss of nest site usability due to disturbance from daily activity or routine operations. Would not apply if impacts can be mitigated through other management actions.</p>
<p>Do not allow new surface disturbing activities within 1/4 mile of active Peregrine falcon nests from Apr 1-Jul 15 (0 acres in level 3). These restrictions do not apply to maintenance and operations of existing programs and facilities.</p>	<p>Establish year-round raptor protection zones in which no construction or disturbing activities (including noise) will be allowed within 1 mile of occupied Peregrine falcon nests from Feb 1-Aug 31 (0 acres in level 3).</p>	<p>Do not allow new surface disturbing activities within 1/4 mile of active Peregrine falcon nests from Apr 1-Jul 15 (0 acres on level 3). Would not apply if impacts can be mitigated through other management actions.</p>	<p>Do not allow new surface disturbing activities within 1/4 mile of active Peregrine falcon nests from Apr 1-Jul 15 (0 acres in level 3). Would not apply if impacts can be mitigated through other management actions.</p>	<p>Establish raptor protection zones in which no construction or disturbing activities (does not apply to rafting) will be allowed within 1 mile of active Peregrine falcon nests from Feb 1-Aug 31 (0 acres in level 3). Safeguard protection zone year-round from permanent loss of nest site usability due to disturbance from daily activity or routine operations. Would not apply if impacts can be mitigated through other management actions.</p>



TABLE 2-13 (Continued):  
AREAWIDE MANAGEMENT DECISIONS BY ALTERNATIVE

A	B	C	D	E
<p>Provide stream habitat for Colorado cutthroat/brook trout</p>	<p>Provide habitat for and allow for reintroduction of Colorado Cutthroat in Willow, Beaver, Sears, Crouse, Tolivers, Davenport, Jackson, &amp; Argyle Creeks.</p>	<p>Provide 98 miles of stream habitat and allow for reintroduction of cutthroat/brook trout</p>	<p>Same as Alternative A</p>	<p>Same as Alternative B</p>
<p>Maintain 19,300 acres of existing habitat in identified black-footed ferret reintroductions areas by avoiding surface disturbance in the following areas (see Map 3-4) in priority order:</p> <ul style="list-style-type: none"> <li>Sunshine Bench</li> <li>Shiner</li> <li>Antelope Flat</li> <li>Twelve Mile</li> <li>Buckskin Hills</li> </ul> <p>Allow only experimental non-essential ferret reintroductions in accordance with Bureau-approved final guidelines on a maximum of 2 areas (see Appendix 2 for guidelines on how these areas would be managed under Alternative A) where these reintroductions would not conflict with other current existing uses in the reintroduction area(s).</p>	<p>Maintain 33,500 acres of existing habitat in identified black-footed ferret reintroduction areas by avoiding surface disturbance in the following areas (Map 3-4). In priority order: Sunshine Bench, Shiner, Antelope Flat, Twelve Mile, Eight Mile Flat. Do not allow any activities that would render potential black-footed ferret habitat unsuitable for future reintroductions. Allow only experimental non-essential ferret reintroductions in accordance with Bureau-approved final guidelines on a maximum of 2 areas (see Appendix 2 for guidelines on how these areas would be managed under Alternative B) where these reintroductions would not conflict with other current existing uses in the reintroduction area(s).</p>	<p>Do not maintain potential black-footed ferret habitat.</p>	<p>Same as Alternative C</p>	<p>Maintain 33,500 acres of existing habitat in identified black-footed ferret reintroduction areas by avoiding surface disturbance in the following areas (Map 3-4). In priority order: Sunshine Bench, Shiner, Antelope Flat, Twelve Mile, Eight Mile Flat. Do not allow any activities that would render potential black-footed ferret habitat unsuitable for future reintroductions. Allow only experimental non-essential ferret reintroductions in accordance with Bureau-approved final guidelines on a maximum of 2 areas (see Appendix 2 for guidelines on how these areas would be managed under Alternative E) where these reintroductions would not conflict with other current existing uses in the reintroduction area(s).</p>



**TABLE 2-13 (Continued):  
AREAWIDE MANAGEMENT DECISIONS BY ALTERNATIVE**

A	B	C	D	E
Wildlife Transplants	Wildlife Transplants	Wildlife Transplants	Wildlife Transplants	Wildlife Transplants
<p>Provide stream habitat and allow present forage allocation for:</p> <ul style="list-style-type: none"> <li>* river otter</li> <li>* upland game</li> <li>* antelope (1.2-Mile and Myton Bench)</li> <li>* bighorn sheep (Bull Canyon and Devils Canyon)</li> </ul>	<p>Provide habitat for and allow for reintroduction:</p> <ul style="list-style-type: none"> <li>* Pronghorn Antelope (150-400 on Diamond Mountain)</li> <li>* Moose (100 on Diamond Mountain-Three Corners, Argyle Canyon, and Dry Fork-Little Mountain)</li> <li>* Bighorn Sheep (300-400 in Browns Park Complex, 100-200 in Island Park, 100-200 in Nine Mile, 100-200 in Dry Fork)</li> <li>* River Otter</li> <li>* Upland Game Birds</li> </ul>	<p>Provide stream habitat and allow for reintroduction of:</p> <ul style="list-style-type: none"> <li>* river otter</li> <li>* upland game</li> <li>* moose</li> <li>* antelope</li> </ul>	<p>Same as Alternative A</p>	<p>Same as Alternative B</p>
<p>Improve and maintain existing habitat in Nine Mile Canyon bighorn sheep reintroduction areas.</p>	<p>Improve or maintain habitat in bighorn sheep reintroduction areas (see Map 3-9). Actions may include vegetation treatments, road closures, additional water source, and the like.</p>	<p>Do not allow reintroduction of bighorn sheep.</p>	<p>Same as Alternative A</p>	<p>Same as Alternative B</p>
<p>Take opportunities to eliminate domestic sheep grazing within 10 miles of identified bighorn sheep habitat by using negotiation of changes in class of livestock, alternative grazing systems, etc.</p>	<p>No livestock grazing within 10 miles of any potential bighorn sheep habitat.</p>	<p>Do not close potential bighorn sheep habitat to livestock use.</p>	<p>Same as Alternative C</p>	<p>Same as Alternative A</p>

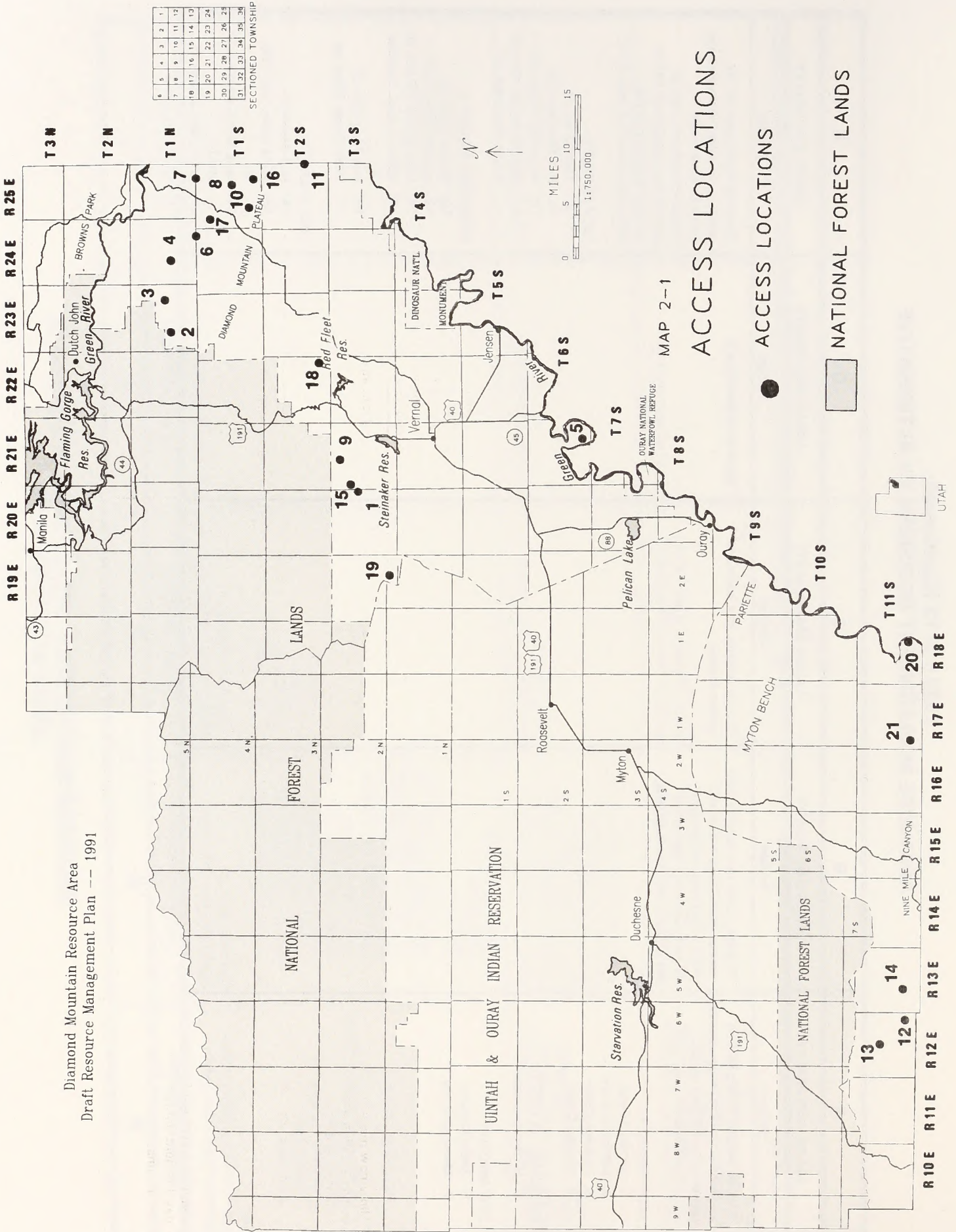


TABLE 2-13 (Continued):  
AREAWIDE MANAGEMENT DECISIONS BY ALTERNATIVE

A	B	C	D	E
LANDS AND REALTY	LANDS AND REALTY	LANDS AND REALTY	LANDS AND REALTY	LANDS AND REALTY
Access	Access	Access	Access	Access
<p>Acquire needed public vehicle access for recreational purposes identified as follows (these areas are noted on map 2-1):</p> <p><b>HIGH PRIORITY:</b></p> <ol style="list-style-type: none"> <li>1. Ashley Creek</li> <li>2. Lambson Draw</li> <li>3. Jackson Draw</li> <li>4. Warren Draw</li> </ol> <p><b>MODERATE PRIORITY:</b></p> <ol style="list-style-type: none"> <li>5. Horseshoe Bend</li> </ol> <p><b>LOW PRIORITY:</b></p> <ol style="list-style-type: none"> <li>6. Sears Canyon</li> <li>7. Marshall Draw</li> </ol>	<p>Acquire public foot access only across established roads and trails to enhance recreational opportunities in those areas identified under Alternative A.</p>	<p>Do not acquire any additional public access.</p>	<p>Same as Alternative A</p>	<p>Same as Alternative A. In addition, acquire legal vehicular (v) or foot/mountain bicycle/horseback only (f) access for recreational and/or wildlife purposes to the following areas (see map 2-1):</p> <p><b>HIGH PRIORITY:</b></p> <ol style="list-style-type: none"> <li>8. Allen Draw (f)</li> <li>9. Red Mountain (v)</li> <li>10. South Pot Creek (v)</li> <li>11. Wild Mountain through South Pot Creek (v)</li> </ol> <p><b>MODERATE PRIORITY:</b></p> <ol style="list-style-type: none"> <li>12. Argyle Ridge (v)</li> <li>13. Jensen Canyon (v)</li> <li>14. Little Sulfur Canyon (f)</li> <li>15. Ashley Creek Rec Site (f)</li> <li>16. Hoy Mountain (f)</li> <li>17. Dead Horse Draw (v)</li> </ol> <p><b>LOW PRIORITY:</b></p> <ol style="list-style-type: none"> <li>18. Red Wash (f)</li> <li>19. West Little Mountain (v)</li> <li>20. Nine Mile Canyon-east end (v)</li> <li>21. Nine Mile Canyon (f)</li> </ol>



Diamond Mountain Resource Area  
Draft Resource Management Plan -- 1991



6	5	4	3	2	1
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36

SECTIONED TOWNSHIP

MAP 2-1  
ACCESS LOCATIONS  
ACCESS LOCATIONS  
NATIONAL FOREST LANDS

R10E R11E R12E R13E R14E R15E R16E R17E R18E  
R19E R20E R21E R22E R23E R24E R25E

NATIONAL FOREST LANDS

UINTAH & OURAY INDIAN RESERVATION

NATIONAL FOREST LANDS

UTAH



**TABLE 2-13 (Continued):  
AREAWIDE MANAGEMENT DECISIONS BY ALTERNATIVE**

A	B	C	D	E
Land Use Authorization	Land Use Authorization	Land Use Authorization	Land Use Authorization	Land Use Authorization
<p>Allow placement of permitted land uses that avoid Red Mountain, Six Mile Draw, Parrette Wetlands, Red Fleet, recreation sites, sage grouse strutting grounds, Jesse Ewing Canyon, Highway 191 Scenic Corridor, the Vernal watersheds, and Green River Scenic Corridor ACEC (cross only at existing crossing points).</p>	<p>Establish utility corridors across the resource area for placement of facilities (see alternative map in map pocket). Establish R/W exclusion areas within level 1 lands. Establish R/W avoidance areas within level 2 lands. Allow placement of permitted land uses with restrictions on level 3 and 4 lands.</p>	<p>Establish utility corridors across the resource area for placement of facilities (see alternative map in map pocket). Establish R/W avoidance areas for level 2 lands. Allow land use authorizations on level 3 lands, if mitigation would improve forage. Allow land use authorizations on level 4 lands with standard conditions.</p>	<p>Establish utility corridors across the resource area for placement of facilities (see alternative map in map pocket). Provide lands (R/Ws, permits, and land transfers) to support the minerals industry and improve manageability. Avoid placing R/W or other facilities on Level 2 lands. Level 3 lands would be available for placement of R/W or other facilities with restrictions. Level 4 lands would be available with standard restrictions.</p>	<p>Establish utility corridors across the resource area for placement of facilities (see alternative map in map pocket). Establish level 1 lands as an exclusion area. Establish a R/W avoidance area within level 2 lands. Make level 3 and 4 lands available to support permitted activities with special restrictions or standard conditions, respectively.</p>
<p>Make 7,500 acres available for agricultural lease. Do not lease lands on Goslin Mountain or in Browns Park.</p>	<p>Lands may be available for consideration of agricultural leases within level 3 and 4 lands only (294,400 acres).</p>	<p>Lands may be available for consideration of agricultural leases within level 3 and 4 lands (698,500 acres).</p>	<p>Lands may be available for consideration of agricultural leases within level 3 and 4 lands (704,500 acres). Do not allow leases that would conflict with mineral development.</p>	<p>Lands within levels 3 and 4 except for special status plant habitat may be available for consideration of agricultural leases (621,900 acres).</p>
<p>Allow new major communication sites on Goslin Mountain and Little Mountain only. New sites on Asphalt Ridge will not be allowed.</p>	<p>Allow new major communication sites on Goslin Mountain, Little Mountain, and Asphalt Ridge.</p>	<p>Same as Alternative B</p>	<p>Same as Alternative A</p>	<p>Same as Alternative B</p>
<p>Consider all lands within the resource area, except ACECs and waters suitable for WSR designation, as available for major (&gt; 1 acre-foot) water development rights-of-way with restrictions.</p>	<p>Do not approve any rights-of-way or withdrawals for major water developments. Water developments could be permitted if a site-specific analysis showed the project was consistent with ACEC or other management prescriptions and identified resource values.</p>	<p>Allow rights-of-way for major water developments on the lower and middle segments of the Green River and their tributaries (level 3 lands).</p>	<p>Same as Alternative C</p>	<p>Level 3 and 4 lands are available for major water development rights-of-way with special restrictions. Outside of these areas, water development rights-of-way may be permitted if the project is consistent with ACEC or other land management prescriptions.</p>



**TABLE 2-13 (Continued):  
AREAWIDE MANAGEMENT DECISIONS BY ALTERNATIVE**

A	B	C	D	E
Resolve trespass airports near Willow Creek and Taylor Flat.	Resolve agricultural and occupancy trespass at Brush Creek; resolve airport trespasses at Willow Creek and Taylor Flat.	Same as Alternative A	Same as Alternative A	On level 1 and 2 lands, trespass resolution would be limited to removal and restoration or cooperative agreement. Resolution of trespass on level 3 and 4 lands could involve other options (to include lease, sale, right-of-way, exchange, agreement). Priority for trespass resolution is as follows:  HIGH PRIORITY: Level 1 and 2 lands; Previous trespass presently under a 3-year (or less) agricultural permit; airport trespasses at Willow Creek and Taylor Flat.  MODERATE PRIORITY: Level 3 lands.  LOW PRIORITY: Level 4 lands.
<b>Withdrawals</b>  Recommend protective withdrawals for all developed or potential recreation sites (5,000 acres) and 19,400 acres on the Green River Scenic Corridor ACEC.	<b>Withdrawals</b>  Recommend protective withdrawals on level 1 and level 2 lands and black-footed ferret potential reintroduction areas in Sunshine Bench, Shiner, Antelope Flat, Twelve Mile, and Eight Mile Flat to preclude entry under the 1872 mining law or agricultural entry (414,600 acres).	<b>Withdrawals</b>  Recommend protective withdrawals that preclude mineral or agricultural entry on level 2 lands (10,500 acres).	<b>Withdrawals</b>  Recommend withdrawals that preclude agricultural entry only on Level 2 lands (4,500 acres).	<b>Withdrawals</b>  Recommend protective withdrawals or other protective measures that would preclude mineral or agricultural entry on (in priority order) the Green River Scenic Corridor (19,400 acres), the relic vegetation areas (3,600 acres), the Lower Green River ACEC (7,900 acres), and developed and potential recreation sites (5,000 acres).
<b>Land Ownership and Disposition</b>  65,550 acres identified on Map 3-10.	<b>Land Ownership and Disposition</b>  294,400 acres (level 3 and 4 lands) would be considered for exchange.	<b>Land Ownership and Disposition</b>  All lands and interests in lands in the resource area would be considered for exchange. Do not exchange lands that would result in a loss of livestock grazing.	<b>Land Ownership and Disposition</b>  All lands and interests in lands in levels 2, 3, and 4 would be considered for disposal by exchange (see "planning criteria--lands" in Chapter 1).	<b>Land Ownership and Disposition</b>  All lands and interests in lands in levels 2, 3, and 4 would be considered for disposal by exchange (see "planning criteria--lands" in Chapter 1).



**TABLE 2-13 (Continued):  
AREAWIDE MANAGEMENT DECISIONS BY ALTERNATIVE**

A	B	C	D	E
<p>4,300 acres of isolated tracts and community expansion lands (i.e., landfills) would be considered potentially suitable for sale.</p> <p>Acquire fee title or an interest in lands (e.g., water rights) on the following level 2 lands with high value riparian or scenic resources:</p> <ul style="list-style-type: none"> <li>*Nine Mile Canyon (1,100 acres)</li> <li>*Beaver, Davenport, Galloway, Jackson, Sears, Ashley, and Willow Creeks (5,300 acres)</li> <li>*Pariette drainage (100 acres)</li> <li>*Crouse Canyon (1,000 acres)</li> </ul>	<p>No lands would be considered suitable for sale.</p> <p>Acquire fee title or interest in lands (e.g., water rights) within or adjacent to level 1 areas.</p>	<p>Same as Alternative B</p> <p>Acquire fee title or interest in lands (e.g., water rights) to enhance livestock management on a case by case basis.</p>	<p>23,676 Acres of isolated tracts and community expansion lands in level 3 outside of ACECs and 4 (i.e., landfills) would be considered potentially suitable for sale (see Appendix 3).</p> <p>Same as Alternative A</p>	<p>23,979 Acres of isolated tracts and community expansion lands in level 3 outside of ACECs and 4 (i.e., landfills) would be considered potentially suitable for sale (see Appendix 3).</p> <p>Acquire fee title or interest in lands (e.g., water rights, scenic easements) with a priority placed on level 1, 2, and 3 lands.</p>
<p><b>LIVESTOCK</b></p> <p>Maintain existing livestock grazing preference at 50,299. Refer to "Vegetation" section for criteria established to make changes to forage distribution.</p>	<p><b>LIVESTOCK</b></p> <p>Establish livestock grazing preference at 50,299 AUMs. Refer to "Vegetation" section for criteria established to make changes to forage distribution.</p>	<p><b>LIVESTOCK</b></p> <p>Establish livestock grazing preference at 50,299 AUMs. Refer to "Vegetation" section for criteria established to make changes to forage distribution.</p>	<p><b>LIVESTOCK</b></p> <p>Establish livestock grazing preference at 50,299 AUMs. Refer to "Vegetation" section for criteria established to make changes to forage distribution.</p>	<p><b>LIVESTOCK</b></p> <p>Establish livestock preference at 50,299 AUMs. Refer to "Vegetation" section for criteria established to make changes to forage distribution.</p>



**TABLE 2-13 (Continued):  
AREAWIDE MANAGEMENT DECISIONS BY ALTERNATIVE**

A	B	C	D	E
<p>321,600 acres in Level 4 lands are open to grazing. 383,900 acres in Level 3 lands and the Pariette wetlands and 600' within riparian areas would be open to grazing with special conditions. The remaining 3,500 acres are closed to grazing.</p>	<p>84,100 acres in Level 4 lands would be open to grazing. 528,900 acres within level 2 and 3 lands would be open to grazing under improved grazing strategies to enhance or maintain identified wildlife, watershed, soil, visual, and vegetation resources. 96,000 acres in level 1 lands are closed to grazing except for those riparian areas in late or climax ecological condition where grazing is presently taking place (1,900 acres).</p>	<p>20,500 acres in Level 4 lands would be open to grazing. 684,000 acres in level 2 lands (except for the relict vegetation areas and the developed recreation sites) and on 3 lands would be open to grazing with number/seasonal restrictions. No grazing on relict vegetation areas and developed recreation sites (4,500 acres).</p>	<p>20,500 acres in Level 4 lands would be open to grazing. 684,000 acres in level 2 lands (except for the relict vegetation areas and the developed recreation sites) and on 3 lands would be open to grazing with number/seasonal restrictions. No grazing on relict vegetation areas and developed recreation sites (4,500 acres).</p>	<p>705,100 acres in Level 3 and 4 lands and the sage grouse leks in level 2 would be open to grazing. No grazing on 3,900 acres on the remainder of Level 2 lands.</p>
<p>Allow use on winter grazing permits on Level 2, 3, and 4 lands after April 1.</p>	<p>Allow use on winter grazing permits in Levels 2, 3, and 4 lands after April 1, only when spring grazing can be rotated or periodic deferment or rest is attained.</p>	<p>Same as Alternative A</p>	<p>Same as Alternative A</p>	<p>Allow use on winter grazing permits after April 1, only when spring grazing can be rotated or periodic deferment or rest is attained.</p>
<p>Manage allotments under the category system (See Appendix 8): 39 Improve (422,000 ac) 38 Maintain (256,900 ac) 31 Custodial (30,100 ac)</p>	<p>Manage allotments under the category system (See Appendix 8): 52 Improve (533,500 ac) 28 Maintain (144,600 ac) 28 Custodial (30,900 ac)  The increase in proposed "I" allotments is due to high potential for wildlife habitat improvement.</p>	<p>Same as Alternative B</p>	<p>Same as Alternative B</p>	<p>Same as Alternative B</p>



**TABLE 2-13 (Continued):  
AREAWIDE MANAGEMENT DECISIONS BY ALTERNATIVE**

A	B	C	D	E
<p>Develop rangeland improvements (i.e., fencing, reservoirs, water developments and systems, vegetation treatments) and implement grazing prescriptions to improve livestock distribution and management, on I and M allotments:</p> <ul style="list-style-type: none"> <li>10 AMPs</li> <li>12 AMP revisions</li> <li>61 guzzlers-springs</li> <li>22,400 ac vegetation treatment</li> <li>657 reservoirs</li> <li>44 miles fence</li> <li>35 miles pipelines</li> </ul>	<p>Develop rangeland improvements only to maintain integrity of level 1 and 2 lands. Develop rangeland improvements and grazing prescriptions on level 3 and 4 lands to enhance forage production and diversity. For the resource area:</p> <ul style="list-style-type: none"> <li>10 AMPs</li> <li>12 AMP revisions</li> <li>48 guzzlers-springs</li> <li>9,000 ac vegetation treatment</li> <li>442 reservoirs</li> <li>115 miles fence</li> <li>23.5 miles pipeline</li> </ul>	<p>Develop rangeland improvements and grazing strategies to increase livestock forage production and diversity, to sustain preference, and to provide additional forage:</p> <ul style="list-style-type: none"> <li>10 AMPs</li> <li>12 AMP revisions</li> <li>61 guzzlers-springs</li> <li>27,100 ac vegetation treatment</li> <li>657 reservoirs</li> <li>44 miles fence</li> <li>35 miles pipelines</li> </ul>	<p>Same as Alternative C</p>	<p>Allow rangeland improvements and grazing prescriptions to maintain or improve the values present:</p> <ul style="list-style-type: none"> <li>10 AMPs</li> <li>12 AMP revisions</li> <li>61 guzzlers-springs</li> <li>22,400 ac vegetation treatment</li> <li>657 reservoirs</li> <li>44 miles fence</li> <li>35 miles pipelines</li> </ul>
<p>Take opportunities to eliminate domestic sheep grazing within 10 miles of identified bighorn sheep habitat in the Nine Mile Canyon area by using negotiation of changes in class of livestock, alternative grazing systems, etc.</p>	<p>No livestock grazing within 10 miles of any potential bighorn sheep habitat.</p>	<p>Do not close potential bighorn sheep habitat to livestock use.</p>	<p>Same as Alternative C</p>	<p>Same as Alternative A</p>
<p><b>MINERALS</b></p> <p><b>Oil and Gas and Combined Hydrocarbon Activities</b></p>	<p><b>MINERALS</b></p> <p><b>Oil and Gas and Combined Hydrocarbon Activities</b></p>	<p><b>MINERALS</b></p> <p><b>Oil and Gas and Combined Hydrocarbon Activities</b></p>	<p><b>MINERALS</b></p> <p><b>Oil and Gas and Combined Hydrocarbon Activities</b></p>	<p><b>MINERALS</b></p> <p><b>Oil and Gas and Combined Hydrocarbon Activities</b></p>
<p>Level 4 lands (423,000 acres) would be open to leasing with standard conditions (category 1), level 3 lands (374,500 acres) would be open to leasing with special conditions (category 2), Level 2 lands (56,500 acres) would be open to leasing with NSO stipulation (category 3).</p>	<p>Level 4 lands (124,400 acres of mineral estate) would be open to leasing with standard conditions (category 1), Level 3 lands (262,100 acres of mineral estate) would be open to leasing with special conditions (category 2), 467,500 acres of mineral estate (level 1 and level 2 lands) would be open to leasing with NSO stipulations (category 3).</p>	<p>Level 4 lands (66,700 acres of mineral estate) would be open to leasing with standard conditions (category 1), level 3 lands (774,700 acres of mineral estate) would be open to leasing with special conditions (category 2), Level 2 lands (12,600 acres of mineral estate) would be open to leasing with NSO stipulation (category 3).</p>	<p>Level 4 lands (259,200 acres of mineral estate) would be open to leasing with standard conditions (category 1), Level 3 lands (588,200 acres of mineral estate) would be open to leasing with special conditions (category 2), Level 2 lands (6,600 acres of mineral estate) would be open to leasing with NSO stipulation (category 3).</p>	<p>Level 4 lands (194,900 acres of mineral estate) would be open to leasing with standard conditions (category 1), level 3 lands (569,000 acres of mineral estate) would be open to leasing with special conditions (category 2), 90,100 acres of mineral estate (level 1 and 2 lands) would be open to leasing with NSO stipulation (category 3).</p>



**TABLE 2-13 (Continued):  
AREAWIDE MANAGEMENT DECISIONS BY ALTERNATIVE**

A	B	C	D	E
<p>All lands open to geophysical exploration with restrictions.</p>	<p>Level 4 lands (84,100 acres of surface estate) would be open to geophysical exploration with standard conditions, Level 3 lands (210,300 acres of surface estate) would be open to geophysical exploration with special restrictions, Level 1 and 2 lands (414,600 acres of surface estate) would be open to non surface disturbing geophysical exploration only (e.g., gravity or magnetic).</p>	<p>Level 4 lands (20,500 acres of surface estate) would be open to geophysical exploration with standard conditions, level 2 and 3 lands (688,500 acres of surface estate) would be open to geophysical exploration with special restrictions, level 1 lands (0 acres) would be closed to geophysical exploration.</p>	<p>Level 4 lands (184,300 acres of surface estate) would be open to geophysical exploration with standard conditions. Level 2 and 3 lands (524,700 acres of surface estate) would be open to geophysical exploration with special restrictions. Level 1 lands (0 acres) would be closed to geophysical exploration.</p>	<p>Level 4 lands (133,400 acres of surface estate) would be open to geophysical exploration with standard conditions (category 1). Level 3 lands (488,500 acres of surface estate) would be open to geophysical exploration with special conditions (category 2). Level 1 and 2 lands (87,100 acres of surface estate) would be open to non surface disturbing geophysical exploration (e.g., magnetic or gravity).</p>
<p><b>Other Leasable Minerals</b></p> <p>Restrictions placed on the lease or subsequent Conditions of Approval would not apply to maintenance and production of existing facilities.</p>	<p><b>Other Leasable Minerals</b></p> <p>Restrictions placed on the lease or subsequent Conditions of Approval would apply to maintenance and production activities.</p>	<p><b>Other Leasable Minerals</b></p> <p>Same as Alternative A</p>	<p><b>Other Leasable Minerals</b></p> <p>Same as Alternative A</p>	<p><b>Other Leasable Minerals</b></p> <p>Restrictions placed on the lease or subsequent Conditions of Approval would not apply to maintenance and production of existing facilities. Restrictions for listed raptor species would apply to maintenance and production activities</p>
<p>Level 4 lands (423,000 acres) would be open to leasing with standard conditions, level 3 lands (374,500 acres) would be open to leasing with special conditions, level 2 lands (56,500 acres) would be open to leasing with NSO stipulation, 0 acres would be closed to leasing.</p>	<p>Level 4 lands (124,400 acres mineral estate) would be open to leasing with standard conditions, level 3 lands (262,100 acres mineral estate) would be open to leasing with special conditions, level 1 and 2 lands (467,500 acres mineral estate) would be open to leasing with NSO stipulation, 0 acres would be closed to leasing.</p>	<p>Level 4 lands (66,700 acres mineral estate) would be open to leasing with standard conditions, level 3 lands (774,700 acres mineral estate) would be open to leasing with special conditions, level 2 lands (12,600 acres) would be open to leasing with NSO stipulation, 0 acres would be closed to leasing.</p>	<p>Level 4 lands (259,200 acres mineral estate) would be open to leasing with standard conditions, level 3 lands (588,200 acres mineral estate) would be open to leasing with special conditions, level 2 lands (6,600 acres mineral estate) would be open to leasing with NSO stipulation, 0 acres would be closed to leasing.</p>	<p>Level 4 lands (194,900 acres mineral estate) would be open to leasing with standard conditions, level 3 lands (569,000 acres mineral estate) would be open to leasing with special conditions, level 2 lands (84,000 acres) would be open to leasing with NSO stipulation, level 1 lands (6,100 acres) would be closed to leasing.</p>
<p>Exploration and development of phosphate within crucial deer and elk winter range would be allowed year round, but would require management actions designed to mitigate both short and long-term loss of habitat.</p>	<p>Same as Alternative A</p>	<p>Same as Alternative A</p>	<p>Same as Alternative A</p>	<p>Same as Alternative A</p>



TABLE 2-13 (Continued):  
AREAWIDE MANAGEMENT DECISIONS BY ALTERNATIVE

A	B	C	D	E
Mineral Materials	Mineral Materials	Mineral Materials	Mineral Materials	Mineral Materials
<p>Allow mineral material disposals on 423,000 acres in level 4 lands with standard conditions, allow mineral material disposals on 364,700 acres in level 3 lands with special restriction, 66,300 acres in level 2 lands and Crouse Canyon, Jones Hole and Red Mountain (of level 3) are closed to mineral material disposals.</p>	<p>Allow mineral material disposals on 124,400 acres of mineral estate in level 4 lands with standard conditions, allow mineral material disposals on 262,100 acres of mineral estate in level 3 lands with special restrictions, allow no mineral material disposals on 467,500 acres of mineral estate in level 1 and 2 lands.</p>	<p>Allow mineral material disposals on 66,700 acres of mineral estate in level 4 lands with standard conditions, allow mineral material disposals on 774,700 acres of mineral estate in level 3 lands with special restrictions, allow no mineral material disposals on 12,600 acres of mineral estate in level 2 lands.</p>	<p>Allow mineral material disposals on 259,200 acres of mineral estate in level 4 lands with standard conditions, allow mineral material disposals on 588,200 acres of mineral estate in level 3 lands with special restrictions, allow no mineral material disposals on 6,600 acres of mineral estate in level 2 lands.</p>	<p>Allow mineral material disposals on 194,900 acres of mineral estate in level 4 lands with standard conditions, allow mineral material disposals on 569,000 acres of mineral estate in level 3 lands with special restrictions, allow mineral material disposals on 84,000 acres of mineral estate in level 2 lands based on a site-specific analysis, allow no mineral material disposals on 6,100 acres on the upper Green River riparian zone and the relic vegetation sites.</p>
Locatables	Locatables	Locatables	Locatables	Locatables
<p>Apply restrictions to 431,000 acres of mineral estate on level 2 and 3 lands to protect identified values. This would not be applied to the 353,000 acres of level 2 and 3 lands that are currently closed to mineral location by withdrawal until such time as the withdrawals are terminated.</p>	<p>Apply restriction to 591,900 acres of mineral estate to level 1, 2, and 3 lands to protect identified values. This would not be applied to the 353,000 acres of level 1, 2 and 3 lands that are currently closed to mineral location by withdrawal until such time as the withdrawals are terminated.</p>	<p>Apply restriction to 787,300 acres of mineral estate to level 2 and 3 lands to protect identified values. This would not be applied to the 384,000 acres of level 2 and 3 lands that are currently closed to mineral location by withdrawal until such time as the withdrawals are terminated.</p>	<p>Apply restriction to 594,800 acres of mineral estate to level 2 and 3 lands to protect identified values. This would not be applied to the 301,700 acres of level 2 and 3 lands that are currently closed to mineral location by withdrawal until such time as the withdrawals are terminated.</p>	<p>Apply restriction to 659,100 acres of mineral estate to level 1, 2 and 3 lands to protect identified values. This would not be applied to the 338,600 acres of level 2 and 3 lands that are currently closed to mineral location by withdrawal until such time as the withdrawals are terminated.</p>



TABLE 2-13 (Continued):  
AREAWIDE MANAGEMENT DECISIONS BY ALTERNATIVE

A	B	C	D	E
RECREATION	RECREATION	RECREATION	RECREATION	RECREATION
OHV	OHV	OHV	OHV	OHV
<p>642,400 acres in level 2, 3 and 4 lands are open to OHV use, 71,800 acres in Pariette, the 5 black-footed ferret reintroduction areas, the Red Creek ACEC, and Green River Scenic Corridor ACEC are open to OHV use on designated roads and trails, 13,800 acres in the Winkles Road area are open to OHV use on existing roads. These closures and limitations would not apply to BLM permitted uses that require off-road travel (i.e., grazing permit operations).</p>	<p>294,400 acres in level 3 and 4 lands are open to OHV use, 258,900 acres in level 2 lands (except for the semi-primitive non-motorized), the 5 black-footed ferret reintroduction areas, and the developed recreation sites in level 1 are open to OHV use on designated roads and trails with seasonal stipulations, 155,700 acres in the semi-primitive non-motorized areas and the remaining level 1 lands are closed to OHV use. These closures and limitations would not apply to BLM permitted uses that require off-road travel (i.e., grazing permit operations).</p>	<p>20,500 acres in level 4 lands are open to OHV use, 688,500 acres in level 2 and 3 lands are open to OHV use on designated roads and trails with seasonal stipulations. These closures and limitations would not apply to BLM permitted uses that require off-road travel (i.e., grazing permit operations).</p>	<p>609,300 acres in level 3 and 4 lands are open to OHV use, 95,200 acres on critical soils in level 3 lands are open to OHV use on existing roads and trails with seasonal restrictions and 4,500 acres in level 2 lands are open to OHV use on designated roads and trails. These closures and limitations would not apply to BLM permitted uses that require off-road travel (i.e., grazing permit operations).</p>	<p>133,400 acres in level 4 lands are open to OHV use; 475,900 acres in level 3 open to OHV use with seasonal restrictions; 90,000 acres of critical soils the 5 black-footed ferret reintroduction areas, within the level 3 lands and the level 1 and 2 lands are open to OHV use on designated roads and trails; and the Semi-Primitive, Non-Motorized areas within level 2 lands would be closed to OHV use (43,200 acres). These closures and limitations would not apply to BLM permitted uses that require off-road travel (i.e., grazing permit operations).</p>



TABLE 2-13 (Continued):  
AREAWIDE MANAGEMENT DECISIONS BY ALTERNATIVE

A	B	C	D	E
Recreation Development	Recreation Development	Recreation Development	Recreation Development	Recreation Development
<p>Develop recreation facilities at: near Jones Hole Brough Reservoir Cottonwood Grove Horseshoe Bend</p> <p>Expand recreation facilities at: Bridge Hollow Pelican Lake Dry Fork Canyon</p> <p>Maintain recreation facilities at their present size: Indian Crossing Pugmire Pocket Red Creek Sand Wash Swallow Canyon Jackson Creek</p> <p>Provide minimum facilities to protect human health and safety at: Pariette Wetlands</p>	<p>Maintain recreation facilities at their present size: Bridge Hollow Pelican Lake Dry Fork Canyon Indian Crossing Jackson Creek Pugmire Pocket Red Creek Sand Wash Swallow Canyon</p> <p>Develop facilities to protect natural systems on hiking, horseback, and mountain bicycle trails, along the Green River, and in other primitive recreation use areas.</p>	<p>Maintain existing recreational facilities in level 3 and 4 lands, may establish primitive (fire-ring, vault toilet and/or picnic table) recreational facilities to meet public demand in level 3 and 4 lands.</p>	<p>Same as Alternative A except do not develop Horseshoe Bend as a recreation site.</p>	<p>Develop recreation facilities at: near Jones Hole Brough Reservoir Red Mountain (outside the relic vegetation site) Cottonwood Grove Horseshoe Bend</p> <p>Expand recreation facilities at: Bridge Hollow Pelican Lake Dry Fork Canyon Indian Crossing</p> <p>Maintain recreation facilities at their present size: Pugmire Pocket Red Creek Sand Wash Swallow Canyon Jackson Creek</p> <p>Provide facilities at Pariette Wetlands.</p> <p>Allow development of limited recreation facilities at identified potential recreation sites (see table 3-14) and along the upper Green River needed to protect health and human safety.</p>
<p>Recreation sites would be closed to grazing and surface disturbing activities not related to recreation development.</p>	<p>Same as Alternative A.</p>	<p>Same as Alternative A.</p>	<p>Same as Alternative A.</p>	<p>Same as Alternative A.</p>
<p>Continue Special Recreation Management Area (SRMA) status for the Green River Scenic Corridor and Pelican Lake.</p>	<p>Continue Special Recreation Management Area (SRMA) status for the Green River Scenic Corridor and Pelican Lake. Establish an SRMA for the Red Mountain-Dry Fork Complex and Nine Mile Canyon Areas.</p>	<p>Same as Alternative A</p>	<p>Same as Alternative A</p>	<p>Same as Alternative B</p>

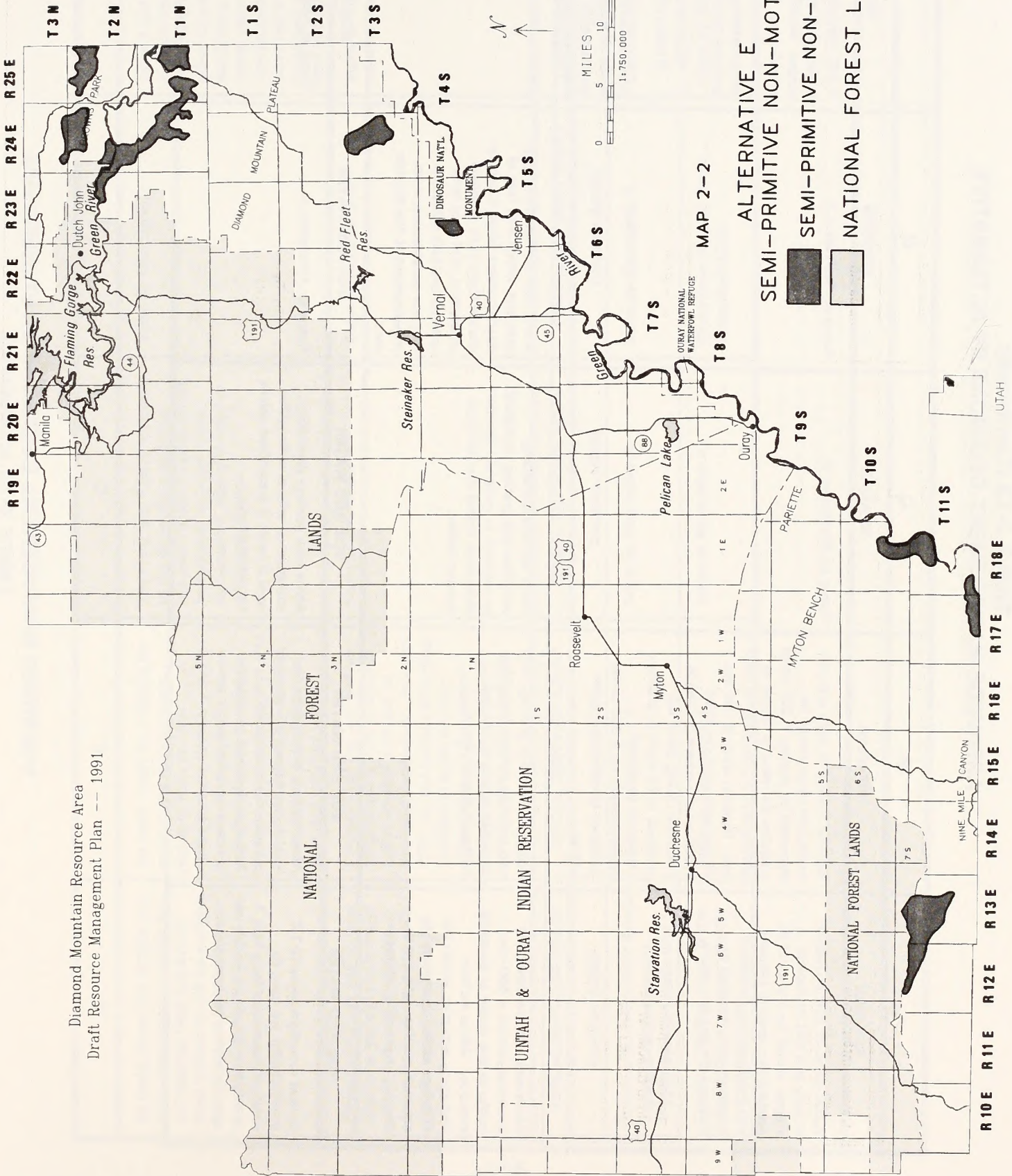


TABLE 2-13 (Continued):  
AREAWIDE MANAGEMENT DECISIONS BY ALTERNATIVE

A	B	C	D	E
<p>Develop interpretive sites at Diamond Hoax, Taylor Flat, Pariette Wetlands and Clay Basin Gas Field.</p>	<p>Develop interpretive facilities at Diamond Hoax, Taylor Flat, Pariette Wetlands, Clay Basin Gas Field, Brush Creek, and Sand Pockets. Do not place any permanent recreation facilities on big horn sheep habitat; reroute existing trails away from crucial big horn sheep habitat.</p>	<p>Same as Alternative A</p>	<p>Same as Alternative A</p>	<p>Develop interpretive facilities at Diamond Hoax, Taylor Flat, Pariette Wetlands, Clay Basin Gas Field, and Brush Creek.</p>
<p>Develop 15 miles of hiking trails along Beaver, Willow, Ashley, Dry Fork and other creeks in the resource area. Develop Sears Canyon as a hiking/horseback trail.</p>	<p>Establish 20 miles of hiking, mountain bicycle, and horseback trails.</p>	<p>Same as Alternative A</p>	<p>Same as Alternative A</p>	<p>Develop 23 miles of hiking and/or horseback trails along the Green River and on Dry Fork, Ashley Creek, Beaver, Willow, Nine Mile and other creeks in the resource area. Establish 12 miles of mountain bicycle trails using existing rural roads and trails. Establish a non-motorized trail along Sears Canyon.</p>
<p>Maintain 6,800 acres at 6-Mile Draw for its primitive values.</p>	<p>Maintain the character and values of 60,700 acres of identified semi-primitive non-motorized areas (see Map 3-20) by closing the areas to OHV use and motorized surface disturbing activities.</p>	<p>Do not maintain Semi-Primitive, Non-Motorized areas.</p>	<p>Same as Alternative C</p>	<p>Maintain the character and values of 43,200 acres of identified semi-primitive non-motorized areas (see Map 2-2) by closing the areas to OHV use and motorized surface disturbing activities.</p>
<p>Establish the Jones Hole road, the Diamond Mountain-Browns Park-Clay Basin Loop and the Red Cloud Loop as Back-county Byways. Continue the established Nine Mile Canyon Back-county Byway designation.</p>	<p>Same as Alternative A</p>	<p>Same as Alternative A</p>	<p>Do not establish any more Back-county Byways. Continue the established Nine Mile Canyon Back-county Byway designation.</p>	<p>Same as Alternative A</p>



Diamond Mountain Resource Area  
Draft Resource Management Plan -- 1991



6	5	4	3	2	1
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36

SECTIONED TOWNSHIP

MAP 2-2

ALTERNATIVE E  
SEMI-PRIMITIVE NON-MOTORIZED  
SEMI-PRIMITIVE NON-MOTORIZED AREAS  
NATIONAL FOREST LANDS

UTAH



TABLE 2-13 (Continued):  
AREAWIDE MANAGEMENT DECISIONS BY ALTERNATIVE

A	B	C	D	E
RIPARIAN	RIPARIAN	RIPARIAN	RIPARIAN	RIPARIAN
<p>7,200 acres of riparian habitat in early and mid ecological stages would be improved by establishing grazing systems and implementing rangeland improvements designed to enhance the riparian values.</p> <p>12.5 miles of fence 9 miles of pipeline</p>	<p>Riparian habitat in early and mid ecological stage would be improved by closing 7,200 acres (requires 84 miles of fence) to grazing and 7,200 acres to OHV use. Riparian areas in late and climax ecological condition (1900 acres) where grazing is presently taking place will continue to be open to grazing. Construct rangeland improvements on 9,500 acres designed to enhance riparian values.</p>	<p>Same as Alternative A</p>	<p>Same as Alternative A</p>	<p>7,200 acres of riparian habitat in early and mid ecological stages would be improved by establishing grazing systems and implementing rangeland improvements designed to enhance the riparian values.</p> <p>12.5 miles of fence 9 miles of pipeline</p> <p>Close to livestock grazing, those riparian areas that do not satisfactorily respond to improved grazing management.</p>
<p>Allow new surface disturbing activities outside a 600-foot buffer of live water or perennial streams. Allow surface disturbing activities within the 600-foot buffer, if designed to enhance riparian values or if there is no practical alternative.</p>	<p>Allow no livestock grazing, OHV use and new surface disturbing activities within a 700-foot buffer of riparian areas.</p>	<p>Allow surface disturbing activities and grazing designed to enhance or maintain riparian objectives within the 330-foot riparian buffer.</p>	<p>Allow new surface disturbing activities within 330 feet of riparian zones when it can be shown there is no practical alternative, that long term impacts are fully mitigated or that the construction is an enhancement to the riparian area.</p>	<p>Same as Alternative D.</p>
<p><b>SOIL AND WATER</b></p>	<p><b>SOIL AND WATER</b></p>	<p><b>SOIL AND WATER</b></p>	<p><b>SOIL AND WATER</b></p>	<p><b>SOIL AND WATER</b></p>
<p>Upland mountain areas (&gt; 12" precipitation) are open to surface disturbance from May 1 to Oct 31. Slopes of &lt; 40% are open to surface disturbance.</p>	<p>Allow surface disturbance on level 3 and 4 lands if watershed protection is maintained. Activities designed to enhance or maintain soil or water values will be allowed on level 1 and 2 lands.</p>	<p>Allow new surface disturbing activities on critical soils within level 3 lands if watershed values are maintained.</p>	<p>Same as Alternative C</p>	<p>Same as Alternative C</p>



**TABLE 2-13 (Continued):  
AREAWIDE MANAGEMENT DECISIONS BY ALTERNATIVE**

A	B	C	D	E
<p>All lands except the ACECs and rivers determined to eligible for the National Wild and Scenic River System would be available for major (&gt; 1 acre-foot) water development, rights-of-way, or other authorization with restrictions.</p>	<p>No lands would be available for major water developments, rights-of-way, or other authorization. Water developments could be permitted if a site-specific analysis showed the project was consistent with ACEC or other management prescription and identified resource values.</p>	<p>The lower and middle segments of the Green River and their tributaries (level 3 lands) would be available for major water development, rights-of-way, or other authorization.</p>	<p>Same as Alternative C</p>	<p>Level 3 and 4 lands are available for major water development, rights-of-way, or other authorization with special restrictions. Outside of these areas, major water developments could be permitted if the project is consistent with ACEC or other land management prescriptions.</p>
<p>Preclude OHV use and surface disturbing activities in areas of critical soils and floodplains during times of saturated soils (usually spring runoff and fall rains).</p>	<p>Preclude OHV use and surface disturbing activities in areas of highly erodible soils and on municipal watersheds. Preclude OHV use and surface disturbing activities in areas of other critical soils and floodplains during times of saturated soils (usually spring runoff and fall rains).</p>	<p>Same as Alternative A</p>	<p>Same as Alternative A</p>	<p>Same as Alternative A</p>
<p><b>SPECIAL EMPHASIS AREAS</b></p>	<p><b>SPECIAL EMPHASIS AREAS</b></p>	<p><b>SPECIAL EMPHASIS AREAS</b></p>	<p><b>SPECIAL EMPHASIS AREAS</b></p>	<p><b>SPECIAL EMPHASIS AREAS</b></p>
<p>Continue ACECs</p>	<p>Continue ACECs</p>	<p>Continue ACECs</p>	<p>Continue ACECs</p>	<p>Continue ACECs</p>
<p>Continue the Green River Scenic Corridor ACEC at present 19,400 acres on public land.</p>	<p>Same as Alternative A</p>	<p>Same as Alternative A</p>	<p>Same as Alternative A</p>	<p>Same as Alternative A</p>
<p>Continue the Red Creek Watershed ACEC at present 24,020 acres public land.</p>	<p>Same as Alternative A</p>	<p>Same as Alternative A</p>	<p>Discontinue the Red Creek Watershed ACEC.</p>	<p>Same as Alternative A</p>



**TABLE 2-13 (Continued):  
AREAWIDE MANAGEMENT DECISIONS BY ALTERNATIVE**

<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>
Designate ACECs	Designate ACECs	Designate ACECs	Designate ACECs	Designate ACECs
Manage and protect 8,950 acres in the Red Mountain area for its high values including wildlife, scenic and cultural resources (however, would not be designated as an ACEC).	Designate 25,800 acres of public land in the Red Mountain-Dry Fork area as an ACEC.	Designate 2,200 acres of public land in the Red Mountain-Castle Cove areas as vegetation relict area ACECs.	Do not designate an ACEC in the Red Mountain area.	Same as Alternative B
Manage and protect 600 acres in Crouse Canyon for its high value scenic and wildlife resources (however, would not be designated as an ACEC).	Designate 55,700 acres in the Browns Park Complex as an ACEC (includes existing Green River Scenic Corridor ACEC, Crouse Canyon and the two WSAs).	Do not designate an ACEC in the Browns Park area.	Same as Alternative C	Same as Alternative B
Develop 9,000 acres of wetland habitat in Pariette Draw. Provide migratory wetland habitat for special status animal species (however, would not be designated as an ACEC).	Designate 11,600 acres in the Pariette drainage as an ACEC.	Do not designate an ACEC for Pariette.	Same as Alternative C	Same as Alternative B.
Manage 38,500 acres in Nine Mile Canyon for the protection of historical and cultural properties (however, would not be designated as an ACEC).	Designate 50,800 acres in Nine Mile Canyon as an ACEC.	Do not designate Nine Mile Canyon as an ACEC.	Same as Alternative C	Designate 47,400 acres in Nine Mile Canyon as an ACEC.
	Designate 12,700 acres on the Lower and Middle Green River as an ACEC (see "Planning Criteria--Special Emphasis Areas" in Chapter 1).	Do not designate the lower and middle Green River segments as an ACEC.	Same as Alternative C	Designate 7,900 acres on the Lower Green River as an ACEC (see "Planning Criteria--Special Emphasis Areas" in Chapter 1).
	Designate 1,400 acres in Lears Canyon as a vegetation relict area ACEC.	Same as Alternative B	Do not designate Lears Canyon as an ACEC.	Same as Alternative B
<b>Wild and Scenic Rivers</b>	<b>Wild and Scenic Rivers</b>	<b>Wild and Scenic Rivers</b>	<b>Wild and Scenic Rivers</b>	<b>Wild and Scenic Rivers</b>
Recommend for designation the Upper Green River between Little Hole and the Colorado State Line.	Same as Alternative A	Withdraw recommendation to include the upper Green River in the Wild and Scenic River System.	Same as Alternative C	Same as Alternative A



**TABLE 2-13 (Continued):  
AREAWIDE MANAGEMENT DECISIONS BY ALTERNATIVE**

A	B	C	D	E
<p>Continue to manage the lower and middle Green River segments for their Wild and Scenic Rivers values (see "Planning Criteria--Special Emphasis Areas" in Chapter 1).</p>	<p>Recommend the lower Green River segment for designation as a scenic river and the middle Green River for designation as a recreational river under the Wild and Scenic Rivers Act (see "Planning Criteria--Special Emphasis Areas" in Chapter 1).</p>	<p>Do not recommend the lower or middle Green River for designation under the Wild and Scenic Rivers Act.</p>	<p>Same as Alternative C</p>	<p>Recommend the lower Green River segment for designation as a scenic river under the Wild and Scenic Rivers Act (see "Planning Criteria--Special Emphasis Areas" in Chapter 1).</p>
<p>Wilderness Study Areas  Continue to manage the Diamond Breaks WSA (3,940 acres) and the West Cold Springs WSA (3,300 acres) under the Interim Management Policy until formal designation has been made by Congress. Should either not be designated as wilderness, return the area to multiple use management.</p>	<p>Recommend Argyle Creek (headwaters to the Carbon County border) and Nine Mile Creek (segment between Argyle Creek and the Carbon County border) as recreational rivers under the Wild and Scenic Rivers Act. Recommend Nine Mile Creek (from Gate Canyon to the Green River) as scenic under the Wild and Scenic Rivers Act.</p>	<p>Do not recommend any segments of Argyle Creek or Nine Mile Creek for designation under the Wild and Scenic Rivers Act.</p>	<p>Same as Alternative C</p>	<p>Same as Alternative C</p>
<p>Wilderness Study Areas  Continue to manage the Diamond Breaks WSA (3,940 acres) and the West Cold Springs WSA (3,300 acres) under the Interim Management Policy until formal designation has been made by Congress. Should either not be designated as wilderness, return the area to multiple use management.</p>	<p>Wilderness Study Areas  Continue to manage the Diamond Breaks WSA (3,940 acres) and the West Cold Springs WSA (3,300 acres) under the Interim Management Policy until formal designation has been made by Congress. Should either not be designated as wilderness, manage the area as part of the Browns Park Complex ACEC.</p>	<p>Wilderness Study Areas  Same as Alternative A</p>	<p>Wilderness Study Areas  Same as Alternative A</p>	<p>Wilderness Study Areas  Same as Alternative A</p>
<p><b>VEGETATION</b>  Allow mechanical, fire, biological, or chemical control of noxious weeds and insect infestations within the resource area with restrictions to protect desired ground cover and water quality.</p>	<p><b>VEGETATION</b>  Allow only biological control of noxious weeds and insect infestations within the resource area with restrictions to protect ground cover and water quality.</p>	<p><b>VEGETATION</b>  Same as Alternative A</p>	<p><b>VEGETATION</b>  Same as Alternative A</p>	<p><b>VEGETATION</b>  Same as Alternative A</p>



**TABLE 2-13 (Continued):  
AREAWIDE MANAGEMENT DECISIONS BY ALTERNATIVE**

A	B	C	D	E
<p>Manage the vegetation to attain the ecological stage that would benefit wildlife in crucial habitat (while maintaining livestock preference) and manage vegetation in remaining areas which results in high vegetation species diversity. For the resource area: 60% Late Seral-Climax 35% Mid Seral 5% Early Seral</p> <p>Management practices in priority order: (1) rangeland treatments, (2) grazing reductions (livestock reductions could be made if needed to achieve wildlife use goals by allotment in crucial wildlife habitat).</p>	<p>Manage the vegetation to attain the ecological condition which results in at least 70% late to climax seral stage. Reduce livestock to achieve wildlife use. For the resource area: 70% Late Seral-Climax 25% Mid Seral 5% Early Seral</p> <p>Management practices in priority order: (1) rangeland treatments and (2) livestock reductions (livestock reductions could be made to achieve wildlife use goals by allotment).</p>	<p>Manage the vegetation to attain the ecological stage which provides the greatest amount of forage production for livestock and increase livestock preference. For the resource area: 50% Late Seral-Climax 45% Mid Seral 5% Early Seral</p> <p>Management practices in priority order: (1) rangeland treatments, (2) grazing prescriptions, and (3) wildlife reductions (wildlife reductions could be made to maintain livestock preference).</p>	<p>Same as Alternative C</p>	<p>Manage the vegetation to attain the ecological stage that would benefit wildlife in crucial habitat and manage vegetation in remaining areas which results in high vegetation species diversity. Maintain livestock preference, if possible for the resource area: 60% Late Seral-Climax 35% Mid Seral 5% Early Seral</p> <p>Management practices in priority order: (1) rangeland treatments, (2) grazing prescriptions, and (3) livestock reductions (livestock reductions could be made if needed to achieve wildlife use goals by allotment in crucial wildlife habitat).</p>
<p>Maintain 50,299 AUMs for existing livestock preference. Provide a maximum of 35,000 AUMs for wildlife forage.</p>	<p>Provide a maximum of 46,000 AUMs (management objective) for wildlife forage. All additional AUMs obtained through rangeland improvements would be assigned to wildlife. Maintain 50,299 AUMs for livestock preference (see following criteria for adjustments in forage assignments).</p>	<p>Maintain 50,299 AUMs for existing livestock preference. Provide a maximum of 27,600 AUMs for wildlife forage.</p>	<p>Same as Alternative C</p>	<p>Maintain existing livestock preference of 50,299 AUMs. Provide a maximum of 40,000 AUMs for wildlife forage. Increase in wildlife AUMs will be realized through rangeland improvements and land acquisitions.</p>
<p>Manipulate 22,400 acres of pinyon-juniper woodlands and sagebrush communities to increase forage production.</p>	<p>Manipulate 9,000 acres of pinyon-juniper woodlands and sagebrush communities to increase forage production for wildlife and water-shed habitat improvement.</p>	<p>Manipulate 27,100 acres of pinyon-juniper woodlands and sagebrush communities to maximize forage production for livestock.</p>	<p>Same as Alternative C</p>	<p>Manipulate 22,400 acres of pinyon-juniper woodlands and sagebrush communities to increase forage production and improve wildlife habitat and watershed.</p>



TABLE 2-13 (Continued):  
AREAWIDE MANAGEMENT DECISIONS BY ALTERNATIVE

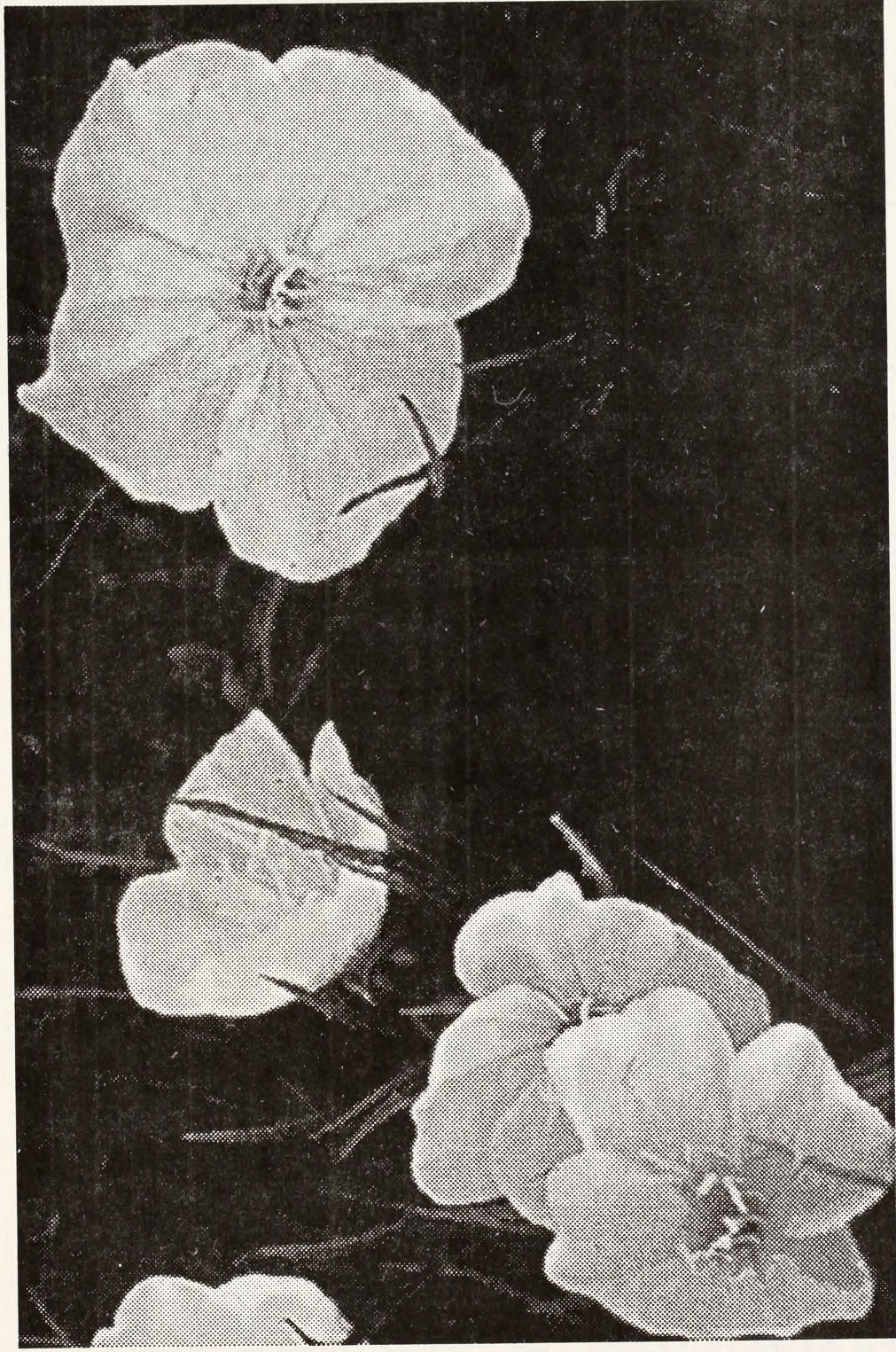
A	B	C	D	E
<p>Provide additional AUMs as follows: In the northern half of the resource area (Diamond Mountain and Browns Park), additional AUMs will be provided to livestock on a temporary non-renewable basis until wildlife demands require them. In the southern half of the resource area (Ashley Valley and Myton Bench), forage increases will be divided equally between livestock and big game on non-crucial wildlife areas. If this additional forage is not needed by big game, it will be given to livestock on a temporary, non-renewable basis.</p>	<p>Areawide, additional forage will be provided to either wildlife or watershed.</p>	<p>Additional forage obtained will be assigned to livestock.</p>	<p>Same as Alternative A, however do not allow existing wildlife habitat boundaries to expand as a result of these increases or additional restrictions imposed on minerals.</p>	<p>Provide additional AUMs (over preference) to livestock on a temporary non-renewal basis until identified for crucial wildlife needs. Additional AUMs outside crucial wildlife areas may be assigned to livestock.</p>
<p>If monitoring indicates forage assignments cannot be met and all other management options are exhausted, reductions would be made as follows: If utilization by wildlife or a combination of livestock and wildlife has caused the unmet allocation, temporary non-renewable livestock AUMs would be reduced first, then wildlife use would be reduced. If monitoring shows that reductions are necessary because of livestock use, temporary non-renewable livestock AUMs would be reduced first, then livestock preference would be reduced. The first year, preference reductions would be made by planning unit with an initial 10 percent adjustment. Five-year agreements would be developed and signed at the same time outlining the process for phased reductions to the desired level.</p>	<p>If monitoring indicates forage assignments cannot be met and all other management options are exhausted, livestock preference would be reduced. Adjustments would be attained by decision or agreement. The first year, preference reductions would be made by planning unit with an initial 10 percent adjustment. Five-year agreements would be developed and signed at the same time outlining the process for phased reductions to the desired level.</p>	<p>If monitoring indicates forage assignments cannot be met and all other management options are exhausted, wildlife use would be reduced.</p>	<p>Same as Alternative C.</p>	<p>If monitoring indicates that forage assignments cannot be met and all management options are exhausted, reductions will be made using the following criteria: Livestock temporary non-renewable AUMs would be reduced first. On wildlife crucial habitat, livestock preference would be reduced if there is a conflict between use by livestock and wildlife; if there is no conflict and the reduction is necessary because of overuse by either livestock or wildlife, that animal's numbers would be reduced. On non-crucial wildlife habitat, livestock preference and wildlife numbers would be reduced equally. The first year, preference reductions would be made by planning unit with an initial 10 percent adjustment. Five-year agreements would be developed and signed at the same time outlining the process for phased reductions to the desired level.</p>



TABLE 2-13 (Continued):  
AREAWIDE MANAGEMENT DECISIONS BY ALTERNATIVE

A	B	C	D	E
Special Status Species	Special Status Species	Special Status Species	Special Status Species	Special Status Species
<p>On a case-by-case basis, do not allow surface disturbing activities on special status plants within 48,000 acres of special status plant habitat if it is determined that no individuals would be destroyed.</p>	<p>Close 48,000 acres of special status plant habitat to all surface disturbing activities, grazing and OHV use.</p>	<p>Same as Alternative A</p>	<p>Same as Alternative A</p>	<p>On a case-by case basis, do not allow surface disturbing activities on 48,000 acres of special status plants and their habitat.</p>
<p><b>VISUAL</b></p> <p>Maintain natural/primitive qualities of the VRM Class II areas. Allow only short-term or mitigable visual intrusions within 1/2 mile or line-of-sight (whichever is smaller) in Green River Scenic Corridor ACEC and within 1/4 mile or line-of-sight of the Browns Park-Jones Hole Road or other VRM class II areas. Allow no surface disturbance which would detract from the natural/primitive qualities of the Rainbow Park road.</p>	<p><b>VISUAL</b></p> <p>Protect natural/primitive qualities of the VRM class II areas. Allow only mitigable visual intrusions on VRM Class II lands and within 1/2 mile or line-of-sight of the Green River.</p>	<p><b>VISUAL</b></p> <p>Maintain natural/primitive qualities of the VRM class II areas. Allow only short-term or mitigable visual intrusions within 1/2 mile or line-of-sight of the upper Green River.</p>	<p><b>VISUAL</b></p> <p>Same as Alternative C</p>	<p><b>VISUAL</b></p> <p>Maintain the natural/primitive qualities of the VRM Class II areas. Allow only short-term or mitigable visual intrusions on VRM Class II lands and within 1/2 mile or line of sight of state or federally listed scenic/backcountry byways.</p>
<p><b>WOODLANDS</b></p> <p>Allow harvest of pinyon-juniper firewood (green and dead/down) by permit to meet demand (averages 2,300 cords per year). Do not sell firewood in Crouse Canyon (600 acres) in Level 2.</p>	<p><b>WOODLANDS</b></p> <p>51,300 acres of productive woodlands in level 3 and 4 lands are open to pinyon-juniper (green and dead/down) harvest subject to special or standard conditions, not to exceed sustained yield on productive woodland areas. This equates to an allowable cut of 1,100 cords per year. Level 1 and 2 lands are closed to pinyon-juniper harvest.</p>	<p><b>WOODLANDS</b></p> <p>203,264 acres of productive woodlands in level 3 and 4 lands are open to pinyon-juniper harvest with restrictions, not to exceed sustained yield on productive woodland areas. This equates to an allowable cut of 4,300 cords per year. Level 2 lands are closed to pinyon-juniper (both green and dead/down) harvest.</p>	<p><b>WOODLANDS</b></p> <p>Same as Alternative A</p>	<p><b>WOODLANDS</b></p> <p>172,800 acres of productive woodlands in level 3 and 4 lands are open to pinyon-juniper harvest with restrictions, not to exceed sustained yield on productive woodland areas. This equates to an allowable cut of 3,700 acres per year. Level 2 lands are closed to pinyon-juniper (both green and dead/down) harvest.</p>





NARROW-LEAF EVENING PRIMROSE

SPECIAL STATUS



**TABLE 2-13 (Continued):  
AREAWIDE MANAGEMENT DECISIONS BY ALTERNATIVE**

A	B	C	D	E
<p>The resource area is closed to the harvest of ponderosa pine, cottonwood, other large conifers, and aspen firewood.</p>	<p>Same as Alternative A</p>	<p>Based on demand, 83,700 acres in level 3 and 4 lands are open to the harvest of ponderosa pine, other large conifers, and aspen firewood. Cottonwoods would not be sold.</p>	<p>Based on demand, 101,200 acres in level 3 and 4 lands are open to the harvest of ponderosa pine, other large conifers, cottonwoods and aspen firewood.</p>	<p>On a case by case basis, to meet other resource management goals on 85,900 acres of level 3 and 4 lands sell ponderosa pine, cottonwood, other large conifer, and aspen firewood.</p>
<p>Based on public demand, 202,700 acres within the resource area are open to the harvest of pinyon-juniper Christmas Trees, juniper fenceposts, pine nuts and the digging of live trees and non-barrel cactus with restrictions.</p>	<p>Based on public demand, 294,400 acres within levels 3 and 4 lands are open for the harvest-collection of common native seed, Christmas trees, juniper fenceposts, pinyon pinenuts, live trees and non-barrel cactus.</p>	<p>Based on public demand, 698,500 acres within levels 3 and 4 lands are open for the harvest-collection of common native seed, Christmas trees, juniper fenceposts, and pinyon pinenuts, live trees and non-barrel cactus.</p>	<p>Based on public demand, 704,500 acres within levels 3 and 4 lands are open for the harvest-collection of common native seed, Christmas trees, juniper fenceposts, and pinyon pinenuts, live trees and non-barrel cactus.</p>	<p>Based on public demand, 621,900 acres within levels 3 and 4 lands are open for the harvest-collection of common native seed, Christmas trees, juniper fenceposts, and pinyon pinenuts, live trees and non-barrel cactus.</p>



## PROPOSED DECISIONS FOR SPECIAL EMPHASIS AREAS

Tables 2-14 through 2-18 outline all major decisions for special emphasis areas proposed under Alternatives A through E, respectively. For complete understanding of the decisions proposed for a specific area under a specific alternative, the aforementioned tables must be read in conjunction with the "Management Common to All Alternatives" presented at the beginning of this chapter.







PARIETTE WETLANDS







**TABLE 2-14: ALTERNATIVE A -**

<u>CROUSE CANYON</u>	<u>GREEN RIVER SCENIC CORRIDOR ACEC</u>	<u>NINE MILE CANYON</u>
<p><b>General Management Objective:</b> Manage and protect Crouse Canyon for its outstanding visual and related resource values. Includes a portion of the Diamond Breaks WSA in this area.</p>	<p><b>General Management Objective:</b> Protect outstanding scenic, cultural, riparian, fisheries, and special status species resource values, while enhancing recreation opportunities, and maintaining compatible uses.</p>	<p><b>General Management Objective:</b> Manage the Nine Mile Canyon for the protection of its historical and cultural properties.</p>
<p><b>Total Federal Acreage:</b> 600</p>	<p><b>Total Federal Acreage:</b> 19,400</p>	<p><b>Total Federal Acreage:</b> 38,500</p>
<p><b>MANAGEMENT LEVELS:</b></p> <p>2 - 100% - Visual, riparian, special status species and wildlife habitat</p>	<p><b>MANAGEMENT LEVELS:</b></p> <p>2 - 45% - Floodplain, scenic, special status species, fisheries habitat, developed recreation sites, cultural resources 3 - 55% - Wildlife habitat, scenic values</p>	<p><b>MANAGEMENT LEVELS:</b></p> <p>2 - 2% - Riparian 3 - 90% - sites eligible to be listed on the <u>National Register of Historic Places (NRHP)</u>, erodible soils, potential bighorn sheep habitat 4 - 8% - Remaining resources</p>
<p><b>MANAGEMENT PRESCRIPTIONS:</b></p>	<p><b>MANAGEMENT PRESCRIPTIONS:</b></p>	<p><b>MANAGEMENT PRESCRIPTIONS:</b></p>
	<p><b>Cultural</b> - Continue to manage, interpret, stabilize and protect the historic properties at the John Jarvie Historic Site in accordance with the John Jarvie Cultural Management Plan.</p> <p>Consult with the Ute tribe to protect areas and items of traditional lifeways and religious significance.</p>	<p><b>Cultural</b> - Establish interpretive sites and trails at selected sites; protect cultural values by stabilization and restoration of NRHP listed and eligible sites.</p> <p>Consult with the Ute Tribe to protect areas and items of traditional lifeways and religious significance.</p>
<p><b>Fire</b> - Suppress fire to protect riparian values.</p>	<p><b>Fire</b> - Do not allow prescribed burns within level 2 areas. Suppress wildfires within the area.</p>	
<p><b>Fish and Wildlife</b> - Restrict surface-disturbing activities from December 1 through June 15 on crucial deer winter range.</p> <p>Do not allow new surface-disturbing activities within 1/4 mile of all active eagle and Swainson's hawk nests from February 15 to June 15. These restrictions do not apply to maintenance and operations of producing wells and facilities.</p> <p>Do not allow new surface-disturbing activities within 1/4 mile of active peregrine falcon nests from April 1 to July 15. This restriction does not apply to maintenance and operation of existing programs and facilities.</p> <p>Provide suitable habitat for reintroductions of Colorado cutthroat trout.</p>	<p><b>Fish and Wildlife</b> - Restrict all surface-disturbing activities from December 1 through June 15 on crucial deer winter range.</p> <p>Construct bald eagle perch sites within level 2 areas as necessary, while maintaining the scenic integrity of the riverway.</p> <p>Do not allow new surface-disturbing activities within 1/4 mile of all active eagle and Swainson's hawk nests from February 15 to June 15. These restrictions do not apply to maintenance and operations of producing wells and facilities.</p> <p>Do not allow new surface-disturbing activities within 1/4 mile of active peregrine falcon nests from April 1 to July 15. This restriction does not apply to maintenance and operation of existing programs and facilities.</p>	<p><b>Fish and Wildlife</b> - Restrict all surface-disturbing activities from December 1 to June 15 on crucial deer and elk winter range.</p> <p>Do not allow new surface-disturbing activities within 1/4 mile of all active eagle and Swainson's hawk nests from February 15 to June 15. These restrictions do not apply to maintenance and operations of producing wells and facilities.</p> <p>Do not allow new surface-disturbing activities within 1/2 mile of all active ferruginous hawk nests from March 1 to July 15. These restrictions do not apply to maintenance and operations of producing wells and facilities.</p>



# MANAGEMENT PRESCRIPTIONS FOR SPECIAL EMPHASIS AREAS

<u>PARIETTE WETLANDS</u>	<u>RED CREEK WATERSHED ACEC</u>	<u>RED MOUNTAIN</u>
<p><b>General Management Objective:</b> Develop wetland habitat in Pariette Draw. Provide migratory wetland habitat for special status species. Provide flood and erosion control. Continue to implement the management objectives and actions outlined in the existing habitat management plan.</p>	<p><b>General Management Objective:</b> Manage the watershed to continue the reduction of sediments into Red Creek, and the downstream Green River, by stabilizing channels and streambanks to lessen erosion, and by maintaining or increasing vegetation cover. Enhance wildlife habitat values.</p>	<p><b>General Management Objective:</b> Manage and protect Red Mountain for its unique combination of geologic formations, existing ponderosa pine-bluegrass vegetation community, wildlife and significant cultural values.</p>
<p><b>Total Federal Acreage:</b> 9,000</p>	<p><b>Total Federal Acreage:</b> 24,400</p>	<p><b>Total Federal Acreage:</b> 8,950</p>
<p><b>MANAGEMENT LEVELS:</b></p> <p>2 - 15% - Riparian, wetlands and floodplains</p> <p>3 - 15% - NRHP eligible cultural sites, critical soils, special status plant habitat</p> <p>4 - 70% - Remaining resources</p>	<p><b>MANAGEMENT LEVELS:</b></p> <p>2 - 35% - Steep slopes, riparian habitat, potential National Register cultural site.</p> <p>3 - 65% - Critical soils, crucial big game habitat, sage grouse strutting and nesting areas, potential bighorn sheep habitat, raptor nesting sites.</p>	<p><b>MANAGEMENT LEVELS:</b></p> <p>2 - 5% - Riparian and developed recreation</p> <p>3 - 95% - Crucial winter deer habitat, VRM Class II values</p>
<p><b>MANAGEMENT PRESCRIPTIONS:</b></p>	<p><b>MANAGEMENT PRESCRIPTIONS:</b></p>	<p><b>MANAGEMENT PRESCRIPTIONS:</b></p>
<p><b>Cultural</b> - Consult with the Ute Tribe to protect areas and items of traditional lifeways and religious significance.</p>		<p><b>Cultural</b> - Protect values by stabilization and restoration of NRHP listed or eligible sites.</p> <p>Consult with the Ute Tribe to protect areas and items of traditional lifeways and religious significance.</p>
	<p><b>Fire</b> - Pinyon-juniper woodlands would be allowed to burn under prescribed conditions to meet watershed or wildlife conditions.</p>	<p><b>Fire</b> - Prescribed burning may be allowed in level 3 areas to meet other management objectives as long as the stated resource values are not impaired.</p>
<p><b>Fish and Wildlife</b> - Level 2 lands would be managed for nesting cover for waterfowl, shorebirds and raptors.</p> <p>Continue to implement the management objectives and actions outlined in the existing habitat management plan.</p> <p>Do not allow new surface-disturbing activities within 1/4 mile of all active eagle and Swainson's hawk nests from February 15 to June 15. These restrictions do not apply to maintenance and operations of existing programs and facilities.</p> <p>Do not allow new surface-disturbing activities within 1/4 mile of all active peregrine falcon from April 1 to July 15. These restrictions would not apply to maintenance and operations of existing programs and facilities.</p> <p>Do not allow surface-disturbing activities within 600 feet of active goose nest sites.</p>	<p><b>Fish and Wildlife</b> - Restrict all surface-disturbing activities from December 1 to June 15 on crucial deer and elk winter range.</p> <p>Restrict all surface-disturbing activities within 1,000 feet of sage grouse strutting grounds.</p> <p>Restrict surface-disturbing activities on sage grouse nesting habitat (within 2 miles of sage grouse strutting grounds) from April 1 through June 30.</p> <p>Do not allow new surface-disturbing activities within 1/4 mile of all active eagle and Swainson's hawk nests from February 15 to June 15. These restrictions do not apply to maintenance and operations of existing programs and facilities.</p>	<p><b>Fish and Wildlife</b> - Restrict all surface-disturbing activities from December 1 to June 15 on crucial deer and elk winter range.</p>



**TABLE 2-14 (CONTINUED): ALTERNATIVE A -**

<u>CROUSE CANYON</u>	<u>GREEN RIVER SCENIC CORRIDOR ACEC</u>	<u>NINE MILE CANYON</u>
	<p><b>Fish and Wildlife (Cont)</b> - Provide habitat for the Colorado cutthroat trout, river otter and waterfowl.</p>	<p><b>Fish and Wildlife (Cont)</b> - Do not allow new surface-disturbing activities within 1/4 mile of all active peregrine falcon nests from April 1 to July 15. These restrictions do not apply to maintenance and operations of producing wells and facilities.</p>
<p><b>Lands</b> - Acquire fee title or an interest in nonfederal lands within the Canyon.</p>	<p><b>Lands</b> - Establish a window for a common river crossing at Little Swallow Canyon, Section 31, T2N, R25E, in level 2, the remainder of the area would be a right-of-way avoidance area.</p> <p>Recommend a protective withdrawal be established for level 2 lands with the area to preclude entry under the 1872 General Mining Law.</p>	<p><b>Lands</b> - Allow placement of permitted land uses through the canyon area.</p> <p>Acquire fee title or an interest in lands (e.g., water rights or scenic easements) in Nine Mile Canyon as opportunities develop.</p>
<p><b>Livestock</b> - Do not allow livestock grazing within identified canyon areas to protect riparian values.</p> <p>Do not allow construction of fences within the canyon proper.</p>	<p><b>Livestock</b> - Level 2 lands would be closed to livestock grazing, enforced with fencing where needed (including Little Hole and Bridgeport grazing allotments). Level 3 areas would continue to be grazed in accordance with existing allotment management plans.</p> <p>Temporary, non-renewable livestock grazing could be allowed within level 2 areas only to enhance or maintain desired riparian vegetation production, or to control invasion of undesired plant species.</p> <p>Rangeland improvements associated with management of level 2 areas or areas immediately adjacent to level 2 would be allowed as long as they would not compromise the identified wild and scenic river qualities. Rangeland improvements associated with management of level 3 areas would be allowed as long as they do not compromise the scenic values of the area.</p>	<p><b>Livestock</b> - No grazing would be allowed in Sand Wash Recreation Site. The remainder of the area would be open to livestock grazing with special conditions designed to protect the watershed and riparian values.</p> <p>Develop rangeland improvements and implement grazing prescriptions to improve livestock distribution and management.</p> <p>Take opportunities to eliminate domestic sheep grazing within 10 miles of identified bighorn sheep habitat within the area.</p>



# MANAGEMENT PRESCRIPTIONS FOR SPECIAL EMPHASIS AREAS

<u>PARIETTE WETLANDS</u>	<u>RED CREEK WATERSHED ACEC</u>	<u>RED MOUNTAIN</u>
<p><b>Fish and Wildlife (Cont)</b> - Do not allow surface-disturbing activities that would result in adverse impact to nesting waterfowl during the period March 1 through May 25.</p>		
<p><b>Lands</b> - Level 2 areas would be an avoidance area for placement of new rights-of-way. If level 2 areas are needed for existing permitted activities, route along existing roads. Level 3 and 4 areas would be open for the placement of new rights-of-way with conditions designed to protect the wetlands resource values and standard conditions, respectively.</p> <p>No new access roads may be constructed within 600 feet of goose nesting habitat.</p> <p>Pariette would be a priority area for acquisition of additional water rights and private and state land title.</p>	<p><b>Lands</b> - Establish a right-of-way avoidance area in level 2 lands. Make Level 3 lands available to support permitted activities with special restrictions to protect the identified resource values.</p>	<p><b>Lands</b> - Establish a right-of-way avoidance area covering the entire area.</p>
<p><b>Livestock</b> - Grazing would be allowed at existing preference levels during the period September 1 through March 30 in accordance with the existing allotment management plan. Grazing could be allowed on a case-by-case basis during the period April 1 to August 30 to enhance stated resource values.</p> <p>Develop rangeland improvements and implement grazing prescriptions to improve livestock distribution and management on I and M category allotments.</p>	<p><b>Livestock</b> - All areas would be open to grazing. Areas within riparian zones would be open to prescribed grazing designed to maintain or enhance the watershed and wildlife habitat values. No grazing would be allowed sites listed or eligible for NRHP.</p> <p>Develop rangeland improvements and implement grazing prescriptions to improve livestock distribution and management on I and M category allotments.</p>	<p><b>Livestock</b> - The area is open to livestock grazing with number or seasonal restrictions designed to maintain or enhance the riparian, recreational and scenic values.</p> <p>Develop rangeland improvements and implement grazing prescriptions to improve livestock distribution and management on I and M category allotments.</p>



TABLE 2-14 (CONTINUED): ALTERNATIVE A -

<u>CROUSE CANYON</u>	<u>GREEN RIVER SCENIC CORRIDOR ACEC</u>	<u>NINE MILE CANYON</u>
<p><b>MINERALS</b></p> <p><b>Leasables</b> - The canyon area would be open to leasing with a no-surface- occupancy stipulation.</p>	<p><b>MINERALS</b></p> <p><b>Leasables</b> - Level 3 lands would be open to leasing with special conditions designed to protect and enhance the visual and wildlife resource values. Level 2 lands would be open to leasing with a no-surface-occupancy stipulation.</p>	<p><b>MINERALS</b></p> <p><b>Leasables</b> - Level 4 lands would be open to leasing with standard conditions. Level 3 lands would be open to leasing with special conditions designed to protect the watershed, riparian and bighorn sheep habitat values. Level 2 lands would be open to leasing with a no-surface-occupancy stipulation.</p>
<p><b>Geophysical Activities</b> - The area would be open to nonsurface-disturbing geophysical exploration activities.</p>	<p><b>Geophysical Activities</b> - Level 2 areas would be open to non surface-disturbing exploration, Level 3 areas would be open to geophysical exploration with special conditions designed to enhance and/or protect the scenic and wildlife resource values and protect human safety and recreational values associated with the Green River.</p>	<p><b>Geophysical Activities</b> - The entire area would be open to geophysical activities.</p>
<p><b>Mineral Materials</b> - The canyon area would be closed to mineral material disposals.</p>	<p><b>Mineral Materials</b> - Level 2 areas would be closed to mineral material disposals, the remainder of the area would be open to mineral material disposals with special conditions.</p>	<p><b>Mineral Material</b> - Level 4 lands would be open to mineral material disposals with standard conditions. Allow mineral material disposals on level 3 lands with special restrictions designed to protect the stated resource values. Level 2 lands would be closed to mineral material disposals.</p>
<p><b>Locatables</b> - Apply necessary restrictions to the area to protect the identified resource values.</p>	<p><b>Locatables</b> - Until a protective withdrawal is in place and in force, any mining activities other than casual use would require a mining plan of operations. Development would be restricted by stipulations designed to protect the identified resource values area within the parameters of the 1872 General Mining Law.</p>	<p><b>Locatables</b> - Apply necessary restrictions to the area to protect the identified resource values.</p>
<p><b>Recreation</b> - The area would be closed to OHV use. Such restrictions would not necessarily apply to permitted BLM activities or authorized administrative uses.</p>	<p><b>Recreation</b> - The entire area would be open to OHV use on designated roads and trails only.</p> <p>Within level 2 areas, develop facilities at Cottonwood Grove; expand Bridge Hollow; maintain facilities at Indian Crossing, Pugmire Pocket, Jackson Creek, Red Creek and Swallow Canyon. Recreational facilities would be designed to maintain riparian values and protect special status plant habitats.</p> <p>Continue Special Recreation Management Area (SRMA) status for this area. Revise existing SRMA plan to incorporate management recommendations of 1991 study on recreation use capacity of the Green River (Pratt et.al.).</p>	<p><b>Recreation</b> - The entire area would be open to OHV use except for the Wrinkles Road area which would be open of OHV use on existing roads and trails only. These restrictions would not apply to BLM permitted uses requiring off-road travel.</p> <p>Maintain the recreation facilities at Sand Wash Recreation Site.</p> <p>Recreation sites would be closed to grazing and surface-disturbing activities not related to recreational development.</p>



# MANAGEMENT PRESCRIPTIONS FOR SPECIAL EMPHASIS AREAS

<u>PARIETTE WETLANDS</u>	<u>RED CREEK WATERSHED ACEC</u>	<u>RED MOUNTAIN</u>
<p><b>MINERALS</b></p> <p><b>Leasables</b> – Level 3 lands would be open to leasing with special conditions designed to protect the stated resource values; level 2 lands would be open to leasing with a no-surface-occupancy stipulation.</p>	<p><b>MINERALS</b></p> <p><b>Leasables</b> – Level 3 lands would be open to leasing with special conditions designed to protect or enhance the watershed and wildlife habitat values. Level 2 lands would be open to leasing with a no-surface-occupancy stipulation.</p>	<p><b>MINERALS</b></p> <p><b>Leasables</b> – Level 3 lands would be open to leasing with special conditions designed to protect or enhance the stated resource values of the area, Level 2 lands would be open to leasing with a no-surface-occupancy stipulation.</p> <p>Exploration and development of phosphate within deer and elk winter range would be allowed year round, but would require management actions designed to mitigate both short- and long-term loss of habitat.</p>
<p><b>Geophysical Activities</b> – Level 3 and 4 areas would be open to geophysical exploration with special conditions designed to minimize adverse impacts to waterfowl disturbance and wetlands habitat. Level 2 areas would be closed to geophysical exploration.</p>	<p><b>Geophysical Activities</b> – Level 3 lands, excluding riparian areas, would be open to geophysical exploration with special conditions, designed to maintain or enhance the stated watershed and wildlife habitat values. Level 2 lands would be open to nonsurface-disturbing geophysical activities.</p>	<p><b>Geophysical Activities</b> – Level 3 lands would be open to geophysical exploration with special conditions designed to protect or enhance the resource values.</p>
<p><b>Mineral Materials</b> – Existing borrow areas and other designated areas would be open to mineral material disposals on level 3 and 4 lands. Level 2 areas are closed to mineral material disposals.</p>	<p><b>Mineral Materials</b> – Allow mineral material disposals on Level 3 lands with special restrictions designed to maintain or enhance the stated watershed and wildlife habitat values; do not allow mineral disposals on level 2 lands.</p>	<p><b>Mineral Materials</b> – Allow mineral material disposal on level 3 lands with special restrictions designed to protect or enhance the stated resource values; do not allow mineral material disposals on level 2 lands.</p>
<p><b>Locatables</b> – Apply restrictions to the area to protect the identified resource values.</p>	<p><b>Locatables</b> – Apply restrictions to the area to protect the identified resource values.</p>	<p><b>Locatables</b> – Apply restrictions to the area to protect the identified resource values.</p>
<p><b>Recreation</b> – Level 3 lands, would be open to OHV use with seasonal restrictions designed to protect the wetlands and waterfowl values. Level 2 areas would be open to OHV use on designated roads and trails only. Roads within level 2 determined to be no longer needed would be closed. This restriction would not be applied to permitted BLM activities or authorized administrative uses.</p> <p>Establish an interpretive site and self-guided tour at Pariette Wetlands. Provide a minimum of facilities to protect human health and safety.</p>	<p><b>Recreation</b> – The entire area is open to OHV use on designated roads and trails only. This would not apply to permitted BLM activities or authorized administrative uses.</p> <p>Develop interpretive trails and/or facilities in the Clay Basin Gas field.</p>	<p><b>Recreation</b> – The area would be open to OHV use.</p> <p>Expand the recreation facilities at Dry Fork Canyon.</p> <p>Recreation sites would be closed to grazing and surface-disturbing activities not related to recreation development.</p> <p>Develop 3 miles of nonmotorized trails along Dry Fork and Ashley Creeks. Establish 12 miles of mountain bicycle trails using existing rural roads and trails. Maintain existing trail on Red Mountain.</p>



**TABLE 2-14 (CONTINUED): ALTERNATIVE A -**

<u>CROUSE CANYON</u>	<u>GREEN RIVER SCENIC CORRIDOR</u> ACEC	<u>NINE MILE CANYON</u>
<p><b>Riparian</b> - Allow new surface-disturbing activities outside a 600-foot buffer of Crouse Creek. Allow new surface-disturbing activities within the 600-foot buffer if specifically designed to enhance or maintain riparian values.</p>		<p><b>Riparian</b> - Riparian habitat in early and mid ecological stages would be improved by establishing grazing systems and constructing rangeland improvements designed to enhance the riparian values.</p> <p>Allow surface-disturbing activities outside a 600-foot buffer of live water or perennial streams. Allow surface-disturbing activities within the 600-foot buffer, if designed to enhance riparian values.</p>
<p><b>Soils &amp; Water</b> - Preclude surface-disturbing activities in areas of critical soils during times of saturated soils (usually spring runoff and fall rains).</p>		<p><b>Soils &amp; Water</b> - Upland mountain areas (&gt;12 inches annual precipitation) would be open to surface-disturbance from May 2 through October 31. Slopes of &lt;40% would be open to surface-disturbance.</p> <p>All lands, unless otherwise designated, would be available for major (&gt;1 acre-foot) water development with special conditions.</p> <p>Preclude OHV use and surface-disturbing activities in areas of erodible soils and floodplains during times of saturated soils (usually spring runoff and fall rains).</p>
<p><b>Special Emphasis Areas</b> - Continue to manage the Diamond Breaks WSA under the Interim Management Policy until formal designation has been made by Congress.</p>	<p><b>Special Emphasis Areas</b> - Wild and Scenic River - Recommend for designation the Green River, between Little Hole and the Colorado state line.</p>	
<p><b>Vegetation</b> - Manipulate 200 acres of pinyon-juniper woodlands outside the canyon proper to increase forage production.</p>	<p><b>Vegetation</b> - Manipulate 600 acres of pinyon-juniper woodlands to increase forage production.</p>	<p><b>Vegetation</b> - Allow mechanical, fire, biological, or chemical control of noxious weeds and insect infestations within the area with restrictions to protect desired ground cover and water quality.</p> <p>Manage the vegetation to attain the ecological stage that would most benefit riparian and wildlife in crucial habitat, and manage vegetation in the remaining areas which results in the highest vegetation species diversity.</p> <p>Manipulate 400 acres of pinyon-juniper woodlands to increase forage production.</p> <p>The <u>Sclerocactus glaucus</u> recovery plan as developed by the U.S. Fish and Wildlife Service (1990) would be implemented where necessary.</p>



# MANAGEMENT PRESCRIPTIONS FOR SPECIAL EMPHASIS AREAS

<u>PARIETTE WETLANDS</u>	<u>RED CREEK WATERSHED ACEC</u>	<u>RED MOUNTAIN</u>
<p><b>Recreation (Cont)</b> - Recreation sites would be closed to livestock grazing and surface-disturbing activities not related to recreation development.</p>		
<p><b>Riparian</b> - Allow surface-disturbing activities within the 600-foot buffer, if designed to enhance riparian values or if there is no practical alternative.</p> <p>Level 2 areas in early and mid ecological stages would be improved by refining the existing grazing system and construction of rangeland improvements designed to enhance the riparian values.</p>	<p><b>Riparian</b> - Allow new surface-disturbing activities outside a 600-foot buffer of live water or perennial streams. Allow surface-disturbing activities within the 600-foot buffer, if designed to enhance riparian values or if there is no practical alternative.</p> <p>Riparian habitat in early and mid ecological stages would be improved by refining the existing grazing system and construction of rangeland improvements designed to enhance the riparian and watershed values.</p>	<p><b>Riparian</b> - Allow new surface-disturbing activities outside a 600-foot buffer of live water or perennial streams. Allow surface-disturbing activities within the 600-foot buffer, if designed to enhance riparian values or if there is no practical alternative.</p>
<p><b>Soil &amp; Water</b> - Water quality would be maintained or enhanced through controlled access along drainages, construction of necessary erosion and flood control structures, proper construction and maintenance of access roads throughout the area.</p> <p>Maintain or increase the percent vegetation cover and reduce erosion potential on the soils with high salt content in levels 3 and 4.</p> <p>Preclude OHV use and surface-disturbing activities in areas of critical soils and floodplains during times of saturated soils (usually spring runoff and fall rains).</p>	<p><b>Soil &amp; Water</b> - Slopes &lt;40% are available to surface disturbance.</p> <p>Levels within the area, unless otherwise designated, would be available for major (&gt;1 acre-foot capacity) water developments with special restrictions.</p> <p>Preclude OHV use and surface-disturbing activities in areas of critical soils and floodplains during times of saturated soils (usually spring runoff and fall rains).</p> <p>Continue to implement and monitor management objectives in the Red Creek Watershed Management Plan; review when necessary.</p>	<p><b>Soil and Water</b> - Slopes of &lt;40% are open to surface disturbance.</p> <p>Preclude OHV use and surface-disturbing activities in areas of critical soils and floodplains during times of saturated soils (usually spring runoff and fall rains).</p> <p>Lands within the area, unless otherwise designated, would be available for major (&gt;1 acre-foot capacity) water developments with restrictions designed to maintain or enhance the area's resource values.</p>
<p><b>Vegetation</b> - Allow mechanical, fire, biological, or chemical control of noxious weeds and insect infestations within the area with restrictions designed to protect the special status plant species and riparian habitat.</p> <p>Manage the vegetation to attain the ecological stage most benefitting waterfowl, special status plant species and watershed and soil resources.</p> <p>The <u>Sclerocactus glaucus</u> recovery plan as developed by the U.S. Fish and Wildlife Service (1990) would be implemented where necessary.</p>	<p><b>Vegetation</b> - Allow mechanical, fire, biological, or chemical control of noxious weeds and insect infestations within the area with restrictions designed to protect the watershed and water quality values.</p> <p>Manage the vegetation to attain the ecological stage that would most benefit wildlife in crucial habitat and manage vegetation in the remaining areas which results in the highest vegetation species diversity for watershed protections and enhancement.</p> <p>Manipulate 500 acres of pinyon-juniper woodlands to increase forage production.</p>	<p><b>Vegetation</b> - Allow mechanical, fire, biological, or chemical control of noxious weeds and insect infestations within the area, with restrictions designed to protect desired ground cover and water quality.</p> <p>Manage the vegetation to attain the ecological stage that would most benefit wildlife in crucial habitat and implement vegetation management in the remaining areas which results in the highest vegetation species diversity.</p> <p>Manipulate 200 acres of pinyon-juniper woodlands to increase forage production.</p>



**TABLE 2-14 (CONTINUED): ALTERNATIVE A -**

<u>CROUSE CANYON</u>	<u>GREEN RIVER SCENIC CORRIDOR ACEC</u>	<u>NINE MILE CANYON</u>
<p><b>Visual</b> - Maintain the natural/primitive qualities of the visual resource within the Canyon. Allow only short-term or mitigable visual intrusions designed to protect the visual qualities.</p>	<p><b>Visual</b> - All future management actions would be designed to maintain or enhance the scenic qualities of the area.</p>	<p><b>Visual</b> - Maintain the natural and primitive qualities of the Lower Green River, the identified segments along the Argyle and Nine Mile Creeks and VRM Class 2 areas, and the Backcountry Byway.</p>
<p><b>Woodlands</b> - Do not sell firewood within the Canyon.</p>	<p><b>Woodlands</b> - Level 2 areas would be closed to the sale and harvest of all woodland products. Level 3 areas would be open to sale and/or harvest of pinyon and juniper for firewood on a case-by-case basis.</p>	<p><b>Woodlands</b> - Allow for the harvest of pinyon-juniper firewood by permit.</p> <p>The area would be closed to the harvest of ponderosa pine, other large conifer, cottonwood and aspen firewood.</p> <p>The area would be open to the harvest of pinyon-juniper Christmas trees, fenceposts, pine nuts, and the digging of live trees and nonbarrel cactus with restrictions designed to protect the watershed values.</p>



**MANAGEMENT PRESCRIPTIONS FOR SPECIAL EMPHASIS AREAS**

<u>PARIETTE WETLANDS</u>	<u>RED CREEK WATERSHED ACEC</u>	<u>RED MOUNTAIN</u>
		<p><b>Visual</b> - Maintain the natural and primitive qualities of the VRM Class II areas within this area. Allow only short-term or mitigable visual intrusions within 1/4 mile or line-of-sight (whichever is smaller) of these areas.</p>
<p><b>Woodlands</b> - Cottonwood trees within the area would not be sold or harvested for firewood. Other woodland products in the area could be sold with restrictions to protect the special status plant species, soils, waterfowl and wetland resources.</p>	<p><b>Woodlands</b> - Allow harvest of woodland products by permit only, with stipulations designed to protect watershed values.</p>	<p><b>Woodlands</b> - Area open to the sale and/or harvest of woodland products. The area is closed to the harvest of ponderosa pine and aspen.</p>





LOWER GREEN RIVER







**TABLE 2-15: ALTERNATIVE B -**

<u><b>BROWNS PARK COMPLEX</b></u>	<u><b>LEARS CANYON</b></u>	<u><b>LOWER AND MIDDLE GREEN RIVER SEGMENTS</b></u>	<u><b>NINE MILE CANYON</b></u>
<p><b>General Management Objective:</b> Protect and enhance crucial deer winter range, outstanding scenic, cultural, riparian, fisheries, and special status species resource values, while enhancing recreation opportunities, and maintaining compatible uses. Include the Crouse Canyon scenic area and the two existing Wilderness Study Areas in this management complex.</p>	<p><b>General Management Objective:</b> Retain the area's present natural douglas fir–mountain browse and pinyon–juniper communities as comparison or control areas, and, to provide/set aside an area in a late to climax ecological stage for research and/or educational purposes within these vegetation community types.</p>	<p><b>General Management Objective:</b> Enhance and protect the delicate BLM-administered riparian community adjacent to the Green River for special status fish, bird and plant species, while maintaining the Wild and Scenic River qualities of these river segments.</p>	<p><b>General Management Objective:</b> Protect and enhance the cultural and special status plant species values of the canyon; while enhancing its scenic, recreation and wildlife resource values.</p>
<p><b>Total Federal Acreage:</b> 55,700</p>	<p><b>Total Federal Acreage:</b> 1,400</p>	<p><b>Total Federal Acreage:</b> 12,700</p>	<p><b>Total Federal Acreage:</b> 50,800</p>
<p><b>MANAGEMENT LEVELS:</b></p> <p>1 - 25% - Existing recreation sites, cultural sites eligible for or listed on the <u>National Register of Historic Places</u> (NRHP), Green River floodplain, high visual (including Crouse Canyon), and critical soils resource values. 2 - 65% - Crucial deer winter habitat, raptor sites, primitive/natural areas, high sensitivity archeological areas, sage grouse strutting areas, and potential recreation areas. 3 - 10% - Potential bighorn sheep habitat, sage grouse nesting habitat, and VRM Class II areas.</p>	<p><b>MANAGEMENT LEVELS:</b></p> <p>2 - 100% - Relict vegetation community (supporting resource values: critical soils, crucial big game habitat, cultural and primitive/natural resource values).</p>	<p><b>MANAGEMENT LEVELS:</b></p> <p>1 - 79% River viewshed, Riparian, cultural sites eligible for or listed on NRHP, special status species habitat, highly erodible soils. 2 - 12% - primitive/ natural areas, raptor habitat, critical watersheds, potential recreation areas, high salt-containing soils, high potential archeological values, scenic qualities, and National Historic Landmark. 3 - 9% - Remaining resources.</p>	<p><b>MANAGEMENT LEVELS:</b></p> <p>1 - 10% - Cultural sites eligible or listed on NRHP, riparian habitat, special status plant habitat, potential recreation sites, highly erodible soils. 2 - 15% - Scenic and recreational values of the Green River, Nine Mile and Argyle Creeks, the existing Sand Wash Recreation Site, primitive/natural areas, raptor and crucial big game winter habitat, and high sensitivity cultural areas. 3 - 65% - Scenic values associated with the Backcountry Byway, potential bighorn sheep habitat. 4 - 10%- Remaining resources</p>
<p><b>MANAGEMENT PRESCRIPTIONS:</b></p>	<p><b>MANAGEMENT PRESCRIPTIONS:</b></p>	<p><b>MANAGEMENT PRESCRIPTIONS:</b></p>	<p><b>MANAGEMENT PRESCRIPTIONS:</b></p>
<p><b>Cultural</b> - Allocate cultural sites including ethnographic properties into three classifications: (1) information potential, (2) public values, and (3) conservation. See Appendix 1 for a listing of which types of sites would be allocated to each classification.</p>		<p><b>Cultural</b> - Allocate cultural sites including ethnographic properties into three classifications: (1) information potential, (2) public values, and (3) conservation. See Appendix 1 for a listing of which types of sites would be allocated to each classification.</p> <p>Do not allow surface disturbance or OHV use on high cultural sensitivity (density) areas. Establish a 200-foot protection buffer around cultural sites eligible or listed on NRHP, and the Desolation Canyon National Historic Landmark.</p>	<p><b>Cultural</b> - Allocate cultural sites including ethnographic properties into three classifications: (1) information potential, (2) public values, and (3) conservation. See Appendix 1 for a listing of which types of sites would be allocated to each classification. Establish interpretive sites and trails at selected sites.</p> <p>Do not allow surface disturbance or OHV use on high cultural sensitivity (density) areas. Establish a 200-foot protection buffer around sites eligible or listed on NRHP.</p>



# MANAGEMENT PRESCRIPTIONS FOR SPECIAL EMPHASIS AREAS

<u>PARIETTE WETLANDS</u>	<u>RED CREEK WATERSHED ACEC</u>	<u>RED MOUNTAIN-DRY FORK COMPLEX</u>
<p><b>General Management Objective:</b> Enhance and protect the wetlands community and associated habitat adjacent to Pariette and Castle Peak Washes, ensuring continued waterfowl production and no long-term deterioration of the water quality in Pariette Wash; reduce sedimentation to the Green River by stabilizing streambanks and water channels; while meeting the management objectives of the final recovery plans for the special status species associated with the area.</p>	<p><b>General Management Objective:</b> Manage the watershed to continue the reduction of sedimentation into Red Creek, and the downstream Green River, by stabilizing channels and streambanks to lessen erosion, and by maintaining or increasing vegetation cover; and, enhance wildlife habitat values.</p>	<p><b>General Management Objective:</b> Protect cultural sites eligible or listed on the National Register of Historic Places (NRHP), significant paleontological sites, and relict vegetation communities; enhance supporting resource values of wildlife habitat, municipal watershed, riparian and scenic values; while allowing compatible uses.</p>
<p><b>Total Federal Acreage:</b> 11,600</p>	<p><b>Total Federal Acreage:</b> 24,400</p>	<p><b>Total Federal Acreage:</b> 25,800</p>
<p><b>MANAGEMENT LEVELS:</b></p> <p>1 - 92% - Riparian and special status species habitats, potential National Register-quality cultural sites. 2 - 8% - Floodplains, raptor habitat, high salt-containing soils, potential recreation sites, high sensitivity archeological area. 3 - &lt;1% - Antelope habitat and potential black-footed ferret reintroduction areas.</p>	<p><b>MANAGEMENT LEVELS:</b></p> <p>1 - 10% - Highly erodible soils and riparian habitat. 2 - 50% - Crucial big game habitat, high salt-containing soils, sage grouse strutting grounds, high sensitivity cultural areas. 3 - 40% - Sage grouse nesting area and antelope habitat.</p>	<p><b>MANAGEMENT LEVELS:</b></p> <p>1 - 40% - Relict vegetation communities, developed recreation sites, municipal watershed, riparian, and highly erodible soils. 2 - 50% - High sensitivity (density) cultural zones and significant paleontological zones, high salt-containing soils, crucial big game habitat, and potential recreation sites. 3 - 10% - Potential bighorn sheep habitat, and VRM Class II resources.</p>
<p><b>MANAGEMENT PRESCRIPTIONS:</b></p>	<p><b>MANAGEMENT PRESCRIPTIONS:</b></p>	<p><b>MANAGEMENT PRESCRIPTIONS:</b></p>
<p><b>Cultural</b> - Allocate cultural sites including ethnographic properties into three classifications: (1) information potential, (2) public values, and (3) conservation. See Appendix 1 for a listing of which types of sites would be allocated to each classification.</p> <p>Coordinate with the Ute Tribe to protect areas and items of traditional lifeways or religious significance.</p>	<p><b>Cultural</b> - Allocate cultural sites including ethnographic properties into three classifications: (1) information potential, (2) public values, and (3) conservation. See Appendix 1 for a listing of which types of sites would be allocated to each classification.</p> <p>Coordinate with the Ute Tribe to protect areas and items of traditional lifeways or religious significance.</p>	<p><b>Cultural</b> - Allocate cultural sites including ethnographic properties into three classifications: (1) information potential, (2) public values, and (3) conservation. See Appendix 1 for a listing of which types of sites would be allocated to each classification.</p> <p>Coordinate with the Ute Tribe to protect areas and items of traditional lifeways or religious significance.</p>



**TABLE 2-15 (CONTINUED): ALTERNATIVE B -**

<u><b>BROWNS PARK COMPLEX</b></u>	<u><b>LEARS CANYON</b></u>	<u><b>LOWER AND MIDDLE GREEN RIVER SEGMENTS</b></u>	<u><b>NINE MILE CANYON</b></u>
<p><b>Cultural (Cont)</b> - Continue to manage, interpret, stabilize and protect the historic properties at the John Jarvie National Historic District under the existing cultural resource management plan. Develop facilities at the Old Rock Saloon. Develop a self-guided tour of important historic structures and locations in the Complex.</p> <p>Coordinate with the Ute Tribe to protect areas and items of traditional lifeways and religious significance.</p> <p>Do not allow surface disturbance or OHV use on high sensitivity (density) areas. Establish a 200-foot protection buffer around sites eligible or listed on NRHP and the John Jarvie National Historic District.</p>			<p><b>Cultural (cont)</b> - Develop facilities as needed to protect the natural systems on approximately 5 miles of hiking, horseback and mountain bicycle trails in primitive recreation use areas. Include a facility to interpret and manage use.</p>
<p><b>Fire</b> - Pinyon-juniper woodlands would be allowed to burn under prescribed conditions in level 2 and 3 areas to enhance or expand big game habitat. Wildfires within the sagebrush and riparian zones would be fully suppressed.</p>	<p><b>Fire</b> - Prescribed burning may be allowed in the pinyon-juniper community to maintain a vigorous, healthy condition of the existing native vegetation community, or to support critical soil or crucial big game habitat management objectives. No more than 50% of the pinyon-juniper community or 40% of the douglas fir-mountain browse community would be allowed to burn during the life of this plan.</p>		
<p><b>Fish and Wildlife</b> - Do not allow activities resulting in adverse impacts to wintering deer from December 1 through June 15 on crucial deer winter range.</p> <p>Do not allow livestock grazing, OHV use, and surface-disturbing activities within 1/2 mile of sage grouse strutting grounds or known nesting sites year-round. Within 6 miles of strutting grounds (nesting areas) allow no surface-disturbing activities from March 1 through June 30.</p> <p>Construct bald eagle perch sites within level 1 areas as necessary, while maintaining the scenic integrity of the Green River.</p>	<p><b>Fish and Wildlife</b> - Do not allow activities that would result in adverse impacts to wintering deer from December 1 through June 15 on crucial big game winter range.</p>	<p><b>Fish and Wildlife</b> - Establish raptor protection zones in which no construction, OHV use or disturbing activities (including noise) would be allowed within 1/2 mile of active eagle or Swainson's hawk nests.</p> <p>Establish raptor protection zones in which no construction, OHV use or disturbing activities (including noise) would be allowed within 1 mile of active ferruginous hawk nests.</p> <p>Establish raptor protection zones in which no construction or disturbing activities (including noise) would be allowed within 1 mile of active peregrine falcon nests.</p>	<p><b>Fish and Wildlife</b> - Do not allow activities that would result in adverse impacts to wildlife from December 1 through June 15 on crucial big game winter habitat.</p> <p>Establish raptor protection zones in which no construction, OHV use or disturbing activities, including noise, would be allowed within 1/2 mile of active eagle or Swainson's hawk nests.</p> <p>Establish raptor protection zones in which no construction or disturbing activities would be allowed within 1 mile of active peregrine falcon or ferruginous hawk nests.</p>



# MANAGEMENT PRESCRIPTIONS FOR SPECIAL EMPHASIS AREAS

<u>PARIETTE WETLANDS</u>	<u>RED CREEK WATERSHED ACEC</u>	<u>RED MOUNTAIN-DRY FORK COMPLEX</u>
<p><b>Cultural (Cont)</b> - Do not allow surface disturbance or OHV use on high sensitivity (density) zones. Establish a 200-foot protection buffer around sites eligible or listed on NRHP.</p>	<p><b>Cultural (Cont)</b> - Do not allow surface disturbance or OHV use on high sensitivity (density) zones. Establish a 200-foot protection buffer around sites eligible or listed on NRHP.</p>	<p><b>Cultural (Cont)</b> - Do not allow surface disturbance or OHV use on high sensitivity (density) zones. Establish a 200-foot protection buffer around sites eligible or listed on NRHP.</p>
<p><b>Fire</b> - Wildfire within the riparian ecosystem would be suppressed.</p>	<p><b>Fire</b> - Pinyon-juniper woodlands would be allowed to burn under prescribed conditions to meet watershed or wildlife objectives.</p>	<p><b>Fire</b> - Maintain the natural role of fire within the relict vegetation communities; however, large-scale fires would not be allowed to kill more than 3% of the ponderosa pine on Red Mountain or 50% of the sagebrush-mountain browse in Castle Cove relict vegetation communities over the life of this RMP. Outside of the relict vegetation communities allow fires to burn under prescribed conditions only to enhance the stated ACEC values.</p>
<p><b>Fish and Wildlife</b> - Do not allow surface-disturbing activities that would result in adverse impact to nesting waterfowl during the period of March 1 to May 25.</p> <p>Do not allow surface-disturbing activities within 1/8 mile of active goose nest sites.</p> <p>Establish raptor protection zones in which no construction, OHV use or disturbing activities (including noise) will be allowed within 1/2 mile of active eagle or Swainson's hawk nests.</p>	<p><b>Fish and Wildlife</b> - Do not allow activities that would result in adverse impacts to wildlife from December 1 through June 15 on crucial deer and elk habitat.</p> <p>Do not allow surface-disturbing activities and OHV use from May 1 to June 30 on antelope fawning areas.</p> <p>Do not allow grazing, OHV use and surface-disturbing activities within 1/2 mile of sage grouse strutting grounds or known nesting sites.</p>	<p><b>Fish and Wildlife</b> - Do not allow activities that would result in adverse impacts to wildlife from December 1 through June 15 on crucial deer and elk habitat.</p> <p>Provide habitat and allow for the reintroduction of upland game and bighorn sheep.</p>



**TABLE 2-10 (CONTINUED): ALTERNATIVE B -**

<u>BROWNS PARK COMPLEX</u>	<u>LEARS CANYON</u>	<u>LOWER AND MIDDLE GREEN RIVER SEGMENTS</u>	<u>NINE MILE CANYON</u>
<p><b>Fish and Wildlife (Cont) -</b> Establish raptor protection zones in which no construction, OHV use or disturbing activities (including noise) will be allowed within 1/2 mile of active eagle or Swainson's hawk nests.</p> <p>Establish raptor protection zones in which no construction or disturbing activities (including noise) would be allowed within 1 mile of active peregrine falcon and ferruginous hawk nests.</p> <p>Provide habitat and allow for reintroductions of Colorado cutthroat, bighorn sheep, river otter and upland game birds.</p>		<p><b>Fish and Wildlife (Cont) -</b> Implement the management guidelines to the extent possible as outlined in the existing recovery plans for the federally-listed fish species occurring within this area.</p> <p>Construct as needed, eagle roost sites along the river with restrictions designed to blend with the visual resources.</p>	<p><b>Fish and Wildlife (Cont) -</b> Provide habitat and allow for reintroductions of Colorado cutthroat, bighorn sheep, moose and upland game birds.</p>
<p><b>Lands -</b> Establish a right-of-way exclusion area on level 1 lands and a right-of-way avoidance area on level 2 areas of the complex. Make level 3 lands available to support permitted activities with special restrictions designed to maintain the wildlife and scenic values.</p> <p>Priority would be given for the resolution of the existing airport trespasses at Willow Creek and Taylor Flat by removal and restoration or cooperative agreement only.</p> <p>Recommend protective withdrawals on level 1 and 2 areas within the complex to preclude entry under the 1872 General Mining Law or agricultural entry.</p>	<p><b>Lands -</b> Establish a rights-of-way exclusion area covering the entire area.</p> <p>Recommend a protective withdrawal precluding mineral or agricultural entry on the entire area.</p>	<p><b>Lands -</b> Establish a right-of-way exclusion area on level 1 lands and a right-of-way avoidance area within Level 2 lands.</p> <p>Recommend protective withdrawals on level 1 and 2 lands to preclude entry under the 1872 General Mining Law.</p> <p>Acquire, where possible, fee title or interest in lands (e.g., water rights) within or adjacent to level 1 lands.</p>	<p><b>Lands -</b> Establish a right-of-way exclusion area on level 1 areas and a right-of-way avoidance area on Level 2 lands. Make Level 3 lands available to support permitted activities with special restrictions designed to protect the stated resource values.</p> <p>Recommend protective withdrawals on level 1 and 2 lands to preclude mineral or agricultural entry.</p> <p>Acquire fee title or interest in lands (e.g., water rights) within or adjacent to level 1 lands as opportunities become available.</p>



# MANAGEMENT PRESCRIPTIONS FOR SPECIAL EMPHASIS AREAS

<u>PARIETTE WETLANDS</u>	<u>RED CREEK WATERSHED ACEC</u>	<u>RED MOUNTAIN-DRY FORK COMPLEX</u>
<p><b>Fish and Wildlife (Cont)</b> - Establish raptor protection zones in which no construction or disturbing activities (including noise) would be allowed within 1 mile of active peregrine falcon and ferruginous hawk nests.</p> <p>Maintain existing habitat in Eight-Mile Flat identified for black-footed ferret reintroduction by avoiding surface disturbance. Do not allow any activities that would render the habitat unsuitable of future reintroductions. Establish raptor protection zones in which no construction or disturbing activities (does not apply to rafting) would be allowed within 1 mile of occupied peregrine falcon nests from February 1 through August 31. Would not apply if impacts could be mitigated through other management actions.</p>	<p><b>Fish and Wildlife (Cont)</b> - Do not allow grazing, OHV use and surface-disturbing activities within 6 miles of sage grouse strutting grounds (nesting habitat) between March 1 and June 30.</p> <p>Provide habitat and allow for the reintroduction of bighorn sheep, and upland game.</p>	
<p><b>Lands</b> - Establish a right-of-way exclusion area on level 1 lands and an avoidance area on level 2 lands. Make level 3 lands available to placement of rights-of-way with special restrictions designed to protect the stated resource values in the area.</p> <p>Recommend protective withdrawals on level 1 and 2 lands to preclude entry under the 1872 General Mining Law or agricultural entry.</p> <p>Acquire fee title or interest in lands (e.g., water rights) within or effecting the Pariette drainage as opportunities develop.</p>	<p><b>Lands</b> - Establish a right-of-way exclusion area on level 1 lands and an avoidance area on level 2 lands. Make level 3 lands available to placement of rights-of-way with special restrictions designed to protect the stated resource values in the area.</p> <p>Recommend protective withdrawals on level 1 and 2 lands to preclude entry under the 1872 General Mining Law or agricultural entry.</p>	<p><b>Lands</b> - Acquire public nonmotorized access across established roads and trails to enhance recreational opportunities along Ashley Creek. Acquire legal motorized access to Red Mountain.</p> <p>Establish a right-of-way exclusion area on level 1 lands and an avoidance area on level 2 lands. Make level 3 lands available to placement of rights-of-way with special restrictions designed to protect the stated resource values in the area.</p> <p>Recommend protective withdrawals on level 1 and 2 lands to preclude entry under the 1872 General Mining Law or agricultural entry.</p>



TABLE 2-15 (CONTINUED): ALTERNATIVE B -

<u>BROWNS PARK COMPLEX</u>	<u>LEARS CANYON</u>	<u>LOWER AND MIDDLE GREEN RIVER SEGMENTS</u>	<u>NINE MILE CANYON</u>
<p><b>Livestock</b> - Level 2 and 3 lands would be open to grazing under improved grazing strategies to maintain or enhance the wildlife, riparian, and vegetation values. Level 1 lands would be closed to grazing.</p> <p>No domestic sheep grazing would be allowed. Cattle grazing may be allowed only in areas outside identified bighorn sheep habitat.</p> <p>Allow rangeland improvements only to maintain or improve the level 1 and 2 resources values of the complex. Develop rangeland improvements and grazing prescriptions on level 3 lands to enhance wildlife habitat.</p> <p>Fence to restrict or prevent livestock from moving into the Green River floodplain or bighorn sheep habitat areas.</p>	<p><b>Livestock</b> - Do not allow livestock grazing within the area.</p>	<p><b>Livestock</b> - Level 3 lands would be open to grazing. Level 2 lands would be open to livestock grazing with number or seasonal restrictions designed to maintain or enhance the stated resource values. Grazing within level 1 lands would limited to those areas in late or climax ecological condition where grazing is currently taking place. No grazing would be allowed in the Sand Wash Recreation Site. Develop rangeland improvements only to maintain or improve the values present in level 1 and 2 lands.</p> <p>No livestock grazing would be allowed within 10 miles of identified bighorn sheep reintroduction areas.</p>	<p><b>Livestock</b> - Level 2 and 3 lands would be open to grazing under improved grazing strategies to enhance or maintain the identified values. Grazing within level 1 lands would limited to those areas in late or climax ecological condition where grazing is already taking place. No grazing would be allowed in the Sand Wash Recreation Site and cultural sites eligible for or listed on NRHP.</p> <p>Develop rangeland improvements only to maintain or improve the stated values within level 1 and 2 areas.</p> <p>No livestock grazing would be allowed within 10 miles of identified bighorn sheep reintroduction areas.</p>
<p><b>MINERALS</b></p> <p><b>Leasables</b> - Level 3 lands would be open to leasing with special conditions designed to protect the visual, wildlife, and soils resource values, all level 1 and 2 lands, except for 100 acres, would be open to leasing with no-surface-occupancy stipulations; the remaining 100 acres would be closed to leasing.</p>	<p><b>MINERALS</b></p> <p><b>Leasables</b> - The area would be open to mineral leasing with a no-surface-occupancy stipulation.</p>	<p><b>MINERALS</b></p> <p><b>Leasables</b> - Level 1 and 2 areas would be open to leasing with a no-surface-occupancy stipulation.</p>	<p><b>MINERALS</b></p> <p><b>Leasables</b> - Level 3 lands would be open to leasing with special conditions designed to protect the stated resource values; level 1 and 2 lands would be open to leasing with a no-surface-occupancy stipulation.</p>
<p><b>Geophysical Activities</b> - Level 2 and 3 areas would be open to geophysical exploration with special conditions designed to enhance and/or protect the values of the complex. Level 1 lands would be open to nonsurface-disturbing geophysical activities.</p>	<p><b>Geophysical Activities</b> - The area would be open to nonsurface-disturbing geophysical activities.</p>	<p><b>Geophysical Activities</b> - Level 2 would be open to geophysical activities with restrictions designed to protect those stated resource values. Level 1 lands would be open to nonsurface-disturbing geophysical activities.</p>	<p><b>Geophysical Activities</b> - Level 3 and level 2 would be open to geophysical exploration with special conditions designed to maintain the resource values; level 1 lands would be open to nonsurface-disturbing geophysical activity.</p>



# MANAGEMENT PRESCRIPTIONS FOR SPECIAL EMPHASIS AREAS

<u>PARIETTE WETLANDS</u>	<u>RED CREEK WATERSHED ACEC</u>	<u>RED MOUNTAIN-DRY FORK COMPLEX</u>
<p><b>Livestock</b> - Allow grazing within level 2 and 3 lands with number and/or seasonal restrictions. Grazing within level 1 would be limited to those areas in late or climax ecological condition where grazing is currently taking place.</p> <p>Allow rangeland improvements only to maintain or improve the values present on level 1 and 2 lands. Develop rangeland improvements and grazing prescriptions on level 3 lands to enhance vegetation production.</p>	<p><b>Livestock</b> - Allow grazing within level 2 and 3 lands with number and/or seasonal restrictions designed to maintain or enhance the watershed and wildlife habitat values. Grazing within level 1 lands would be limited to those areas in late or climax ecological condition where grazing is currently taking place.</p> <p>Develop rangeland improvements only to maintain or improve the values identified in the level 1 and 2 areas. Develop rangeland improvements and grazing prescriptions on level 3 lands designed to enhance watershed and wildlife habitat values.</p>	<p><b>Livestock</b> - Allow grazing within level 2 and 3 areas with number and/or seasonal restrictions designed to maintain or enhance the stated resource values for those levels. Grazing within level 1 lands would be limited to those areas in late or climax condition where grazing is actively taking place.</p> <p>Develop rangeland improvements only to maintain or improve the values identified in the level 1 and 2 areas. Develop rangeland improvements and grazing prescriptions on level 3 lands designed to enhance watershed and wildlife habitat values.</p>
<p><b>MINERALS</b></p> <p><b>Leasables</b> - Level 3 lands would be open to leasing with special conditions designed to protect the stated resource values; level 1 and 2 lands would be open to leasing with a no-surface-occupancy stipulation.</p>	<p><b>MINERALS</b></p> <p><b>Leasables</b> - Level 3 lands would be open to leasing with special conditions designed to protect or enhance the watershed and wildlife habitat values. All level 1 and 2 lands, except for approximately 100 acres, would be open to leasing with a no-surface-occupancy stipulation; the remaining 100 acres would be closed to leasing.</p>	<p><b>MINERALS</b></p> <p><b>Leasables</b> - Level 3 lands would be open to leasing with special conditions designed to protect or enhance the stated resource values of the area; all level 1 and 2 lands, except for 100 acres, would be open to leasing with a no-surface-occupancy stipulation; the remaining 100 acres would be closed to leasing.</p> <p>Exploration and development of phosphate within crucial deer and elk winter range would be allowed year round, but would require management actions designed to mitigate both short- and long-term loss of habitat.</p>
<p><b>Geophysical Activities</b> - Level 2 and 3 areas would be open to geophysical exploration with special conditions designed to enhance and/or protect the values of the area. Level 1 lands would be open to nonsurface-disturbing geophysical activities.</p>	<p><b>Geophysical Activities</b> - Level 2 and 3 lands, would be open to geophysical exploration with special conditions, designed to maintain or enhance the stated watershed and wildlife habitat values. Level 1 lands would be open to nonsurface-disturbing geophysical activities.</p>	<p><b>Geophysical Activities</b> - Level 2 and 3 lands, would be open to geophysical exploration with special conditions designed to protect or enhance the identified resource values; level 1 lands would be open to nonsurface-disturbing geophysical activities.</p>



**TABLE 2-15 (CONTINUED): ALTERNATIVE B -**

<u><b>BROWNS PARK COMPLEX</b></u>	<u><b>LEARS CANYON</b></u>	<u><b>LOWER AND MIDDLE GREEN RIVER SEGMENTS</b></u>	<u><b>NINE MILE CANYON</b></u>
<p><b>Mineral Materials</b> - Allow mineral material disposal on Level 3 lands with special restrictions designed to protect/enhance the stated values of the complex. Level 1 and 2 lands would be closed to mineral material disposals.</p>	<p><b>Mineral Materials</b> - Do not allow mineral material disposal.</p>	<p><b>Mineral Materials</b> - Do not allow mineral material disposals on the area.</p>	<p><b>Mineral Material</b> - Allow mineral material disposals on level 3 lands with special restrictions designed to protect those stated resource values; do not allow mineral material disposals on level 1 and 2 lands.</p>
<p><b>Locatables</b> - Any mining activity other than casual use would require a mining plan of operations. Development would be restricted by stipulations designed to protect the natural values of the area within the parameters of the 1872 General Mining Law. For the level 1 areas, the preceding would be applied until a protective withdrawal is obtained.</p>	<p><b>Locatables</b> - Until a protective withdrawal is in place and in force, any mining activity other than casual use would require a mining plan of operations. Development would be restricted by stipulations designed to protect the vegetation community in the area within the parameters of the 1872 General Mining Law.</p>	<p><b>Locatables</b> - Until a protective withdrawal is in place and in force, any mining activity other than casual use would require a mining plan of operations. Development would be restricted by stipulations designed to protect the vegetation community in the area within the parameters of the 1872 General Mining Law.</p>	<p><b>Locatables</b> - Any mining activity other than casual use would require a mining plan of operations. Development would be restricted by stipulations designed to protect the natural and primitive values of the area within the parameters of the 1872 General Mining Law.</p>
<p><b>Recreation</b> - Level 3 lands would be open to OHV use; Level 2 except for the semi-primitive non-motorized areas and the developed recreation sites in level 1 would be open to OHV use on designated roads and trails with seasonal restrictions designed to protect wildlife and soil resource values. Semi-primitive nonmotorized areas within Level 2 and the remaining level 1 lands would be closed to OHV use. Such restrictions would not apply to permitted BLM activities or authorized administrative uses.</p> <p>Continue Special Recreation Management Area (SRMA) status along 17,000 acres of the Green River Scenic Corridor. Revise existing SRMA management plan recommendations of the 1991 study of recreation use capacity of the Green River (Pratt et.al.).</p> <p>Maintain the high quality recreation experience along the Green River by limiting the number of float boaters on the river through establishment of a reservation type system of use.</p>	<p><b>Recreation</b> - The area would be closed to OHV use due to the clear dominance of the primitive/natural qualities (90%) of the area. This would not apply to permitted BLM activities or authorized administrative uses.</p> <p>Maintain the primitive-natural character and values of this area by closing it to motorized surface-disturbing activities.</p>	<p><b>Recreation</b> - Level 2 lands, excluding the primitive/natural area, would be open to OHV use on designated roads and trails and/or seasonal stipulations. Level 1 and the primitive/natural area would be closed to OHV use. This would not apply to permitted BLM activities or authorized administrative uses.</p> <p>Develop facilities to protect natural systems along non-motorized trails on the Green River segments.</p> <p>Maintain the character and value of the primitive/natural area within this area by closing it to OHV use and motorized surface-disturbing activities.</p>	<p><b>Recreation</b> - Level 3 lands would be open to OHV use. Level 2 (except for the primitive/natural area) would be open to OHV use on designated roads and trails with seasonal restrictions designed to protect the watershed, soils and wildlife resource values. The primitive/natural areas, within level 2 and the level 1 lands, would be closed to OHV use. This would not apply to permitted BLM activities or authorized administrative uses.</p> <p>Recreation sites would be closed to grazing and surface-disturbing activities not related to recreational development.</p> <p>Maintain the character and values of the identified primitive/natural area by closing the area to OHV use and motorized surface-disturbing activities.</p> <p>Establish an SRMA that would cover the subject area.</p>



# MANAGEMENT PRESCRIPTIONS FOR SPECIAL EMPHASIS AREAS

<u>PARIETTE WETLANDS</u>	<u>RED CREEK WATERSHED ACEC</u>	<u>RED MOUNTAIN-DRY FORK COMPLEX</u>
<p><b>Mineral Materials</b> - Allow mineral material disposals on level 3 lands with special restrictions designed to protect watershed values. Do not allow mineral material disposals on level 1 and 2 areas.</p>	<p><b>Mineral Materials</b> - Allow mineral material disposals on Level 3 lands with special restrictions designed to maintain or enhance the stated resources values; do not allow mineral material disposals on level 1 and 2 lands.</p>	<p><b>Mineral Materials</b> - Allow mineral material disposal on level 3 lands with special restrictions designed to protect or enhance the resource values of the level; do not allow mineral material disposals on level 1 and 2 lands.</p>
<p><b>Locatables</b> - Until a protective withdrawal is in place and in force, any mining activity other than casual use would require a mining plan of operations. Development would be restricted by stipulations designed to protect the vegetation community in the area within the parameters of the 1872 General Mining Law.</p>	<p><b>Locatables</b> - Until a protective withdrawal is in place and in force, any mining activity other than casual use would require a mining plan of operations. Development would be restricted by stipulations designed to protect the vegetation community in the area within the parameters of the 1872 General Mining Law.</p>	<p><b>Locatables</b> - Until a protective withdrawal is in place and in force, any mining activity other than casual use would require a mining plan of operations. Development would be restricted by stipulations designed to protect the vegetation community in the area within the parameters of the 1872 General Mining Law.</p>
<p><b>Recreation</b> - Level 3 lands, except critical soils, would be open to OHV use with seasonal restrictions designed to protect the watershed and soils values, level 2 lands and the critical soils within level 3 would be open to OHV use on designated roads and trails. This restriction would not be applied to permitted BLM activities or authorized administrative uses.</p> <p>Provide recreation facilities and interpretive trails at Pariette Wetlands.</p> <p>Recreation sites would be closed to livestock grazing and surface-disturbing activities not related to recreation development.</p>	<p><b>Recreation</b> - Level 3 lands, excluding highly erodible soils, would be open to OHV use with seasonal restrictions for the watershed and wildlife protection; level 2 lands and the soils in level 3 would be open to OHV use on designated roads and trails.</p> <p>Develop interpretive trails and/or facilities in the Clay Basin Gas field.</p>	<p><b>Recreation</b> - Level 3 lands, except highly erodible soils, would be open to OHV use with seasonal restrictions; level 1 and 2 lands and highly erodible soils within level 3 would be open to OHV use on designated roads and trails.</p> <p>Develop recreation facilities on Red Mountain outside the relict vegetation community; expand recreation facilities at Dry Fork Canyon.</p> <p>Recreation sites would be closed to grazing and surface-disturbing activities not related to recreation development.</p> <p>Develop an interpretive trail and/or facilities along Brush Creek.</p> <p>Develop 3 miles of nonmotorized trails along Dry Fork and Ashley Creeks. Establish 12 miles of mountain bicycle trails using existing rural roads and trails.</p> <p>Maintain existing trail on Red Mountain. If, however, OHV use occurs off trail after a reasonable program of signing and public education, close trail. Close trail to Moonshine Arch to OHV use.</p> <p>Establish a Special Recreation Management Area (SRMA) that would cover the subject area.</p>



**TABLE 2-15 (CONTINUED): ALTERNATIVE B -**

<u><b>BROWNS PARK COMPLEX</b></u>	<u><b>LEARS CANYON</b></u>	<u><b>LOWER AND MIDDLE GREEN RIVER SEGMENTS</b></u>	<u><b>NINE MILE CANYON</b></u>
<p><b>Recreation (Cont)</b> - Maintain existing facilities at Bridge Hollow, Jackson Creek, Indian Crossing, Pugmire Pocket, Red Creek and Swallow Canyon at their present size (all within Level I). Develop facilities to protect natural systems on non-motorized (i.e., hiking, horseback, and mountain bicycle) trails along the Green River and other primitive recreation use areas within the complex.</p> <p>Recreation sites would be closed to grazing and surface-disturbing activities not related to recreation development.</p> <p>Develop 15 miles of hiking and/or horseback trails along the Green River, Sears Canyon, Beaver and Willow Creeks and other creeks with conditions to protect the riparian values.</p> <p>Maintain the character and values of identified primitive-natural areas within level 2 areas by closing the areas to OHV use and motorized surface-disturbing activities.</p>			
<p><b>Riparian</b> - Construct rangeland improvements and design grazing prescriptions to enhance riparian values within the complex. The improvements would be designed to minimize adverse impacts to the visual and wildlife resource values.</p>		<p><b>Riparian</b> - Riparian habitat in early and mid ecological stages would be protected by closure to grazing and OHV use. Construct rangeland improvements designed to enhance riparian values and to minimize visual and recreational disturbance.</p> <p>Do not allow livestock grazing, OHV use, and new surface-disturbing activities within the 700-foot riparian buffer.</p>	<p><b>Riparian</b> - Riparian habitat in early and mid ecological stages would be protected by closure to livestock grazing and OHV use. Construct rangeland improvements designed to enhance riparian values.</p> <p>Allow no surface-disturbing activities, OHV use or grazing within the established 700-foot riparian buffer.</p>



**MANAGEMENT PRESCRIPTIONS FOR SPECIAL EMPHASIS AREAS**

<u>PARIETTE WETLANDS</u>	<u>RED CREEK WATERSHED ACEC</u>	<u>RED MOUNTAIN-DRY FORK COMPLEX</u>
<p><b>Riparian</b> - Construct rangeland improvements designed to enhance riparian values.</p> <p>Allow no livestock grazing, OHV use and new surface-disturbing activities within a 700-foot buffer of riparian zones.</p>	<p><b>Riparian</b> - Riparian habitat in early and mid ecological stages would be protected by closure to grazing and OHV use. Construct rangeland improvements designed to enhance riparian values.</p> <p>Allow no livestock grazing, OHV use and new surface-disturbing activities within a 700-foot buffer of riparian zones.</p>	<p><b>Riparian</b> - Riparian habitat in early and mid ecological stages would be protected by closure to livestock grazing and OHV use. Construct rangeland improvements designed to enhance riparian values.</p> <p>Allow no livestock grazing, OHV use and new surface-disturbing activities within a 700-foot buffer of riparian zones.</p>



**TABLE 2-15 (CONTINUED): ALTERNATIVE B -**

<u>BROWNS PARK COMPLEX</u>	<u>LEARS CANYON</u>	<u>LOWER AND MIDDLE GREEN RIVER SEGMENTS</u>	<u>NINE MILE CANYON</u>
<p><b>Soils &amp; Water</b> - Allow surface-disturbing activities on critical soils within Level 3 areas of the complex if watershed values are maintained. Surface-disturbing activities could be allowed only to enhance soil or water values on level 1 and 2 areas.</p> <p>Preclude OHV use and surface-disturbing activities in areas of highly erodible soils. Preclude OHV use and surface-disturbing activities in floodplains during times of saturated soils (usually spring runoff and fall rains).</p>		<p><b>Soils &amp; Water</b> - Activities designed to enhance or improve soil or water values would be allowed on the area with restrictions designed to minimize adverse impacts to the recreational and scenic values.</p> <p>Preclude OHV use and surface-disturbing activities in areas of critical soils and floodplains within the area during periods of saturated soils (usually spring runoff and fall rains).</p>	<p><b>Soils &amp; Water</b> - Allow surface-disturbing activities on level 3 lands if watershed values would be maintained. Activities designed to enhance or maintain soil or water values would be allowed on level 1 and 2 areas.</p> <p>Preclude OHV use and surface-disturbing activities in areas of highly erodible soils and floodplains during times of saturated soils (usually spring runoff and fall rains).</p> <p>Level 3 lands would be available for major (&gt;1 acre foot capacity) water developments with special restrictions designed to maintain the existing resource values. Outside of these areas, major water developments could be permitted if the project is consistent with the area's prescriptions.</p> <p>Slopes less than 40% would be open to surface disturbance.</p>
<p><b>Special Emphasis Areas</b> - Wild and Scenic River - Continue to recommend for designation the Green River, between Little Hole and the Colorado state line for inclusion in the system.</p> <p>Wilderness Study Areas - Continue to manage the Diamond Breaks WSA and the West Cold Springs WSA under the Interim Management Policy until formal designation has been made by Congress. Should either one or both not be designated as wilderness manage the area as an integral part of this complex.</p>		<p><b>Special Emphasis Areas</b> - Recommend the lower Green River segment as a scenic river and the middle Green River segment as a recreational river under the Wild and Scenic Rivers Act.</p>	<p><b>Special Emphasis Areas</b> - Recommend Argyle Creek and Nine Mile Creek (segment between Argyle Creek and the Carbon County border) as recreational rivers under the Wild and Scenic Rivers Act. Recommend the Gate Canyon to the boundary with the Lower Green River ACEC nomination segment of Nine Mile Creek as scenic river under the Wild and Scenic Rivers Act.</p>



# MANAGEMENT PRESCRIPTIONS FOR SPECIAL EMPHASIS AREAS

<u>PARIETTE WETLANDS</u>	<u>RED CREEK WATERSHED ACEC</u>	<u>RED MOUNTAIN-DRY FORK COMPLEX</u>
<p><b>Soil &amp; Water</b> - Allow surface-disturbing activities on level 3 lands if watershed protection is maintained.</p> <p>Activities specifically designed to maintain or improve soil or water values would be allowed on level 1 and 2 areas.</p> <p>Preclude OHV use and surface-disturbing activities in areas of critical soils and floodplains during times of saturated soils (usually spring runoff and fall rains).</p>	<p><b>Soil &amp; Water</b> - Allow surface-disturbing activities on level 3 lands if watershed protection is maintained.</p> <p>Activities specifically designed to maintain or improve soil or water values would be allowed on level 1 and 2 areas.</p> <p>Preclude OHV use and surface-disturbing activities in areas of critical soils and floodplains during times of saturated soils (usually spring runoff and fall rains).</p>	<p><b>Soil &amp; Water</b> - Allow surface-disturbing activities on level 3 lands if watershed protection is maintained.</p> <p>Activities specifically designed to maintain or improve soil or water values would be allowed on level 1 and 2 areas, excluding the relict vegetation community within level 1.</p> <p>Preclude OHV use and surface-disturbing activities in areas of critical soils and floodplains during times of saturated soils (usually spring runoff and fall rains).</p>



TABLE 2-15 (CONTINUED): ALTERNATIVE B -

<u>BROWNS PARK COMPLEX</u>	<u>LEARS CANYON</u>	<u>LOWER AND MIDDLE GREEN RIVER SEGMENTS</u>	<u>NINE MILE CANYON</u>
<p><b>Vegetation</b> - Allow only biological control of noxious weeds and insect infestations within the area with restrictions designed to protect ground cover, special status species habitat, water quality and the scenic values of the area.</p> <p>Manage the vegetation in the complex to attain the ecological stage which results in the highest species diversity to meet the habitat needs of wildlife and protects the critical soils values of the complex.</p> <p>Do not allow the removal of sagebrush in level 2 areas unless fully mitigated.</p> <p>Allow for the vegetation treatment of pinyon-juniper within level 2 and level 3 areas for the expansion of big game habitat. Do not allow for the use of chaining as a vegetation treatment method in primitive/natural areas.</p> <p>Develop an activity plan for the proposed-for-listing-as-threatened plant species <u>Spiranthes diluvialis</u>. Should the U.S. Fish and Wildlife Service develop a recovery plan, implement the objectives of that plan.</p> <p>Manipulate 900 acres of pinyon-juniper woodlands for forage production and habitat enhancement.</p>	<p><b>Vegetation</b> - Retain the vegetation compositions in their present late to climax ecological stages.</p> <p>Allow only biological control of noxious weeds and insect infestation within the area to protect watershed values. In the event revegetation following a major surface disturbance, such as a wildfire, is deemed necessary to protect watershed and visual resource values, only site-adapted native species would be used. On small surface-disturbed areas (less than five acres) within the pinyon-juniper community, where other resource values would not be adversely affected, allow natural revegetation to monitor the vegetation community's natural recovery.</p>	<p><b>Vegetation</b> - Allow only biological control of noxious weeds and insect infestations within the area with restrictions designed to protect ground cover, special status species habitat, water quality and the scenic values of the area.</p> <p>Manage the vegetation to attain the ecological stage that would result in the highest vegetation species diversity for the riparian, special status species, and visual resource values of the area.</p>	<p><b>Vegetation</b> - Allow only biological control of noxious weeds and insect infestations within the area with restrictions designed to protect ground cover, special status species habitat, water quality and the scenic values of the area.</p> <p>Manage the vegetation to attain the ecological stage that would result in the highest vegetation species diversity for the riparian, special status species, and visual resource values of the area.</p> <p>The <u>Sclerocactus glaucus</u> recovery plan as developed by the U.S. Fish and Wildlife Service (1990) would be implemented, where necessary. Specific activity plans for the remaining special status plant species would be developed. Should the U.S. Fish and Wildlife Service develop recovery plans, their objectives would be implemented to the extent possible.</p> <p>Manipulate 100 acres of pinyon-juniper woodlands for forage production and habitat enhancement.</p>
<p><b>Visual</b> - Protect natural/ primitive qualities of the VRM Class II areas. Allow only mitigable visual intrusions within 1/2 mile or line-of-sight of the Green River.</p> <p>All management actions would be designed to maintain or enhance the scenic qualities of the complex.</p>	<p><b>Visual</b> - Protect the natural-primitive qualities of the VRM Class II areas by allowing only mitigable visual intrusions.</p>	<p><b>Visual</b> - Protect primitive/ natural qualities and other VRM Class II areas within the area by allowing only mitigable visual intrusions within 1/2 mile or line-of-sight of the Green River.</p>	<p><b>Visual</b> - Maintain the natural and primitive qualities of the Lower Green River, the identified segments along the Argyle and Nine Mile Creeks and VRM Class II areas. Allow only mitigable visual intrusions on these lands and within line-of-sight, up to 1/2 mile, of state or federally-listed scenic/backcountry byways.</p>



# MANAGEMENT PRESCRIPTIONS FOR SPECIAL EMPHASIS AREAS

<u>PARIETTE WETLANDS</u>	<u>RED CREEK WATERSHED ACEC</u>	<u>RED MOUNTAIN-DRY FORK COMPLEX</u>
<p><b>Vegetation</b> - Allow only biological control of noxious weed and insect infestations within the area with restrictions designed to protect special status plant species habitat, desired ground cover and water quality.</p> <p>Manage the vegetation to attain the ecological stage which results in the highest vegetation species diversity for wetlands, waterfowl, soils, special status plant species, and watershed resource values.</p> <p>The <u>Sclerocactus glaucus</u> recovery plan as developed by the U.S. Fish and Wildlife Service (1990) would be implemented where necessary.</p>	<p><b>Vegetation</b> - Allow only biological control of noxious weed and insect infestations within the area with restrictions to protect the watershed and water quality resources.</p> <p>Manage the vegetation to attain the ecological stage which results in the highest vegetation species diversity for watershed and wildlife values.</p> <p>Manipulate 100 acres of pinyon-juniper woodlands for forage production and habitat enhancement.</p>	<p><b>Vegetation</b> - Allow only biological control of noxious weed and insect infestations within the riparian area and the relict vegetation community (level 1) with restrictions to protect the relict vegetation, riparian ground cover and water quality.</p> <p>Outside of the relict vegetation community, manage the vegetation to attain the ecological stage which results in the highest vegetation species diversity for wildlife and scenic values. Within the relict vegetation community, allow the area to maintain its late to climax ecological stages.</p> <p>In the event revegetation following a major surface disturbance, such as fire, is deemed necessary to protect watershed and/or visual resource values within the relict vegetation community, only site-adapted native species would be used.</p> <p>Manipulate 250 acres of pinyon-juniper woodlands for forage production and habitat enhancement.</p>
		<p><b>Visual</b> - Protect natural/ primitive qualities of the VRM Class II areas by allowing only mitigable visual intrusions.</p>



**TABLE 2-15 (CONTINUED): ALTERNATIVE B -**

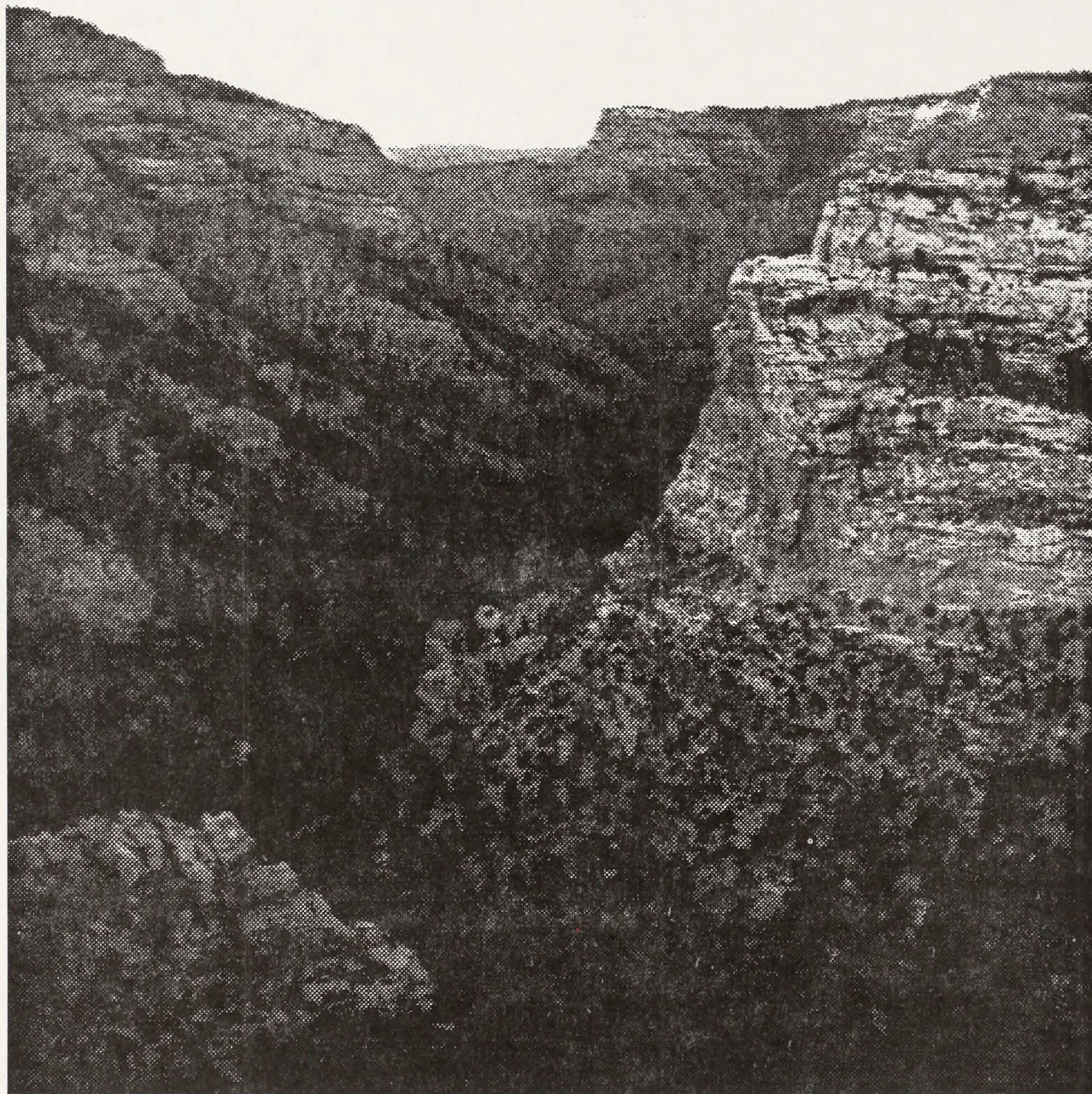
<u><b>BROWNS PARK COMPLEX</b></u>	<u><b>LEARS CANYON</b></u>	<u><b>LOWER AND MIDDLE GREEN RIVER SEGMENTS</b></u>	<u><b>NINE MILE CANYON</b></u>
<p><b>Woodlands - Level 3 lands would be open to sale and/or harvest of woodland products with restrictions designed to maintain the stated resource values. Level 1 and 2 areas would be closed.</b></p>	<p><b>Woodlands - The area would be closed to the sale and/or harvest of woodland products.</b></p>	<p><b>Woodlands - The entire area would be closed to the sale and/or harvest of woodland products.</b></p>	<p><b>Woodlands - Level 3 lands would be open to the sale and/or harvest of woodland products except aspen, ponderosa pine, and other large conifers with restrictions designed to protect the stated resource values. Level 1 and 2 lands would be closed.</b></p>



# MANAGEMENT PRESCRIPTIONS FOR SPECIAL EMPHASIS AREAS

<u>PARIETTE WETLANDS</u>	<u>RED CREEK WATERSHED ACEC</u>	<u>RED MOUNTAIN-DRY FORK COMPLEX</u>
<p><b>Woodlands</b> - Level 3 lands would be open to the sale and/or harvest of woodland products, except for barrel cactus species. Level 1 and 2 lands would be closed to the sale and/or harvest of woodland products.</p>	<p><b>Woodlands</b> - Level 3 lands would be open to the sale and/or harvest of woodland products. Level 1 and 2 lands would be closed.</p>	<p><b>Woodlands</b> - Level 3 lands would be open to sale and/or harvest of woodland products. Level 1 and 2 lands would be closed.</p>

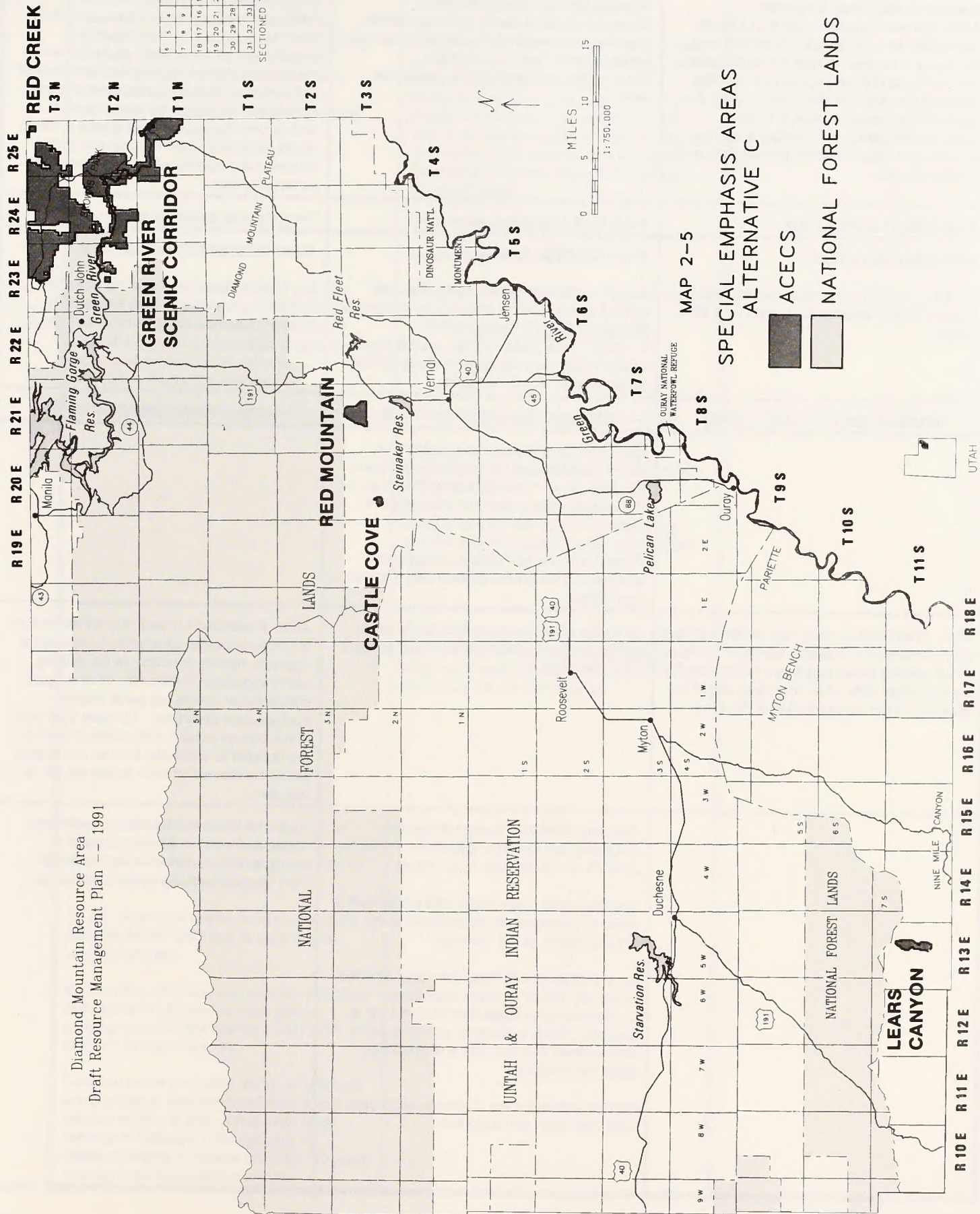




ASHLEY GORGE, RED MOUNTAIN AREA



Diamond Mountain Resource Area  
Draft Resource Management Plan -- 1991



6	5	4	3	2	1
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36

SECTIONED TOWNSHIP

MAP 2-5

SPECIAL EMPHASIS AREAS  
ALTERNATIVE C

- ACECS
- NATIONAL FOREST LANDS

R 10E R 11E R 12E R 13E R 14E R 15E R 16E R 17E R 18E  
R 19E R 20E R 21E R 22E R 23E R 24E R 25E

UTAH



TABLE 2-16: ALTERNATIVE C -

CASTLE COVE	GREEN RIVER SCENIC CORRIDOR ACEC	LEARS CANYON
<p><b>General Management Objective:</b> Retain the area's present natural sagebrush community as a comparison or control area, serving as a measuring stick for management and biological objectives practiced on other similar communities in the resource area; and, to provide/set aside an area in a late to climax ecological stage for research and/or educational purposes within this vegetation community type.</p>	<p><b>General Management Objective:</b> Protect outstanding scenic, cultural, riparian, fisheries, and special status species resource values, while enhancing recreation opportunities, and maintaining compatible uses.</p>	<p><b>General Management Objective:</b> Retain the area's present natural douglas fir-mountain browse and pinyon-juniper communities as comparison or control areas, serving as a measuring stick for management and biological objectives practiced on other similar communities in the resource area; and, to provide/ set aside an area in a late to climax ecological stage for research and/or educational purposes within this vegetation community type.</p>
<p><b>Total Federal Acreage: 200</b></p>	<p><b>Total Federal Acreage: 19,400</b></p>	<p><b>Total Federal Acreage: 1,400</b></p>
<p><b>MANAGEMENT LEVELS:</b>  2 - 100% - Relict vegetation communities, Dry Fork critical watershed, and Class II VRM values</p>	<p><b>MANAGEMENT LEVELS:</b>  2 - 2% - Developed recreation sites and cultural sites eligible or listed on the <u>National Register of Historic Places</u> (NRHP) 3 - 98% - Floodplain, riparian, crucial deer winter range, potential bighorn sheep habitat, scenic values, and critical soils</p>	<p><b>MANAGEMENT LEVELS:</b>  2 - 100% - Relict vegetation communities (supporting resource values: critical soils, crucial big game habitat, cultural and visual resources)</p>
<p><b>MANAGEMENT PRESCRIPTIONS:</b></p>	<p><b>MANAGEMENT PRESCRIPTIONS:</b></p>	<p><b>MANAGEMENT PRESCRIPTIONS:</b></p>
	<p><b>Cultural</b> - Continue to manage, interpret, stabilize and protect the historic properties at the John Jarvie National Historic District under the existing cultural resource management plan.</p> <p>Consult with the Ute Tribe to protect areas and items of traditional lifeways and religious significance.</p>	
<p><b>Fire</b> - Prescribed burning may be allowed only to maintain a vigorous, healthy condition of the existing native vegetation community. No more than 40% of the total area would be allowed to burn during the life of this plan.</p>	<p><b>Fire</b> - Do not allow prescribed burns within level 2 areas. Aggressively suppress wildfires within the area.</p>	<p><b>Fire</b> - Prescribed burning may be allowed in the pinyon-juniper community to maintain a vigorous, healthy condition of the existing native vegetation community, or to support critical soil or crucial big game habitat management objectives. No more than 50% of the pinyon-juniper community or 40% of the douglas fir-mountain browse community would be allowed to burn during the life of this plan.</p>
	<p><b>Fish and Wildlife</b> - Restrict all surface-disturbing activities from December 1 through June 15 on crucial deer winter range.</p> <p>Construct bald eagle perch sites within level 2 areas as necessary, while maintaining the scenic integrity of the riverway.</p> <p>Do not allow new surface-disturbing activities within 1/4 mile of all active eagle and Swainson's hawk nests from February 15 to June 15. These restrictions do not apply to maintenance and operations of producing wells and facilities.</p> <p>Provide habitat for the Colorado cutthroat trout, river otter and waterfowl.</p>	<p><b>Fish and Wildlife</b> - Do not allow activities that would result in adverse impacts to wintering deer from December 1 through April 30 on crucial big game winter range.</p>



# MANAGEMENT PRESCRIPTIONS FOR SPECIAL EMPHASIS AREAS

RED CREEK WATERSHED ACEC	RED MOUNTAIN
<p><b>General Management Objective:</b> Manage the watershed to continue the reduction of sedimentation into Red Creek, and the downstream Green River, by stabilizing channels and streambanks to lessen erosion, and by maintaining or increasing vegetation cover; and, enhance wildlife habitat values.</p>	<p><b>General Management Objective:</b> Retain the present natural ponderosa-bluegrass community on Red Mountain as a comparison or control area, serving as a measuring stick for management and biological objectives practiced on other similar communities in the resource area; and, to provide/set aside an area in a late to climax ecological stage for research and/or educational purposes within this vegetation community type.</p>
<p><b>Total Federal Acreage:</b> 24,400</p>	<p><b>Total Federal Acreage:</b> 2,000</p>
<p><b>MANAGEMENT LEVELS:</b></p> <p>2 - 2% - Sage grouse strutting grounds, cultural sites eligible or listed on the NRHP 3 - 60% - Highly erodible soils, riparian, crucial big game habitat, sage grouse nesting area, and archeological potential 4 - 18% - Remaining resources</p>	<p><b>MANAGEMENT LEVELS:</b></p> <p>2 - 100% - Relict vegetation communities</p>
<p><b>MANAGEMENT PRESCRIPTIONS:</b></p>	<p><b>MANAGEMENT PRESCRIPTIONS:</b></p>
	<p><b>Cultural</b> - Protect cultural values by stabilization and interpretation of sites eligible or listed on NRHP.</p> <p>Consult with the Ute Tribe to protect areas and items of traditional lifeways and religious significance.</p>
	<p><b>Fire</b> - Maintain the natural role of fire within the relict vegetation areas; however, large-scale fires would not be allowed to kill more than 3% of the ponderosa pine.</p>
<p><b>Fish and Wildlife</b> - Do not allow activities that would result in adverse impacts to wildlife from December 1 through April 30 on crucial big game winter range.</p> <p>Do not allow OHV use or surface-disturbing activities within 1,000 feet of sage grouse strutting grounds.</p> <p>Do not allow OHV use and surface-disturbing activities within 2 miles of sage grouse strutting grounds (the nesting areas) from March 1 through June 30.</p> <p>Establish raptor protection zones in which no construction or disturbing-activities would be allowed within 1/2 mile of occupied eagle nests from February 1 through July 15. Would not apply if impacts could be mitigated through other management actions.</p>	



TABLE 2-16 (CONTINUED): ALTERNATIVE C -

<u>CASTLE COVE</u>	<u>GREEN RIVER SCENIC CORRIDOR ACEC</u>	<u>LEARS CANYON</u>
<p><b>Lands</b> - Establish a rights-of-way avoidance area for the entire area.</p>	<p><b>Lands</b> - Establish a window for a common river crossing at Section 31, T2N, R25E, in level 2, the remainder of the area would be a right-of-way avoidance area.</p> <p>Recommend a protective withdrawal be established for level 2 lands with the area to preclude entry under the agricultural laws only.</p>	<p><b>Lands</b> - Establish a rights-of-way avoidance area covering the entire area.</p>
<p><b>Livestock</b> - Do not allow livestock grazing within the area.</p>	<p><b>Livestock</b> - Level 2 lands would be closed to livestock grazing, enforced with fencing where needed (including Little Hole and Bridgeport grazing allotments). Level 3 areas would continue to be grazed in accordance with existing allotment management plans.</p> <p>Temporary, non-renewable livestock grazing could be allowed within level 2 areas only to enhance or maintain desired riparian vegetation production, or to control invasion of undesired plant species.</p> <p>Rangeland improvements associated with management of level 2 areas or areas immediately adjacent to level 2 would be allowed as long as they would not compromise the identified wild and scenic river qualities. Rangeland improvements associated with management of level 3 areas would be allowed as long as they do not compromise the scenic values of the area.</p>	<p><b>Livestock</b> - Do not allow livestock grazing within the area. Occasional one-day livestock trailing could be authorized through the area to afford proper livestock distribution elsewhere on the grazing allotment.</p> <p>Develop range improvements to prevent livestock from moving or drifting onto the area.</p>
<p><b>MINERALS</b></p> <p><b>Leaseables</b> - The area would be open to mineral leasing with a no-surface-occupancy stipulation.</p>	<p><b>MINERALS</b></p> <p><b>Leasables</b> - Level 3 lands would be open to leasing with special conditions designed to protect and enhance the visual and wildlife resource values. Level 2 lands would be open to leasing with a no-surface-occupancy stipulation.</p>	<p><b>MINERALS</b></p> <p><b>Leasables</b> - The area would be open to mineral leasing with a no-surface-occupancy stipulation.</p>
<p><b>Geophysical Activities</b> - The area would be open to such activities subject to special restrictions designed to minimize damage to the existing vegetation community.</p>	<p><b>Geophysical Activities</b> - Level 2 areas would be open to nonsurface-disturbing geophysical activities only, level 3 areas would be open to geophysical exploration with special conditions designed to enhance and/or protect the scenic and wildlife resource values and protect human safety and recreational values associated with the Green River.</p>	<p><b>Geophysical Activities</b> - The area would be open to nonsurface-disturbing geophysical activities.</p>
<p><b>Mineral Materials</b> - The entire area would be closed to disposal of mineral materials.</p>	<p><b>Mineral Materials</b> - Level 2 areas would be closed to mineral material disposals, the remainder of the area would be open mineral material disposals with special conditions.</p>	<p><b>Mineral Materials</b> - Do not allow mineral material disposal.</p>



# MANAGEMENT PRESCRIPTIONS FOR SPECIAL EMPHASIS AREAS

<b>RED CREEK WATERSHED ACEC</b>	<b>RED MOUNTAIN</b>
<p><b>Fish and Wildlife (Cont)</b> - Provide habitat and allow for the reintroduction of upland game.</p>	
<p><b>Lands</b> - Establish a right-of-way avoidance area in level 2 lands. Make Level 3 lands available to support permitted activities with special restrictions to protect the identified resource values.</p>	<p><b>Lands</b> - Establish right-of-way avoidance area for the entire relict vegetation site.</p> <p>Recommend protective withdrawals or other protective measures on the entire area to preclude entry under the 1872 General Mining Law or agricultural entry laws.</p>
<p><b>Livestock</b> - Level 3 lands would be open to grazing. Level 2 lands would be open to prescribed grazing designed to maintain or enhance the watershed and wildlife habitat values. No grazing would be allowed on cultural sites eligible or listed on NRHP.</p> <p>Allow rangeland improvements and grazing prescriptions to maintain or improve the values identified within the ACEC.</p>	<p><b>Livestock</b> - No grazing would be allowed in the relict vegetation area.</p> <p>Develop range improvements to prevent livestock from moving or drifting onto the area.</p>
<p><b>MINERALS</b></p> <p><b>Leasables</b> - Level 3 lands would be open to leasing with special conditions designed to protect or enhance the watershed and wildlife habitat values. Level 2 lands would be open to leasing with a no-surface-occupancy stipulation.</p>	<p><b>MINERALS</b></p> <p><b>Leaseables</b> - The area would be open to mineral leasing with a no-surface-occupancy stipulation.</p>
<p><b>Geophysical Activities</b> - Level 3 lands, excluding riparian areas, would be open to geophysical exploration with special conditions, designed to maintain or enhance the stated watershed and wildlife habitat values. Level 2 lands and all riparian lands would be open to nonsurface-disturbing geophysical activities only.</p>	<p><b>Geophysical Activities</b> - The area would be open to such activities subject to special restrictions designed to minimize damage to the existing vegetation community, watershed, and soils values.</p>
<p><b>Mineral Materials</b> - Allow mineral material disposals on level 3 lands with special restrictions designed to maintain or enhance the stated watershed and wildlife habitat values, allow mineral disposals on level 2 lands on a case-by-case basis with restrictions to protect or enhance stated resource values.</p>	<p><b>Mineral Materials</b> - The entire area would be closed to mineral material disposals.</p>



**TABLE 2-16 (CONTINUED): ALTERNATIVE C -**

<u>CASTLE COVE</u>	<u>GREEN RIVER SCENIC CORRIDOR ACEC</u>	<u>LEARS CANYON</u>
<p><b>Locatables</b> - Until a protective withdrawal is in place and in force, any mining activity except casual use would require a mining plan of operations. Development would be restricted by stipulations designed to protect the vegetation community in the area within the parameters of the 1872 General Mining Law.</p>	<p><b>Locatables</b> - Any mining activity except casual use would require a mining plan of operations. Development would be restricted by stipulations designed to protect the identified resource values in the area within the parameters of the 1872 General Mining Law. The developed recreation sites would be withdrawn from mineral entry.</p>	<p><b>Locatables</b> - Until a protective withdrawal is in place and in force, any mining activity except casual use would require a mining plan of operations. Development would be restricted by stipulations designed to protect the vegetation community in the area within the parameters of the 1872 General Mining Law.</p>
<p><b>Recreation</b> - The area would be open to OHV use on designated roads and trails with seasonal restrictions designed to minimize possible soils damage during periods of saturated soils (usually spring runoff and fall rains). Such restrictions would not necessarily apply to permitted BLM activities or authorized administrative uses.</p>	<p><b>Recreation</b> - The entire area would be open to OHV use on designated roads and trails only.</p> <p>Continue Special Recreation Management Area (SRMA) status along the corridor. Revise, as necessary, the existing SRMA management plan to incorporate recommendations made by 1991 study on recreation use capacity of the upper Green River (Pratt et.al.).</p> <p>Within level 2 areas, develop facilities at Cottonwood Grove; expand Bridge Hollow; maintain facilities at Indian Crossing, Pugmire Pocket, Jackson Creek, Red Creek and Swallow Canyon. Recreational facilities would be designed to maintain riparian values and protect special status plant habitats.</p>	<p><b>Recreation</b> - The area would be closed to OHV use due to the clear dominance of the primitive/ natural qualities (90%) of the area. This would not apply to permitted BLM activities or authorized administrative uses.</p>
	<p><b>Special Emphasis Areas</b> - Withdraw recommendation to include the upper Green River in the National Wild and Scenic River System.</p>	



# MANAGEMENT PRESCRIPTIONS FOR SPECIAL EMPHASIS AREAS

RED CREEK WATERSHED ACEC	RED MOUNTAIN
<p><b>Locatables</b> - Any mineral activity except casual use would require a mining plan of operations. Development would be restricted by stipulations designed to protect the identified resource values.</p>	<p><b>Locatables</b> - Until a protective withdrawal is in place and in force, any mining activity except casual use would require a mining plan of operations. Development would be restricted by stipulations designed to protect the vegetation community in the area within the parameters of the 1872 General Mining Law.</p>
<p><b>Recreation</b> - Level 3 lands, excluding highly erodible soils, would be open to OHV use with seasonal restrictions for the watershed and wildlife protection; level 2 lands and highly erodible soils in level 3 would be open to OHV use on designated roads and trails.</p> <p>Develop interpretive trails and/or facilities in the Clay Basin Gas field.</p>	<p><b>Recreation</b> - The area would be open to OHV use on designated roads and trails with seasonal restrictions designed to minimize possible soils damage during periods of saturated soils (usually the spring runoff and fall rains). Such restrictions would not necessarily apply to permitted BLM activities or authorized administrative uses.</p>
<p><b>Riparian</b> - Allow new surface-disturbing activities within 330 feet of riparian zones when it can be shown there is no practical alternative, that long term impacts are fully mitigated or that the construction is an enhancement to the riparian area.</p>	
<p><b>Soil &amp; Water</b> - Allow new surface-disturbing activities on highly erodible soils with level 3 lands if watershed values are maintained.</p> <p>Level 3 lands would be available for major (&gt;1 acre-foot capacity) water developments with special restrictions. Outside of these areas, major water developments could be permitted if the project is consistent with these ACEC management prescriptions.</p>	



TABLE 2-16 (CONTINUED): ALTERNATIVE C -

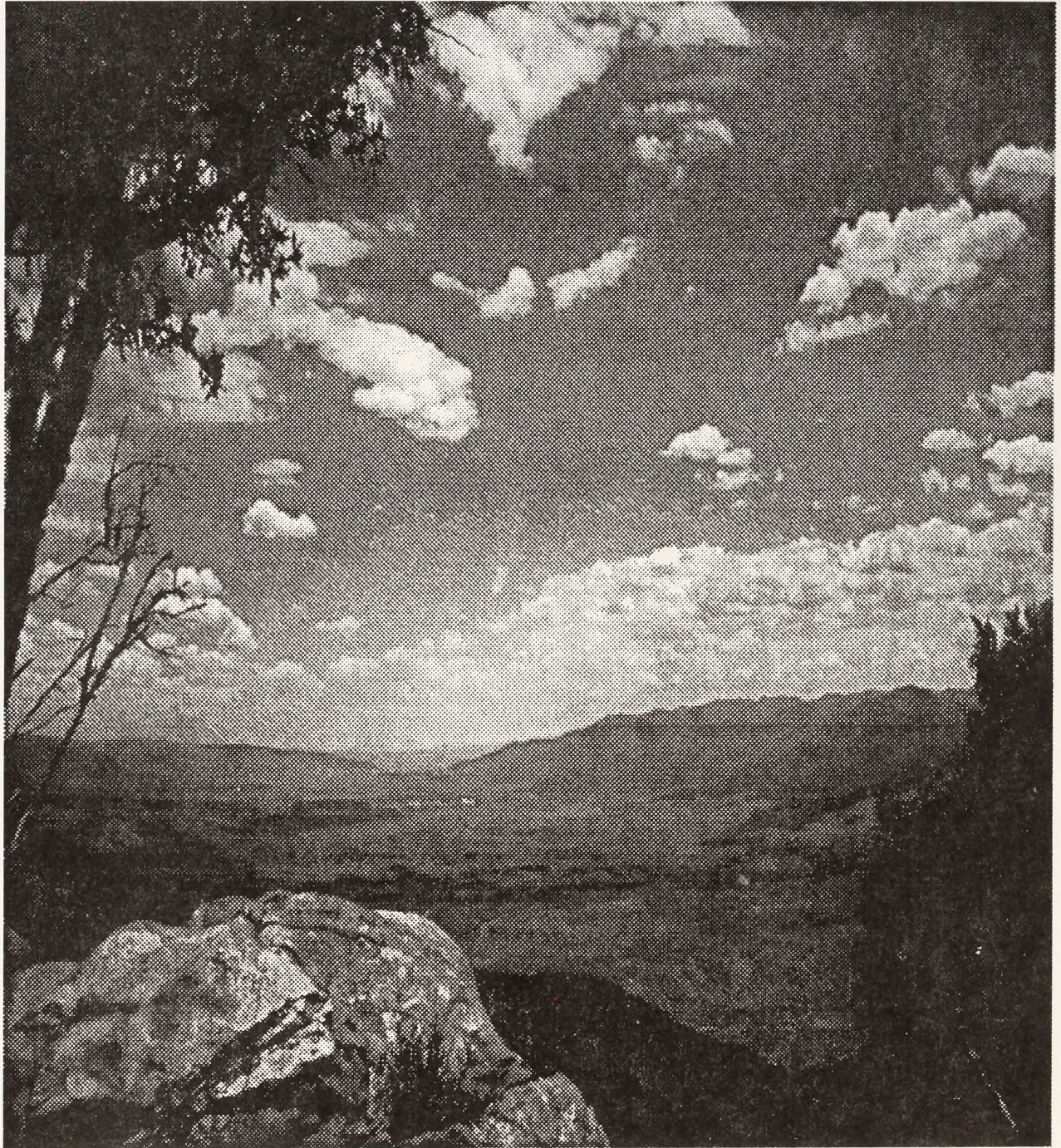
CASTLE COVE	GREEN RIVER SCENIC CORRIDOR ACEC	LEARS CANYON
<p><b>Vegetation</b> - Retain vegetation composition in its present late or climax ecological stage.</p> <p>Allow biological, or chemical control of noxious weeds and insect infestations within the area with restrictions to protect the existing desired native plant community and watershed values.</p> <p>In the event revegetation following a major surface disturbance or fire is deemed necessary to protect watershed and visual resource values, only site-adapted native species would be used. On small surface-disturbed areas (less than five acres), where other resource values would not be adversely affected, consider allowing natural revegetation to monitor the vegetation community's natural recovery.</p>	<p><b>Vegetation</b> - Manipulate 900 acres of pinyon-juniper woodlands to maximize forage production for livestock.</p>	<p><b>Vegetation</b> - Retain the vegetation compositions in their present late to climax ecological stages.</p> <p>Allow biological, or chemical control of noxious weeds and insect infestations within the area with restrictions to protect the existing desired plant communities and watershed values. Do not allow mechanical control in of the area due to its high sensitivity for cultural resources, primitive/natural qualities, and critical soil values.</p> <p>In the event revegetation following a major surface disturbance, such a wildfire, is deemed necessary to protect watershed and visual resource values, only site-adapted native species would be used. On small surface-disturbed areas (less than five acres) within the pinyon-juniper community, where other resource values would not be adversely affected, consider allowing natural revegetation to monitor the vegetation community's natural recovery.</p>
<p><b>Visual</b> - Allow only short-term or mitigable visual intrusions on VRM Class II lands within the area.</p>	<p><b>Visual</b> - All future management actions would be designed to maintain or enhance the scenic qualities of the area.</p>	<p><b>Visual</b> - Allow only short-term or mitigable visual intrusions on VRM Class II lands and within 1/2 mile or line-of-sight of state- or federally-listed scenic/back-country byways.</p>
	<p><b>Woodlands</b> - Level 2 areas would be closed to the sale and harvest of all woodland products. Level 3 areas would be open to sale and/or harvest of pinyon and juniper for firewood on a case-by-case basis.</p>	<p><b>Woodlands</b> - The area would be closed to the sale and/or harvest of woodland products.</p>



# MANAGEMENT PRESCRIPTIONS FOR SPECIAL EMPHASIS AREAS

RED CREEK WATERSHED ACEC	RED MOUNTAIN
<p><b>Vegetation</b> - Allow mechanical, fire, biological, or chemical control of noxious weeds and insect infestations within the ACEC with restrictions designed to protect the vegetation ground cover and water quality values.</p> <p>Manage the vegetation to attain the ecological stage that would most benefit wildlife in crucial habitat. Manage vegetation in the remaining areas which results in the highest vegetation species diversity for the maintenance and enhance of the watershed resource values.</p> <p>Manipulate 1,400 acres of pinyon-juniper woodlands to maximize forage production for livestock.</p>	<p><b>Vegetation</b> - Retain vegetation composition in its present late to climax ecological stage.</p> <p>Allow biological or chemical control of noxious weeds and insect infestations within the area with restrictions to protect the existing desired native plant community, watershed, and soils resource values.</p> <p>In the event revegetation following a major surface disturbance, such a wildfire, is deemed necessary to protect watershed and visual resource values, only site-adapted native species would be used.</p>
	<p><b>Visual</b> - Allow only short-term or mitigable visual intrusions on VRM Class II lands within the area.</p>
<p><b>Woodlands</b> - Level 3 lands would be open to the sale and/or harvest of woodland products. Level 2 lands would be closed.</p>	<p><b>Woodlands</b> - Do not sell any ponderosa pine for commercial harvest.</p>

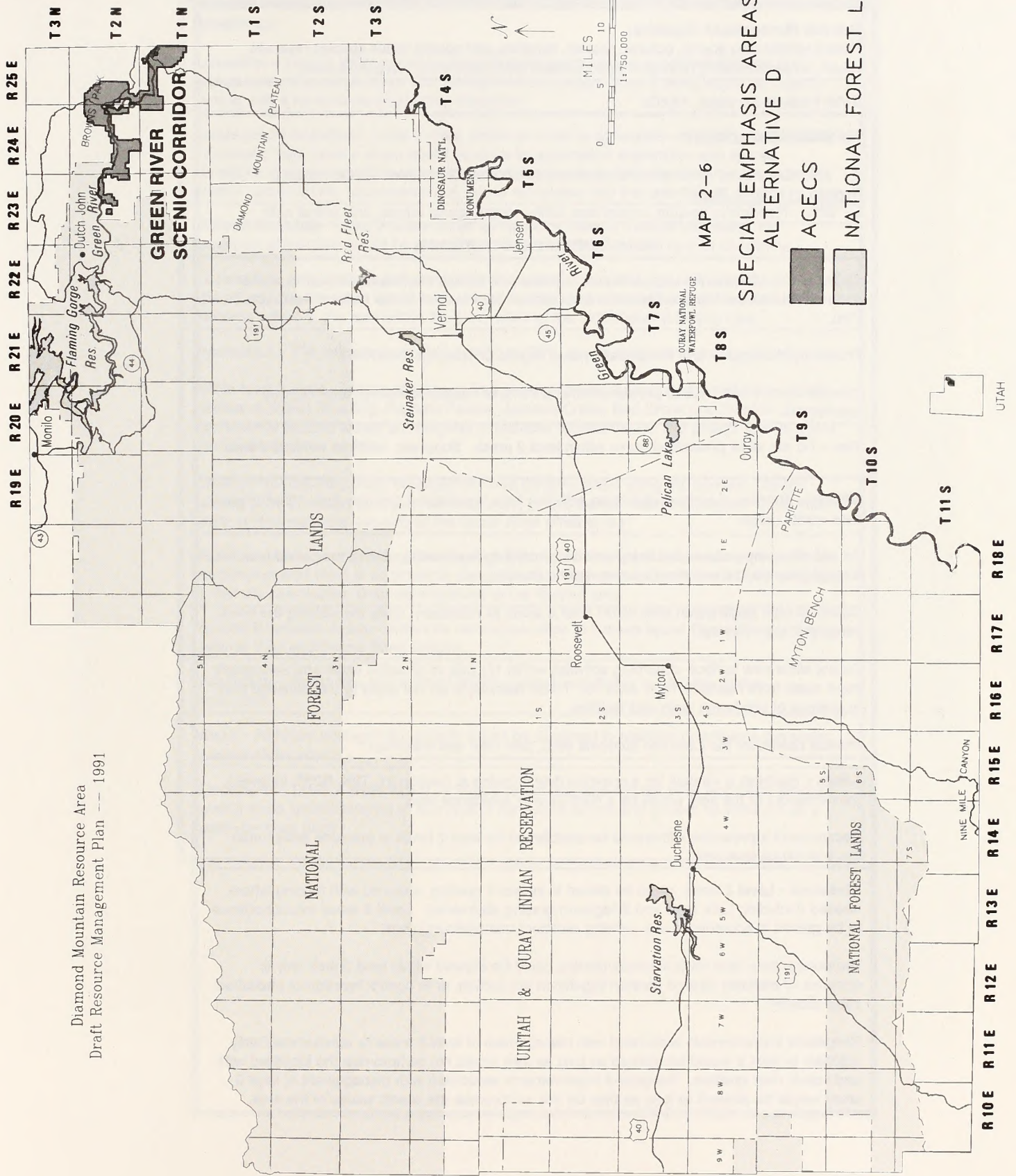




BROWNS PARK



Diamond Mountain Resource Area  
Draft Resource Management Plan -- 1991





**TABLE 2-17: ALTERNATIVE D -  
MANAGEMENT PRESCRIPTIONS FOR SPECIAL EMPHASIS AREAS**

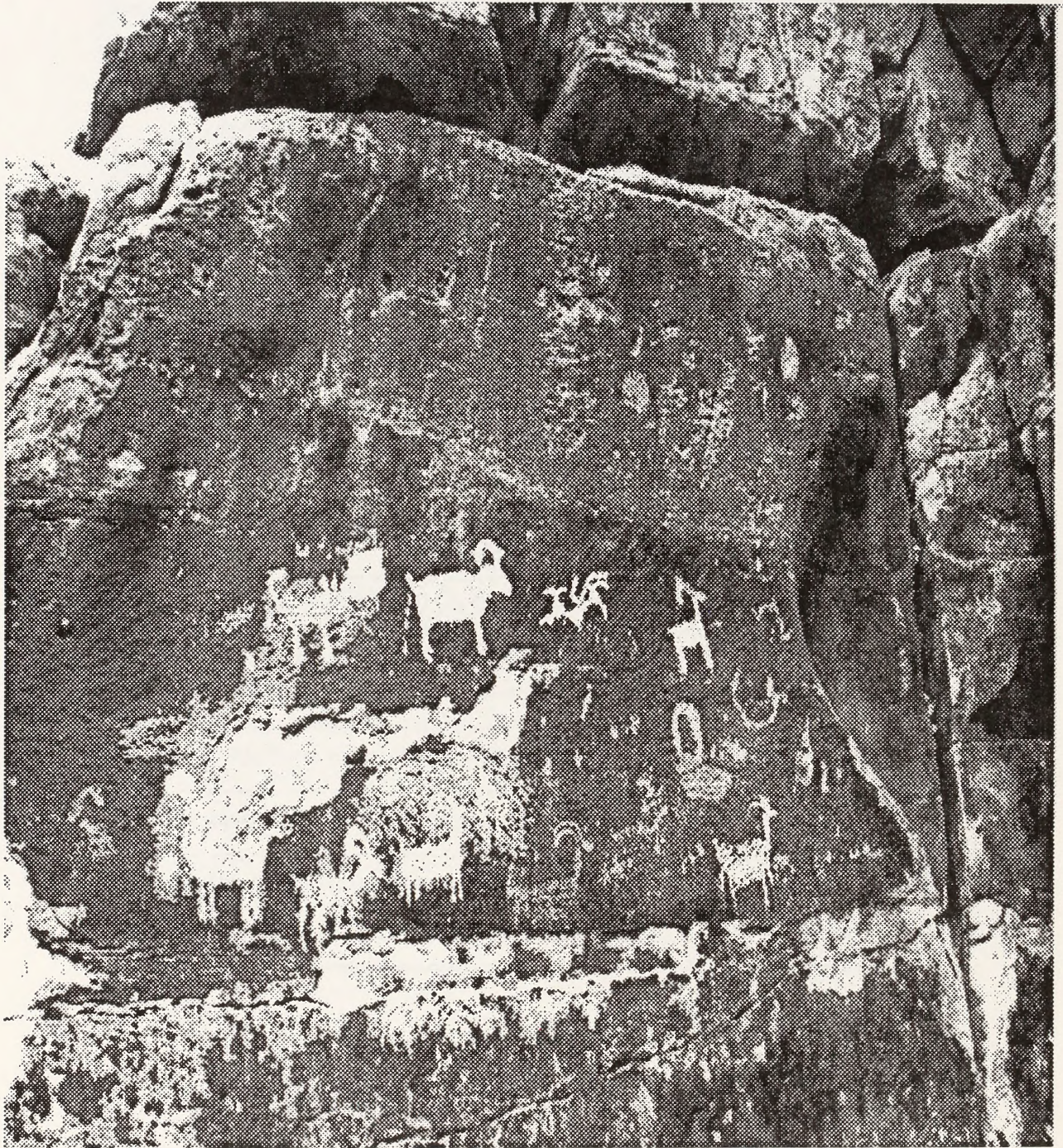
<b>GREEN RIVER SCENIC CORRIDOR ACEC</b>
<p><b>General Management Objective:</b> Protect outstanding scenic, cultural, riparian, fisheries, and special status species resource values, while enhancing recreation opportunities, and maintaining compatible uses.</p>
<p><b>Total Federal Acreage:</b> 19,400</p>
<p><b>MANAGEMENT LEVELS:</b></p> <p>2 - 2% - Developed recreation sites and cultural sites eligible or listed on the <u>National Register of Historic Places</u></p> <p>3 - 98% - Floodplain, riparian, crucial deer winter range, scenic values, and critical soils</p>
<b>MANAGEMENT PRESCRIPTIONS:</b>
<p><b>Cultural</b> - Continue to manage, interpret, stabilize and protect the historic properties at the John Jarvie National Historic District in accordance with the John Jarvie Cultural Resource Plan.</p> <p>Protect by stabilization and interpretation sites eligible or listed on the NRHP.</p> <p>Consult with the Ute Tribe to protect areas and items of traditional lifeways and religious significance.</p>
<p><b>Fire</b> - Do not allow prescribed burns within level 2 areas. Suppress wildfires within the area.</p>
<p><b>Wildlife</b> - Restrict all surface-disturbing activities from December 1 through June 15 on crucial deer winter range.</p> <p>Do not allow any surface-disturbing activities, including floatboating, during the period March 1 through May 25, the waterfowl's active nesting period.</p> <p>Construct bald eagle perch sites within level 2 areas as necessary, while maintaining the scenic integrity of the riverway.</p> <p>Do not allow new surface-disturbing activities within 1/4 mile of all active eagle and Swainson's hawk nests from February 15 to June 15. These restrictions do not apply to maintenance and operations of producing wells and facilities.</p> <p>Provide habitat for the Colorado cutthroat trout, river otter and waterfowl.</p>
<p><b>Lands</b> - Establish a window for a common river crossing at Section 31, T2N, R25E, in level 2, the remainder of the area would be a right-of-way avoidance area.</p> <p>Recommend a protective withdrawal be established for level 2 lands to preclude entry under the agricultural laws only.</p>
<p><b>Livestock</b> - Level 2 lands would be closed to livestock grazing, enforced with fencing where needed (including Little Hole and Bridgeport grazing allotments). Level 3 areas would continue to be grazed in accordance with existing allotment management plans.</p> <p>Temporary, non-renewable livestock grazing could be allowed within level 2 areas only to enhance or maintain desired riparian vegetation production, or to control invasion of undesired plant species.</p> <p>Rangeland improvements associated with management of level 2 areas or areas immediately adjacent to level 2 would be allowed as long as they would not compromise the identified wild and scenic river qualities. Rangeland improvements associated with management of level 3 areas would be allowed as long as they do not compromise the scenic values of the area.</p>



**TABLE 2-17 (CONTINUED): ALTERNATIVE D -  
MANAGEMENT PRESCRIPTIONS FOR SPECIAL EMPHASIS AREAS**

<b>GREEN RIVER SCENIC CORRIDOR ACEC</b>
<b>MINERALS</b>
<b>Leasables</b> - Level 3 lands would be open to leasing with special conditions designed to protect and enhance the visual and wildlife resource values. Level 2 lands would be open to leasing with a no-surface-occupancy stipulation.
<b>Geophysical Activities</b> - Level 2 areas would be open to nonsurface-disturbing geophysical exploration only, Level 3 areas would be open to geophysical exploration with special conditions designed to enhance and/or protect the scenic and wildlife resource values and protect human safety and recreational values associated with the Green River.
<b>Mineral Materials</b> - Level 2 areas would be closed to mineral material disposals, the remainder of the area would be open mineral material disposals with special conditions.
<b>Locatables</b> - Any mining activity other than casual use would require a mining plan of operations. Development would be restricted by stipulations designed to protect the identified resource values in the area within the parameters of the 1872 General Mining Law.
<b>Recreation</b> - The entire area would be open to OHV use on designated roads and trails only.  Within level 2 areas, develop facilities at Cottonwood Grove; expand Bridge Hollow; maintain facilities at Indian Crossing, Pugmire Pocket, Jackson Creek, Red Creek and Swallow Canyon. Recreational facilities would be designed to maintain riparian values and protect special status plant habitats.  Continue Special Recreation Management Area (SRMA) status along the corridor. Revise existing SRMA management plan, as necessary, to incorporate recommendations of the 1991 study of recreation use capacity of the Green River (Pratt et al.)
<b>Riparian</b> - Allow new surface-disturbing activities within 330 feet of riparian areas when it can be demonstrated there is no practical alternative, that long-term impacts can be fully mitigated or that the construction is an enhancement to the riparian area.
<b>Special Emphasis Areas</b> - Withdraw recommendation to include upper Green River in the National Wild and Scenic River System.
<b>Vegetation</b> - Manipulate 900 acres of pinyon-juniper woodlands to increase forage production.
<b>Visual</b> - All future management actions would be designed to maintain or enhance the scenic qualities of the area.
<b>Woodlands</b> - Level 2 areas would be closed to the sale and harvest of all woodland products. Level 3 areas would be open to sale and/or harvest of pinyon and juniper for firewood on a cases-by-case basis.

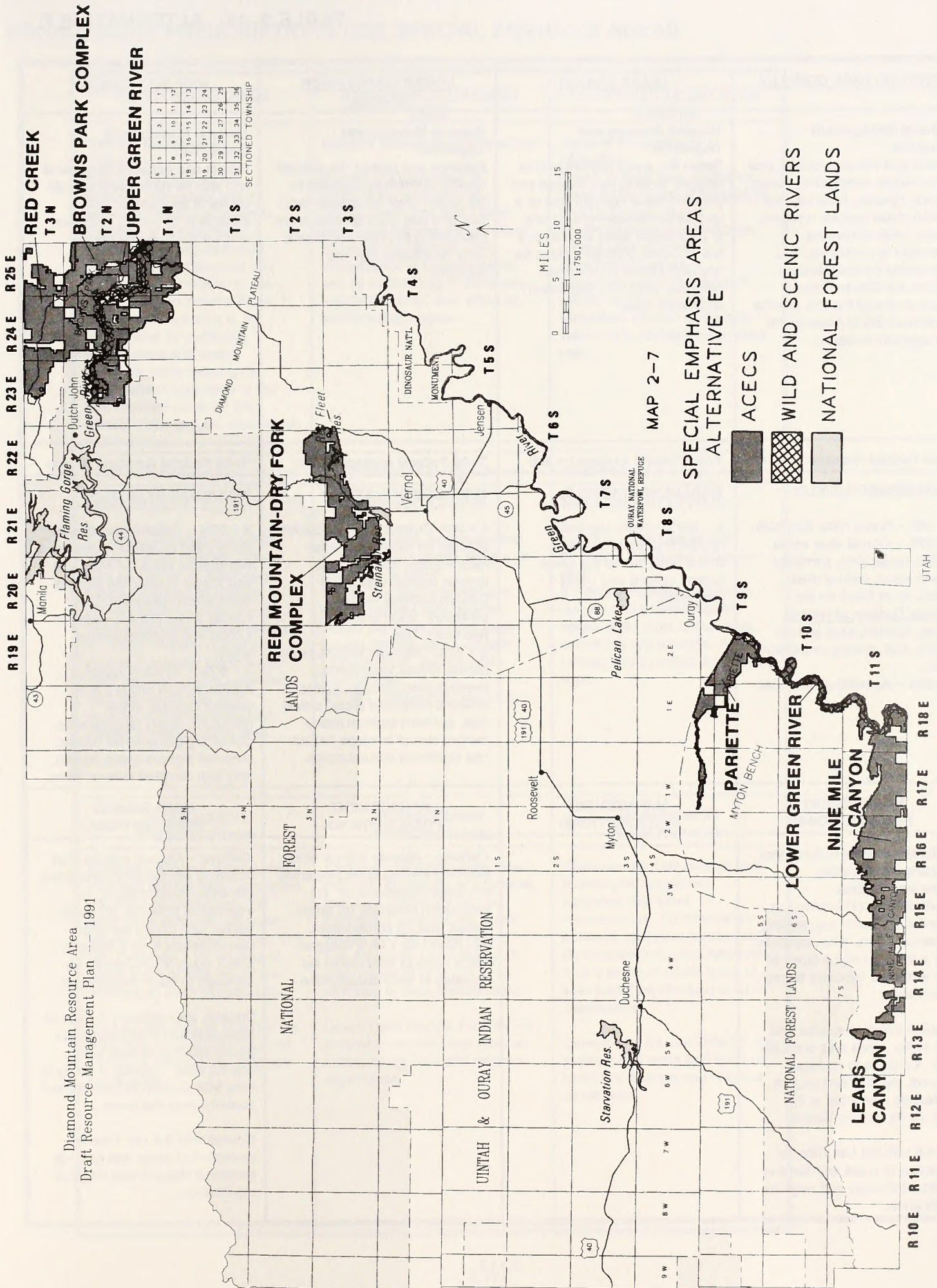




PETROGLYPHS, NINE MILE CANYON



Diamond Mountain Resource Area  
Draft Resource Management Plan -- 1991






6	5	4	3	2	1
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SECTIONED TOWNSHIP

MAP 2-7

SPECIAL EMPHASIS AREAS  
ALTERNATIVE E

-  ACECS
-  WILD AND SCENIC RIVERS
-  NATIONAL FOREST LANDS

R10E R11E R12E R13E R14E R15E R16E R17E R18E R19E R20E R21E R22E R23E R24E R25E

T1N T2N T3N T1S T2S T3S T4S T5S T6S T7S T8S T9S T10S T11S

Starvation Res. Duchesne Myton Roosevelt Pelican Lake Ouray Jensen Vernal

Flaming Gorge Res. Dutch John Green River

MONTEZUMA CASTLE NATIONAL MONUMENT

OURAY NATIONAL WATERFOWL REFUGE

DIAMOND MOUNTAIN PLATEAU

LEARS CANYON NINE MILE CANYON MYTON BENCH

RED MOUNTAIN-DRY FORK COMPLEX

BROWNS PARK COMPLEX

UPPER GREEN RIVER

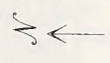
RED CREEK

NATIONAL FOREST

UINTAH & OURAY INDIAN RESERVATION

NATIONAL FOREST LANDS

UTAH





**TABLE 2-18: ALTERNATIVE E -**

<u>BROWNS PARK COMPLEX</u>	<u>LEARS CANYON</u>	<u>LOWER GREEN RIVER SEGMENT</u>	<u>NINE MILE CANYON</u>
<p><b>General Management Objective:</b> Protect and enhance crucial deer winter range, outstanding scenic, cultural, riparian, fisheries, and special status species resource values, while enhancing recreation opportunities, and maintaining compatible uses. Include the Crouse Canyon scenic area and the two existing Wilderness Study Areas in this management complex.</p>	<p><b>General Management Objective:</b> Retain the area's present natural douglas fir-mountain browse and pinyon-juniper communities as a comparison or control area and to provide/set aside an area in a late to climax ecological stage for research and/or educational purposes within this vegetation community type.</p>	<p><b>General Management Objective:</b> Enhance and protect the delicate riparian community adjacent to the Green River for special status fish, bird and plant species, while maintaining the Wild and Scenic River qualities of this river segment.</p>	<p><b>General Management Objective:</b> Protect and enhance the cultural and special status plant species values of the canyon; while enhancing its scenic, recreation and wildlife resource values.</p>
<p><b>Total Federal Acreage:</b> 55,700</p>	<p><b>Total Federal Acreage:</b> 1,400</p>	<p><b>Total Federal Acreage:</b> 7,900</p>	<p><b>Total Federal Acreage:</b> 47,400</p>
<p><b>MANAGEMENT LEVELS:</b></p> <p>1 - 3% - Green River floodplain 2 - 52% - Crucial deer winter habitat, raptor sites, primitive/natural areas, cultural sites eligible for or listed on the <u>National Register of Historic Places</u>, riparian, sage grouse habitat, and existing recreation areas. 3 - 45% - Remaining resources</p>	<p><b>MANAGEMENT LEVELS:</b></p> <p>1 - 100% - Relict vegetation (supporting resource values: critical soils, crucial big game habitat, cultural and visual resources).</p>	<p><b>MANAGEMENT LEVELS:</b></p> <p>2 - 30% Cultural sites eligible for or listed on NRHP, primitive/natural areas, special status species habitat, Desolation Canyon National Historic Landmark, Sand Wash Recreation Site. 3 - 70% - Riparian habitat, raptor habitat, critical watersheds, sensitive plant species habitat, potential recreation areas, critical soils, potential bighorn sheep habitat, crucial antelope habitat and significant cultural zones.</p>	<p><b>MANAGEMENT LEVELS:</b></p> <p>2 - 20% - Cultural sites eligible for or listed on NRHP, scenic and recreational values of Nine Mile and Argyle Creeks, the existing Sand Wash Recreation Site, special status plant species habitat and primitive/natural areas. 3 - 80% - Riparian, raptor habitat, special status plant species habitats, visual resources, highly erodible soils, crucial big game winter habitat, potential bighorn sheep habitat, and high sensitive cultural areas.</p>
<p><b>MANAGEMENT PRESCRIPTIONS:</b></p>	<p><b>MANAGEMENT PRESCRIPTIONS:</b></p>	<p><b>MANAGEMENT PRESCRIPTIONS:</b></p>	<p><b>MANAGEMENT PRESCRIPTIONS:</b></p>
<p><b>Cultural</b> - Allocate cultural sites including ethnographic properties into three classifications: (1) information potential, (2) public values, and (3) conservation. See Appendix 1 for a listing of which types of sites would be allocated to each classification.</p> <p>Establish interpretive sites and trails in the Jarvie area and Little Hole. Continue to manage, interpret, stabilize and protect the historic properties at the John Jarvie Historic District.</p> <p>Consult with the Ute Tribe for protection of areas and items of traditional lifeways and religious significance.</p>		<p><b>Cultural</b> - Allocate cultural sites including ethnographic properties into three classifications: (1) information potential, (2) public values, and (3) conservation. See Appendix 1 for a listing of which types of sites would be allocated to each classification.</p>	<p><b>Cultural</b> - Allocate cultural sites including ethnographic properties into three classifications: (1) information potential, (2) public values, and (3) conservation. See Appendix 1 for a listing of which types of sites would be allocated to each classification.</p> <p>Develop approximately 5 miles of recreation and interpretive trails and/or facilities at selected cultural sites. Develop a facility in Nine Mile Canyon to interpret and control use of the areas.</p> <p>Consult with the Ute Tribe for protection of areas and items of traditional lifeways and religious significance.</p>



# MANAGEMENT PRESCRIPTIONS FOR SPECIAL EMPHASIS AREAS

<u>PARIETTE WETLANDS</u>	<u>RED CREEK WATERSHED ACEC</u>	<u>RED MOUNTAIN-DRY FORK COMPLEX</u>
<p><b>General Management Objective:</b> Enhance and protect the wetlands community and associated habitat adjacent to Pariette and Castle Peak Washes, ensuring continued waterfowl production and no long-term deterioration of the water quality in Pariette Wash; reduce sedimentation to the Green River by stabilizing streambanks and water channels; while meeting the management objectives of the final recovery plans for the special status species associated with the area.</p>	<p><b>General Management Objective:</b> Manage the watershed to continue the reduction of sedimentation into Red Creek, and the downstream Green River, by stabilizing channels and streambanks to lessen erosion, and by maintaining or increasing vegetation cover; and, enhance wildlife habitat values.</p>	<p><b>General Management Objective:</b> Protect cultural sites eligible for listing on the <u>National Register of Historic Places</u>; protect significant paleontological sites; protect relict vegetation communities; enhance supporting resource values of wildlife habitat, municipal watershed, riparian and scenic values while allowing compatible uses.</p>
<p><b>Total Federal Acreage:</b> 11,600</p>	<p><b>Total Federal Acreage:</b> 24,400</p>	<p><b>Total Federal Acreage:</b> 25,800</p>
<p><b>MANAGEMENT LEVELS:</b> 2 - 90% - Riparian and special status species habitats, cultural sites eligible for or listed on the <u>National Register of Historic Places</u> (NRHP), Lower Green River scenic/recreational values. 3 - 10% - Raptor, crucial antelope and potential black-footed ferret habitats, critical watershed, high salt-containing soils, potential recreation sites, high sensitivity archeological area.</p>	<p><b>MANAGEMENT LEVELS:</b> 2 - 2% - Sage grouse strutting grounds, cultural sites eligible or listed on the NRHP. 3 - 93% - High erodible and salt-containing soils, riparian, crucial big game habitat, sage grouse nesting area, potential bighorn sheep habitat, raptor nesting sites. 4 - 5% - Remaining resources.</p>	<p><b>MANAGEMENT LEVELS:</b> 1 - 19% - Relict vegetation 2 - 1% - Developed recreation sites. 3 - 80% - Riparian, significant cultural and paleontological zones, watershed, critical soils, crucial big game habitat, raptor habitat, and potential recreation sites.</p>
<p><b>MANAGEMENT PRESCRIPTIONS:</b></p>	<p><b>MANAGEMENT PRESCRIPTIONS:</b></p>	<p><b>MANAGEMENT PRESCRIPTIONS:</b></p>
<p><b>Cultural</b> - Allocate cultural sites including ethnographic properties into three classifications: (1) information potential, (2) public values, and (3) conservation. See Appendix 1 for a listing of which types of sites would be allocated to each classification.</p> <p>Consult with the Ute Tribe for the protection of areas and items of traditional lifeways and religious significance.</p>	<p><b>Cultural</b> - Allocate cultural sites including ethnographic properties into three classifications: (1) information potential, (2) public values, and (3) conservation. See Appendix 1 for a listing of which types of sites would be allocated to each classification.</p> <p>Consult with the Ute Tribe for the protection of areas and items of traditional lifeways and religious significance.</p>	<p><b>Cultural</b> - Allocate cultural sites including ethnographic properties into three classifications: (1) information potential, (2) public values, and (3) conservation. See Appendix 1 for a listing of which types of sites would be allocated to each classification.</p> <p>Consult with the Ute Tribe for the protection of areas and items of traditional lifeways and religious significance.</p>



**TABLE 2-18 (CONTINUED): ALTERNATIVE E -**

<u>BROWNS PARK COMPLEX</u>	<u>LEARS CANYON</u>	<u>LOWER GREEN RIVER SEGMENT</u>	<u>NINE MILE CANYON</u>
<p><b>Cultural (Cont)</b> - Develop interpretive trail and/or facilities at Taylor Flat and the old Rock Saloon. Develop a self-guided tour of important historic structures and locations in the complex.</p>			
<p><b>Fire</b> - Pinyon-juniper woodlands would be allowed to burn under prescribed conditions in Level 2 and 3 areas to enhance or expand big game habitat. Wildfires within the sagebrush and riparian zones would be fully suppressed.</p>	<p><b>Fire</b> - Prescribed burning may be allowed in the pinyon-juniper community to maintain a vigorous, healthy condition of the existing native vegetation community, or to support critical soil or crucial big game habitat management objectives. No more than 50% of the pinyon-juniper community or 40% of the douglas fir-mountain browse community would be allowed to burn during the life of this plan.</p>		
<p><b>Fish and Wildlife</b> - Do not allow activities that would result in adverse impacts to wintering deer from December 1 through April 30 on crucial deer winter range.</p> <p>Do not allow any surface-disturbing activities (does not apply to boating) during the period March 1 through May 25, the waterfowl's active nesting period in Level I lands.</p> <p>Do not allow permanent surface-disturbing activities within 1,000 feet of sage grouse strutting grounds year round that cannot be mitigated or would not enhance sage grouse habitat. Within 2 miles of strutting grounds (nesting areas) allow no surface-disturbing activities from March 1 through June 30.</p> <p>Construct bald eagle perch sites within level 1 areas as necessary, while maintaining the scenic integrity of the riverway.</p> <p>Establish raptor protection zones in which no construction or disturbing activities (does not apply to river rafting) will be allowed within 1/2 mile of an occupied eagle or Swainson's hawk nest from February 1 through July 15. Would not apply if impacts could be mitigated through other management actions.</p>	<p><b>Fish and Wildlife</b> - Do not allow activities that would result in adverse impacts to wintering deer from December 1 through April 30 on crucial deer winter range.</p>	<p><b>Fish and Wildlife</b> - Do not allow activities that would result in adverse impacts to wildlife from May 1 through June 30 on antelope fawning areas.</p> <p>Establish raptor protection zones in which no construction or disturbing activities (does not apply to rafting) would be allowed within 1/2 mile of occupied eagle or Swainson's hawk nests from February 1 through July 15. Would not apply if impacts could be mitigated through other management actions.</p> <p>Establish raptor protection zones in which no construction or disturbing activities (would not apply to rafting) would be allowed within 1/2 mile of occupied ferruginous hawk nests from March 1 through July 15. Would not apply if impacts could be mitigated through other management action.</p> <p>Establish raptor protection zones in which no construction or disturbing activities (does not apply to rafting) would be allowed within 1 mile of occupied peregrine falcon nests from February 1 through August 31. Would not apply if impacts could be mitigated through other management actions.</p>	<p><b>Fish and Wildlife</b> - Do not allow activities that would result in adverse impacts to wildlife from December 1 through April 30 on crucial deer and elk winter range.</p> <p>Establish raptor protection zones in which no construction or disturbing activities would be allowed within 1/2 mile of occupied eagle or Swainson's hawk nests from February 1 through July 15. Would not apply if impacts could be mitigated through other management actions.</p> <p>Establish raptor protection zones in which no construction or disturbing activities would be allowed within 1/2 mile of occupied ferruginous hawk nests from March 1 through July 15. Would not apply if impacts could be mitigated through other management actions.</p> <p>Establish raptor protection zones in which no construction or disturbing activities would be allowed within 1 mile of occupied peregrine falcon nests from February 1 through August 31. Would not apply if impacts could be mitigated through other management actions.</p> <p>Provide habitat for and allow for reintroductions of Colorado cutthroat, bighorn sheep, moose and upland game birds.</p>



# MANAGEMENT PRESCRIPTIONS FOR SPECIAL EMPHASIS AREAS

PARIETTE WETLANDS	RED CREEK WATERSHED ACEC	RED MOUNTAIN-DRY FORK COMPLEX
		<p><b>Fire</b> - Maintain the natural role of fire within the relict vegetation areas; however, large-scale fires would not be allowed to kill more than 3% of the ponderosa pine on Red Mountain or 50% of the sagebrush-mountain browse in Castle Cove relict vegetation areas over the life of this RMP. Outside of the relict vegetation areas allow fires to burn under prescribed conditions only to enhance the stated values.</p>
<p><b>Fish and Wildlife</b> - Do not allow surface-disturbing activities that would result in adverse impact to nesting waterfowl during the period March 1 through May 25.</p> <p>Do not allow surface-disturbing activities within 1/8 mile of active goose nest sites.</p> <p>Do not allow new surface-disturbing activities or OHV use within 1/2 mile from occupied eagle or Swainson's hawk nests from February 1 through June 15. This restriction would not apply if impacts could be mitigated through other management actions.</p> <p>Do not allow new surface-disturbing activities within 1 mile of occupied peregrine falcon nests from February 1 through August 31. Would not apply if impacts could be mitigated through other management actions.</p> <p>Maintain existing habitat in Eight-Mile Flat identified for black-footed ferret reintroduction by avoiding surface disturbance. Do not allow any activities that would render the habitat unsuitable of future reintroductions.</p>	<p><b>Fish and Wildlife</b> - Do not allow activities that would result in adverse impacts to wildlife from December 1 through April 30 on crucial deer and elk winter range.</p> <p>Do not allow OHV use or surface-disturbing activities within 1,000 feet of sage grouse strutting grounds.</p> <p>Do not allow OHV use and surface-disturbing activities within 2 miles of sage grouse strutting grounds (the nesting areas) from March 1 through June 30.</p> <p>Establish raptor protection zones in which no construction or disturbing-activities would be allowed within 1/2 mile of occupied eagle nests from February 1 through July 15. Would not apply if impacts could be mitigated through other management actions.</p> <p>Provide habitat and allow for the reintroduction of bighorn sheep, and upland game.</p>	<p><b>Fish and Wildlife</b> - Do not allow activities that would result in adverse impacts to wildlife from December 1 through April 30 on crucial big game winter range.</p> <p>Establish raptor protection zones in which no construction or disturbing activities would be allowed within 1/2 mile of occupied eagle nests from February 1 through July 15. Would not apply if impacts could be mitigated through other management actions.</p> <p>Provide habitat and the reintroductions of bighorn sheep and upland game.</p>



**TABLE 2-18 (CONTINUED): ALTERNATIVE E -**

<u><b>BROWNS PARK COMPLEX</b></u>	<u><b>LEARS CANYON</b></u>	<u><b>LOWER GREEN RIVER SEGMENT</b></u>	<u><b>NINE MILE CANYON</b></u>
<p><b>Fish and Wildlife (Cont)</b> - Establish raptor protection zones in which no construction or disturbing activities (does not apply to rafting) would be allowed within 1 mile of occupied peregrine falcon nests from February 1 through August 31. Would not apply if impacts could be mitigated through other management actions.</p> <p>Provide habitat and allow for reintroductions of Colorado cutthroat, bighorn sheep, river otter and upland game birds.</p>		<p><b>Fish and Wildlife (Cont)</b> - Provide habitat for and allow for the reintroduction of bighorn sheep and upland game birds within the lower Green River area.</p>	
<p><b>Lands</b> - Establish a right-of-way avoidance area within level 1 and 2 areas of the complex. Make level 3 lands available to support permitted activities with special restrictions designed to maintain the wildlife, soils and scenic values.</p> <p>Priority would be given for the resolution of the existing airport trespasses at Willow Creek and Taylor Flat.</p> <p>Recommend protective withdrawals that preclude entry under the 1872 General Mining Law or the agricultural entry laws on the Green River Scenic Corridor and the developed and potential recreation areas within level 1 and 2 areas of the complex.</p>	<p><b>Lands</b> - Establish a rights-of-way avoidance area covering the entire area.</p> <p>Recommend protective withdrawals that preclude entry under the 1872 General Mining Law or the agricultural entry laws or other protective measures for the lower Green River.</p>	<p><b>Lands</b> - Establish a right-of-way avoidance area within level 2 lands, make level 3 lands available to support permitted activities with special restrictions designed to protect the identified resource values.</p> <p>Recommend protective withdrawals that preclude entry under the 1872 General Mining Law or the agricultural entry laws or other protective measures for the lower Green River.</p> <p>Acquire fee title or interest in lands (e.g., water rights) within the area as they become available.</p>	<p><b>Lands</b> - Acquire needed legal motorized vehicular access to Argyle Ridge, Nine Mile Canyon-east end, and Jensen Canyon. Acquire needed non-motorized access to Nine Mile Canyon and Little Sulfur Canyon.</p> <p>Establish a right-of-way avoidance area within Level 2 lands. Make Level 3 lands available to support permitted activities with special restrictions designed to protect the stated resource values.</p> <p>Recommend protective withdrawals that preclude entry under the 1872 General Mining Law or the agricultural entry laws or other protective measures on identified segments of Nine Mile and Argyle Creeks.</p> <p>Acquire fee title or interest in lands (e.g., water rights) within the area as opportunities become available.</p>
<p><b>Livestock</b> - Level 2 lands would be open to grazing under improved grazing strategies to maintain or enhance the wildlife, riparian, and vegetation values. Level 1 lands would be open to restricted grazing on a case-by-case basis only as a biological tool to control noxious weeds. No grazing would be allowed on developed recreation sites and cultural sites eligible for or listed on the NRHP. Do not allow livestock grazing within Sears Canyon except for one day livestock trailing.</p>	<p><b>Livestock</b> - Do not allow livestock grazing within the area. Occasional one-day livestock trailing could be authorized through the area to afford proper livestock distribution elsewhere on the grazing allotment.</p> <p>Develop range improvements to prevent livestock from moving or drifting onto the area.</p>	<p><b>Livestock</b> - Level 3 lands would be open to grazing. Level 2 lands would be open to prescribed grazing designed to maintain or enhance the stated resource values. Level 1 lands would be open to restricted grazing on a case-by-case basis. No grazing would be allowed in the Sand Wash Recreation Site.</p> <p>Allow rangeland improvements and grazing prescriptions to maintain or improve the values present on the area.</p>	<p><b>Livestock</b> - Level 3 lands would be open to livestock grazing. Level 2 lands would be open to grazing under improved grazing strategies to enhance or maintain the level 2 values identified above. No grazing would be allowed on cultural sites eligible for or listed on NRHP.</p> <p>Allow rangeland improvements and grazing prescriptions to maintain or improve the stated values within the area.</p>



# MANAGEMENT PRESCRIPTIONS FOR SPECIAL EMPHASIS AREAS

<u>PARIETTE WETLANDS</u>	<u>RED CREEK WATERSHED ACEC</u>	<u>RED MOUNTAIN-DRY FORK COMPLEX</u>
<p><b>Fish and Wildlife (Cont)</b> - Allow only experimental, non-essential ferret reintroductions in accordance with Bureau-approved final guidelines (see Appendix 2 for guidelines on how this area would be managed) where these reintroductions would not conflict with other current existing uses in the reintroduction area.</p>		
<p><b>Lands</b> - Establish a right-of-way avoidance area within level 2 lands. Make level 3 lands available to placement of rights-of-way with special restriction designed to protect the stated resource values in the area.</p> <p>Acquire fee title or interest in lands (e.g., water rights) within level 2 areas as opportunities develop.</p>	<p><b>Lands</b> - Establish a right-of-way avoidance area in level 2 lands. Make level 3 lands available to support permitted activities with special restrictions to protect the identified resource values.</p>	<p><b>Lands</b> - Acquire public non-motorized access across established roads and trails to enhance recreational opportunities along Ashley Creek. Acquire legal motorized access to Red Mountain.</p> <p>Establish right-of-way avoidance areas within level 1 and 2 lands. Allow for the placement of permitted land uses with restrictions designed to maintain or enhance the resource values in Level 3 areas.</p> <p>Recommend protective withdrawals to preclude entry under the General Mining Law of 1872 or the agricultural entry laws or other protective measures on the level 1 and 2 lands and the potential recreation sites.</p> <p>Acquire fee title or interest in lands (e.g., water rights, scenic easements) within the area as opportunities become available.</p>
<p><b>Livestock</b> - Level 3 lands would be open to grazing. Level 2 lands would be open to prescribed grazing, designed to maintain and/or enhance the wetland, watershed, and special status species habitat.</p> <p>Allow rangeland improvements and grazing prescriptions to maintain or improve the values present on level 2 and 3 lands.</p>	<p><b>Livestock</b> - Level 3 lands would be open to grazing. Level 2 lands would be open to prescribed grazing designed to maintain or enhance the watershed and wildlife habitat values. No grazing would be allowed on cultural sites eligible or listed on NRHP.</p> <p>Allow rangeland improvements and grazing prescriptions to maintain or improve the values identified within the ACEC.</p>	<p><b>Livestock</b> - Level 3 lands would be open to livestock grazing. Level 2 lands would open to prescribed grazing with conditions designed to maintain or enhance the area's identified resource values. Level 1 lands would be open to restricted grazing on a case-by-case basis. No grazing would be allowed in developed recreation sites and cultural sites selected eligible or listed on NRHP.</p> <p>Grazing would not be allowed in the relict vegetation communities.</p>



TABLE 2-18 (CONTINUED): ALTERNATIVE E -

<u>BROWNS PARK COMPLEX</u>	<u>LEARS CANYON</u>	<u>LOWER GREEN RIVER SEGMENT</u>	<u>NINE MILE CANYON</u>
<p><b>Livestock (Cont)</b> - No domestic sheep grazing would be allowed.</p> <p>Allow rangeland improvements which maintain or improve the wildlife, scenic and recreation values of the complex.</p>		<p><b>Livestock (Cont)</b> - Take opportunities to eliminate domestic sheep grazing within 10 miles of identified bighorn sheep habitat within the lower Green River segment by using negotiation of changes in class of livestock, alternative grazing systems, etc.</p>	
<p><b>MINERALS</b></p> <p><b>Leasables</b> - Level 3 lands would be open to leasing with special conditions designed to protect the visual, wildlife, and soils resource values, level 1 and 2 lands would be open to leasing with no-surface-occupancy stipulations.</p>	<p><b>MINERALS</b></p> <p><b>Leasables</b> - The area would be open to mineral leasing with a no-surface-occupancy stipulation.</p>	<p><b>MINERALS</b></p> <p><b>Leasables</b> - Level 3 areas would be open to leasing with special conditions designed to protect the resource values of the area, and level 2 areas would be open to leasing with a no-surface-occupancy stipulation.</p>	<p><b>MINERALS</b></p> <p><b>Leasables</b> - Level 3 lands would be open to leasing with special conditions designed to protect the stated resource values; level 2 lands would be open to leasing with a no-surface-occupancy stipulation.</p>
<p><b>Geophysical Activities</b> - Level 3 areas would be open to geophysical exploration with special conditions designed to enhance and/or protect the values of the complex.</p>	<p><b>Geophysical Activities</b> - The area would be open to nonsurface-disturbing geophysical activities only.</p>	<p><b>Geophysical Activities</b> - Level 3 lands and the primitive/natural areas within Level 2 would be open to geophysical activities with restrictions designed to protect those stated resource values. Level 1 and the remaining areas within level 2 would be open to nonsurface-disturbing geophysical activities only.</p>	<p><b>Geophysical Activities</b> - Level 3 and Level 2 (except riparian and primitive/natural areas) would be open to geophysical exploration with special conditions designed to maintain the resource values; the remainder of level 2 lands would be open to nonsurface-disturbing geophysical activity.</p>
<p><b>Mineral Materials</b> - Allow mineral material disposal on level 3 lands with special restrictions designed to protect/enhance the stated values of the complex. Consider allowing mineral material disposals on level 2 areas only after a site-specific analysis. Level 1 lands would be closed to mineral material disposals.</p>	<p><b>Mineral Materials</b> - Do not allow mineral material disposal.</p>	<p><b>Mineral Materials</b> - Allow mineral material disposals on level 3 with restrictions. Consider allowing such disposals on level 1 and 2 areas only after a site-specific analysis.</p>	<p><b>Mineral Material</b> - Allow mineral material disposals on level 3 lands with special restrictions designed to protect those stated resource values, allow mineral material disposals on level 2 lands on a case-by-case basis.</p>



# MANAGEMENT PRESCRIPTIONS FOR SPECIAL EMPHASIS AREAS

<u>PARIETTE WETLANDS</u>	<u>RED CREEK WATERSHED ACEC</u>	<u>RED MOUNTAIN-DRY FORK COMPLEX</u>
		<p><b>Livestock (Cont)</b> - Allow rangeland improvements and grazing prescriptions to maintain or improve the values present on lands within the area.</p>
<p><b>MINERALS</b></p> <p><b>Leasables</b> - Level 3 lands would be open to leasing with special conditions designed to protect the stated resource values; level 2 lands would be open to leasing with a no-surface-occupancy stipulation.</p>	<p><b>MINERALS</b></p> <p><b>Leasables</b> - Level 3 lands would be open to leasing with special conditions designed to protect or enhance the watershed and wildlife habitat values. Level 2 lands would be open to leasing with a no-surface-occupancy stipulation.</p>	<p><b>MINERALS</b></p> <p><b>Leasables</b> - Level 3 lands would be open to leasing with special conditions designed to protect or enhance the stated resource values of the area, level 2 lands would be open to leasing with a no-surface-occupancy stipulation; and level 1 lands would be closed to leasing.</p> <p>Exploration and development of phosphate within crucial deer and elk winter range would be allowed year round, but would require management actions designed to mitigate both short- and long-term loss of habitat.</p>
<p><b>Geophysical Activities</b> - Level 3 areas would be open to geophysical exploration with special conditions designed to enhance and/or protect the values of the complex.</p>	<p><b>Geophysical Activities</b> - Level 3 lands, excluding riparian areas, would be open to geophysical exploration with special conditions, designed to maintain or enhance the stated watershed and wildlife habitat values. Level 2 lands and all riparian lands would be open to nonsurface-disturbing geophysical activities only.</p>	<p><b>Geophysical Activities</b> - Level 3 lands, except for riparian areas, would be open to geophysical exploration with special conditions designed to protect or enhance the resource values of the level; level 1 and 2 lands and all riparian areas within level 3 would be open to nonsurface-disturbing geophysical activities only.</p>
<p><b>Mineral Materials</b> - Allow mineral material disposals on level 3 lands with special restrictions designed to protect watershed values. Allow mineral material disposals on level 2 areas on a case-by-case basis.</p>	<p><b>Mineral Materials</b> - Allow mineral material disposals on level 3 lands with special restrictions designed to maintain or enhance the stated watershed and wildlife habitat values, allow mineral disposals on level 2 lands on a case-by-case basis with restrictions to protect or enhance stated resource values.</p>	<p><b>Mineral Materials</b> - Allow mineral material disposal on level 3 lands with special restrictions designed to protect or enhance the resource values of the level; allow mineral disposals on level 2 areas on a case-by-case basis with restrictions to protect or enhance the stated resource values; do not allow mineral material disposals on the relict vegetation communities within level 1.</p>



TABLE 2-18 (CONTINUED): ALTERNATIVE E -

<u>BROWNS PARK COMPLEX</u>	<u>LEARS CANYON</u>	<u>LOWER GREEN RIVER SEGMENT</u>	<u>NINE MILE CANYON</u>
<p><b>Locatables</b> - Any mining activity other than casual use would require a mining plan of operations. Development would be restricted by stipulations designed to protect the natural values of the area within the parameters of the 1872 General Mining Law. For the level 1 areas, the preceding would be applied until a protective withdrawal is obtained.</p>	<p><b>Locatables</b> - Until a protective withdrawal is in place and in force, any mining activity other than casual use would require a mining plan of operations. Development would be restricted by stipulations designed to protect the vegetation community in the area within the parameters of the 1872 General Mining Law.</p>	<p><b>Locatables</b> - Until a protective withdrawal is in place and in force, any mining activity other than casual use would require a mining plan of operations. Development would be restricted by stipulations designed to protect the riparian and special status species in the area within the parameters of the 1872 General Mining Law.</p>	<p><b>Locatables</b> - Any mining activity other than casual use would require a mining plan of operations. Development would be restricted by stipulations designed to protect the natural and primitive values of the area within the parameters of the 1872 General Mining Law.</p>
<p><b>Recreation</b> - Level 3 lands would be open to OHV use with seasonal restrictions designed to protect wildlife habitat and watershed values; level 1 and 2 and critical soils within Level 3 would be open to OHV use on designated roads and trails. Semi-primitive, nonmotorized areas within level 2 would be closed to OHV use. Such restrictions would not apply to permitted BLM activities or authorized administrative uses.</p> <p>Develop recreation facilities at Cottonwood Grove. Expand recreation facilities at Bridge Hollow and Indian Crossing. Maintain recreation facilities at Pugmire Pocket, Red Creek and Swallow Canyon at their present size (all within level 1).</p> <p>Allow development of limited recreation facilities along the Green River needed to protect human health and safety.</p> <p>Recreation sites would be closed to grazing and surface-disturbing activities not related to recreation development.</p> <p>Develop 15 miles of hiking and/ or horseback trails along the Green River, Beaver and Willow Creeks with conditions to protect the riparian values. In Sears Canyon develop a nonmotorized trail.</p> <p>Maintain the high quality recreation experience along the Green River by managing float boating and related activities in cooperation with other land managing agencies through development of a new river corridor management plan.</p>	<p><b>Recreation</b> - The area would be closed to OHV use due to the clear dominance of the primitive/ natural qualities (90%) of the area. This would not apply to permitted BLM activities or authorized administrative uses.</p>	<p><b>Recreation</b> - Level 3 lands, excluding the critical soils would be open to OHV use with seasonal restrictions designed to protect the resource values. Level 1, 2, excluding the primitive/natural areas, and the critical soils within level 3 would be open to OHV use on existing roads and trails. The primitive/ natural area within level 2 would be closed to OHV use.</p>	<p><b>Recreation</b> - Level 3 lands, except critical soils, would be open to OHV use with seasonal restrictions designed for watershed, soils and vegetation resource protection. Level 2 (except for the primitive/natural area) and the critical soils within level 3 would be open to OHV use on designated roads and trails. The primitive/natural areas, within level 2, would be closed to OHV use. This would not apply to permitted BLM activities or authorized administrative uses.</p> <p>Recreation sites would be closed to grazing and surface-disturbing activities not related to recreational development.</p> <p>Maintain the character and values of the identified primitive/natural area by closing the area to OHV use and motorized surface-disturbing activities.</p> <p>Establish a Special Recreation Management Area to cover the Nine Mile Canyon area.</p>



# MANAGEMENT PRESCRIPTIONS FOR SPECIAL EMPHASIS AREAS

<u>PARIETTE WETLANDS</u>	<u>RED CREEK WATERSHED ACEC</u>	<u>RED MOUNTAIN-DRY FORK COMPLEX</u>
<p><b>Locatables</b> - Any mineral activity other than casual use would require a mining plan of operations. Development would be restricted by stipulations designed to protect the identified resource values.</p>	<p><b>Locatables</b> - Any mineral activity other than casual use would require a mining plan of operations. Development would be restricted by stipulations designed to protect the identified resource values.</p>	<p><b>Locatables</b> - Any mining activity other than casual use would require a mining plan of operations. Development would be restricted by stipulations designed to protect the natural values of the area within the parameters of the 1872 General Mining Law. For the level 1 areas, the preceding would be applied until a protective withdrawal is obtained.</p>
<p><b>Recreation</b> - Level 3 lands, except critical soils, would be open to OHV use with seasonal restrictions designed to protect the watershed and soils values, level 2 lands and the critical soils within level 3 would be open to OHV use on designated roads and trails. This restriction would not be applied to permitted BLM activities or authorized administrative uses.</p> <p>Provide recreation facilities and interpretive trails at Pariette Wetlands.</p> <p>Recreation sites would be closed to livestock grazing and surface-disturbing activities not related to recreation development.</p>	<p><b>Recreation</b> - Level 3 lands, excluding critical soils, would be open to OHV use with seasonal restrictions for the watershed and wildlife protection; level 2 lands and critical soils in level 3 would be open to OHV use on designated roads and trails.</p> <p>Develop interpretive trails and/or facilities in the Clay Basin Gas field.</p>	<p><b>Recreation</b> - Level 3 lands, except critical soils, would be open to OHV use with seasonal restrictions; level 1 and 2 lands and critical soils within level 3 would be open to OHV use on designated roads and trails.</p> <p>Develop recreation facilities on Red Mountain outside the relict vegetation area; expand recreation facilities at Dry Fork Canyon.</p> <p>Recreation sites would be closed to grazing and surface-disturbing activities not related to recreation development.</p> <p>Develop an interpretive trail and/or facilities along Brush Creek.</p> <p>Develop 3 miles of nonmotorized trails along Dry Fork and Ashley Creeks. Establish 12 miles of mountain bicycle trails using existing rural roads and trails.</p> <p>Maintain existing trail on Red Mountain. If, however, OHV use occurs off trail after a reasonable program of signing and public education, close trail. Close trail to Moonshine Arch to OHV use.</p> <p>Establish a Special Recreation Management Area (SRMA) to cover the Red Mountain-Dry Fork Complex.</p>



TABLE 2-18 (CONTINUED): ALTERNATIVE E -

<u>BROWNS PARK COMPLEX</u>	<u>LEARS CANYON</u>	<u>LOWER GREEN RIVER SEGMENT</u>	<u>NINE MILE CANYON</u>
<p><b>Recreation (Cont)</b> – Maintain the character and values of identified primitive/ natural areas within the area by closing them to OHV use and motorized surface-disturbing activities.</p> <p>Continue the current Special Recreation Management Area (SRMA) status along the Green River Scenic Corridor at its present 17,000-acre size.</p>			
<p><b>Riparian</b> – Allow surface-disturbing activities and grazing, only if specifically designed to enhance or maintain riparian objectives within the 330-foot riparian buffer.</p>		<p><b>Riparian</b> – Riparian habitat in early and mid ecological states would be improved by establishing grazing systems and constructing rangeland improvements designed to enhance riparian values.</p> <p>Provide sufficient herbaceous forage biomass to meet requirements of plant vigor maintenance, bank protection and sediment entrapment.</p> <p>Allow surface-disturbing activities and grazing only if designed to enhance or maintain riparian objectives within the 330-foot riparian buffer.</p>	<p><b>Riparian</b> – Riparian habitat in early and mid ecological stages would be improved by establishing grazing systems and constructing rangeland improvements designed to enhance the riparian values.</p> <p>Allow surface-disturbing activities and grazing only if designed to enhance or maintain riparian objectives within the established 330-foot riparian buffer.</p>
<p><b>Soils &amp; Water</b> – Allow new surface-disturbing activities on critical soils within Level 3 areas of the complex if watershed values are maintained.</p> <p>Preclude OHV use and surface-disturbing activities in areas of highly erodible soils and floodplains during times of saturated soils (usually spring runoff and fall rains).</p> <p>Level 3 lands would be available for major (&gt;1 acre-foot capacity) water developments if the project would be consistent with the overall management prescriptions of the complex.</p>		<p><b>Soils &amp; Water</b> – Allow new surface-disturbing activities on critical soils within level 3 lands if watershed values are maintained.</p> <p>Level 3 would be available for major (&gt;1 acre-foot capacity) water developments with special restrictions designed to maintain the visual qualities of the area. Outside of these areas, major water developments could be permitted if the project is consistent with the area prescriptions.</p> <p>Areas of critical soils and floodplains are closed during periods of saturated soils (usually spring runoff and fall rains) to OHV use and surface-disturbing activities.</p>	<p><b>Soils &amp; Water</b> – Allow new surface-disturbing activities on highly erosive soils within level 3 lands if watershed values would be maintained.</p> <p>Areas of highly erodible soils and floodplains are closed during times of saturated soils (usually spring runoff and fall rains) to OHV use and surface-disturbing activities.</p> <p>Level 3 lands would be available for major (&gt;1 acre foot capacity) water developments with special restrictions designed to maintain the existing resource values. Outside of these areas, major water developments could be permitted if the project is consistent with these prescriptions.</p>



# MANAGEMENT PRESCRIPTIONS FOR SPECIAL EMPHASIS AREAS

<u>PARIETTE WETLANDS</u>	<u>RED CREEK WATERSHED ACEC</u>	<u>RED MOUNTAIN-DRY FORK COMPLEX</u>
<p><b>Riparian</b> - Allow new surface-disturbing activities within 330 feet of riparian zones only when it can be shown there is no practical alternative, that long-term impacts are fully mitigated or that the construction is an enhancement to the riparian area.</p>	<p><b>Riparian</b> - Allow new surface-disturbing activities within 330 feet of riparian zones only when it can be shown there is no practical alternative, that long-term impacts are fully mitigated or that the construction is an enhancement to the riparian area.</p>	<p><b>Riparian</b> - Allow new surface-disturbing activities within 330 feet of riparian zones only when it can be shown there is no practical alternative, that long-term impacts are fully mitigated or that the construction is an enhancement to the riparian area.</p>
<p><b>Soil &amp; Water</b> - Allow new surface-disturbing activities on critical soils within the level 3 lands if watershed values can be maintained.</p> <p>Level 3 lands would be available for major (&gt;1 acre foot capacity) with special restrictions designed to protect the stated resource values. Level 2 lands could be available for such projects if it is consistent with these prescriptions.</p> <p>Areas of critical soils and floodplains are closed during periods of saturated soils (usually spring runoff and fall rains) to OHV use and surface-disturbing activities.</p>	<p><b>Soil &amp; Water</b> - Allow new surface-disturbing activities on critical soils with level 3 lands if watershed values are maintained.</p> <p>Level 3 lands would be available for major (&gt;1 acre-foot capacity) water developments with special restrictions. Outside of these areas, major water developments could be permitted if the project is consistent with these management prescriptions.</p> <p>Areas of critical soils and floodplains are closed during periods of saturated soils (usually spring runoff and fall rains) to OHV use and surface-disturbing activities.</p>	<p><b>Soil and Water</b> - Allow new surface-disturbing activities on critical soils and watersheds within level 3 lands if watershed values are maintained.</p> <p>Level 3 lands would be available for major (&gt;1 acre foot capacity) water developments with restrictions designed to maintain or enhance the area's resource values. Outside of this level, major water developments could be permitted if the project is consistent with these management prescriptions.</p> <p>Areas of critical soils, municipal watersheds and floodplains are closed during periods of saturated soils (usually spring runoff and fall rains) to OHV use and surface-disturbing activities. Close Moonshine Arch Trail to OHV use.</p>



TABLE 2-18 (CONTINUED): ALTERNATIVE E -

<u>BROWNS PARK COMPLEX</u>	<u>LEARS CANYON</u>	<u>LOWER GREEN RIVER SEGMENT</u>	<u>NINE MILE CANYON</u>
<p><b>Special Emphasis Areas - Wild and Scenic River -</b> Recommend for designation the Green River, between Little Hole and the Colorado state line.</p> <p><b>Wilderness Study Areas -</b> Continue to manage the Diamond Breaks WSA and the West Cold Springs WSA under the Interim Management Policy until formal designation has been made by Congress. Should either one or both not be designated as wilderness manage the area as an integral part of this complex.</p>		<p><b>Special Emphasis Areas -</b> Recommend this Green River segment for designation as a scenic river under the Wild and Scenic Rivers Act, only if other major land owners (i.e., State of Utah) concur.</p>	
<p><b>Vegetation -</b> Allow mechanical, fire, biological, or chemical control of noxious weeds and insect infestations within the complex with restrictions to protect visual, wildlife habitat and watershed resources.</p> <p>Manage the vegetation in the complex to attain the ecological stage that would most benefit wildlife while maintaining watershed and recreational values.</p> <p>Do not allow the removal of sagebrush in level 2 areas unless fully mitigated.</p> <p>Allow for the vegetation treatment of pinyon-juniper within level 2 and level 3 areas for the expansion of big game habitat. Do not allow for the use of chaining as a vegetation treatment method in primitive/natural areas.</p> <p>Develop an activity plan for the proposed-for-listing-as-threatened plant species <u>Spiranthes diluvialis</u>. Should the U.S. Fish and Wildlife Service develop a recovery plan, implement the objectives of that plan.</p> <p>Manipulate 2,200 acres of pinyon-juniper woodlands to increase forage production and improve wildlife habitat.</p>	<p><b>Vegetation -</b> Retain the vegetation compositions in their present late to climax ecological stages.</p> <p>Allow biological, or chemical control of noxious weeds and insect infestation within the area with restrictions to protect the existing desired plant communities and watershed values. Do not allow mechanical control in of the area due to its high sensitivity for cultural resources, primitive/ natural qualities, and critical soil values.</p> <p>In the event revegetation following a major surface disturbance, such a wildfire, is deemed necessary to protect watershed and visual resource values, only site-adapted native species would be used. On small surface-disturbed areas (less than five acres) within the pinyon-juniper community, where other resource values would not be adversely affected, consider allowing natural revegetation to accomplish the vegetation community's natural recovery.</p>	<p><b>Vegetation -</b> Allow mechanical, fire, biological or chemical control of noxious weeds and insect infestations within the area with restrictions designed to protect ground cover, special status plant species, water quality and the scenic values of the area.</p> <p>Manage the vegetation to attain the ecological stage that would most benefit special status species habitats, riparian, watershed and visual resource values. Manage vegetation in the remaining portion of the area which would result in the highest vegetation species diversity to maintain or enhance the remaining resource values.</p> <p>The <u>Sclerocactus glaucus</u> recovery plan as developed by the U.S. Fish and Wildlife Service (1990) would be implemented, where necessary.</p>	<p><b>Vegetation -</b> Allow mechanical, fire, biological, or chemical control of noxious weeds and insect infestations within the area with restrictions to minimize adverse impacts to cultural sites, special status plant species habitat, riparian and scenic watershed values.</p> <p>Manage the vegetation to attain the ecological stage that would most benefit the special status plant species habitat, primitive/natural, riparian and scenic resource values.</p> <p>The <u>Sclerocactus glaucus</u> recovery plan as developed by the U.S. Fish and Wildlife Service (1990) would be implemented, where necessary. Prepare specific activity plans for the remaining special status plant species. Should USFWS develop specific recovery plans, their objectives would be implemented to the extent possible.</p> <p>Manipulate 400 acres of pinyon-juniper woodlands to increase forage production and improve wildlife habitat.</p>



# MANAGEMENT PRESCRIPTIONS FOR SPECIAL EMPHASIS AREAS

<u>PARIETTE WETLANDS</u>	<u>RED CREEK WATERSHED ACEC</u>	<u>RED MOUNTAIN-DRY FORK COMPLEX</u>
<p><b>Vegetation</b> – Allow mechanical, fire, biological, or chemical control of noxious weeds and insect infestations within the area with restrictions designed to protect the special status plant species and riparian habitat, desired ground cover, and water quality.</p> <p>Manage the vegetation to attain the ecological stage that would most benefit riparian and watershed values, and manage vegetation in the remaining area which results in the highest vegetation species diversity to meet the special status plant species, wildlife, and recreation values.</p> <p>The <u>Sclerocactus glaucus</u> recovery plan as developed by the U.S. Fish and Wildlife Service (1990) would be implemented where necessary.</p>	<p><b>Vegetation</b> – Allow mechanical, fire, biological, or chemical control of noxious weeds and insect infestations within the ACEC with restrictions designed to protect the vegetation ground cover and watershed and water quality values.</p> <p>Manage the vegetation to attain the ecological stage that would most benefit wildlife in crucial habitat and manage vegetation in the remaining areas which results in the highest vegetation species diversity for the maintenance and enhance of the watershed resource values.</p> <p>Manipulate 500 acres of pinyon-juniper woodlands to increase forage production and improve wildlife habitat.</p>	<p><b>Vegetation</b> – Allow mechanical, fire, biological, or chemical control of noxious weeds and insect infestations within the area, except for the relict vegetation areas, with restrictions designed to protect the watershed and water quality values and other resource values of the area. Within the relict vegetation communities, allow only biological control of noxious weeds and insect infestations.</p> <p>Outside of the relict vegetation communities, manage the vegetation to attain the ecological stage which results in the highest vegetation species diversity for wildlife and scenic values. Within the relict vegetation communities, allow the area to maintain their late to climax ecological stages.</p> <p>Manipulate 1000 acres of pinyon-juniper woodlands to increase forage production and improve wildlife habitat.</p>



TABLE 2-18 (CONTINUED): ALTERNATIVE E -

<u>BROWNS PARK COMPLEX</u>	<u>LEARS CANYON</u>	<u>LOWER GREEN RIVER SEGMENT</u>	<u>NINE MILE CANYON</u>
<p>Visual - Maintain the natural/primitive qualities of the VRM Class II areas. Allow only short-term or mitigable visual intrusions on VRM Class II lands (within level 3) and level 1 areas of the complex.</p>	<p>Visual - Allow only short-term or mitigable visual intrusions on VRM Class II lands and within 1/2 mile or line-of-sight of state- or federally-listed scenic/back-country byways.</p>	<p>Visual - Maintain the primitive/natural qualities of the lower Green River viewshed and other VRM Class II lands within the area by allowing only short-term or mitigable visual intrusions.</p>	<p>Visual - Maintain the natural and primitive qualities of identified segments along Argyle and Nine Mile Creeks and VRM Class II areas. Allow only short-term or mitigable visual intrusions on these lands and within line-of-sight, up to 1/2 mile, of state or federally-listed scenic/backcountry byways.</p>
<p>Woodlands - Level 3 lands would be open to sale and/or harvest of pinyon-juniper for firewood. level 1 and 2 areas would be closed.</p> <p>Level 3 lands would be open for the harvest or collection of common native seed, Christmas trees, juniper fenceposts and pinyon pine nuts, live trees and non-barrel cactus. Level 1 and 2 areas would be closed.</p>	<p>Woodlands - The area would be closed to the sale and/or harvest of woodland products.</p>	<p>Woodlands - Level 3 would be open for the sale and/or harvest of woodland productions. Level 2 lands would be closed.</p>	<p>Woodlands - Level 3 lands would be open to the sale and/or harvest of woodland products with restrictions designed to protect the stated resource values. Level 2 lands would be closed.</p> <p>On a case-by-case basis to meet other resource management goals allow for the sale of ponderosa pine and other large conifer and aspen on level 3. Level 2 lands would be closed.</p>



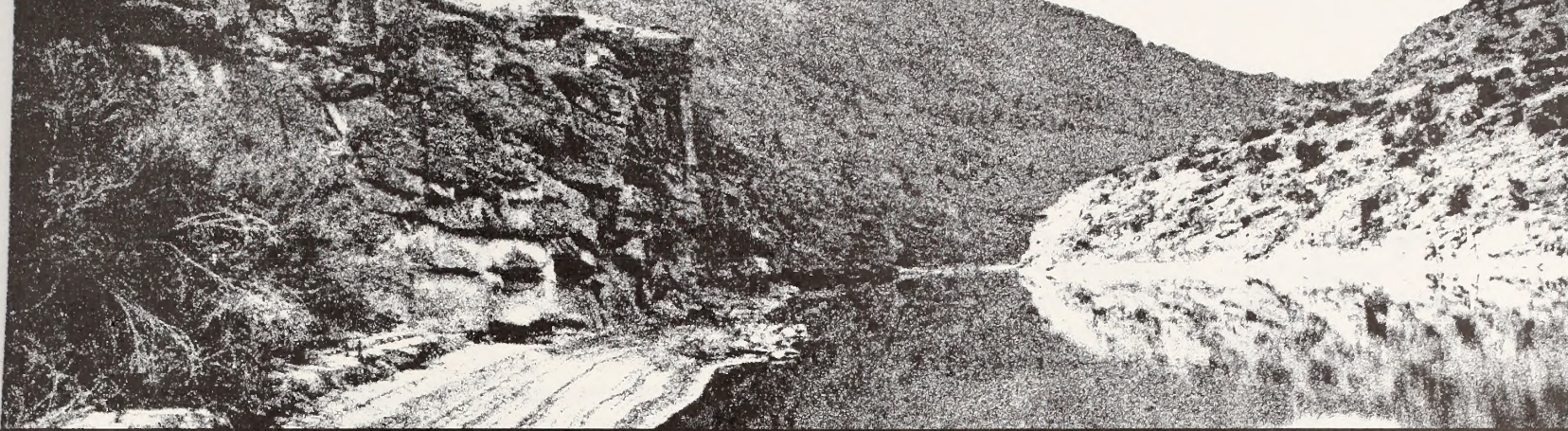
# MANAGEMENT PRESCRIPTIONS FOR SPECIAL EMPHASIS AREAS

<u>PARIETTE WETLANDS</u>	<u>RED CREEK WATERSHED ACEC</u>	<u>RED MOUNTAIN-DRY FORK COMPLEX</u>
		<p><b>Visual</b> - Maintain the natural/primitive qualities of the VRM Class II areas by allowing only short-term or mitigable visual intrusions.</p>
<p><b>Woodlands</b> - On a case-by-case and to meet other resource management goals, any cottonwood trees within level 3 lands could be harvested or sold. Level 3 lands would be open for the harvest and/or collection of common native seed, excluding barrel cactus species.</p>	<p><b>Woodlands</b> - Level 3 lands would be open to the sale and/or harvest of woodland products. level 2 lands would be closed.</p>	<p><b>Woodlands</b> - Level 3 lands would be open to the sale and/or harvest of woodland products with restrictions designed to maintain or enhance the resource values of the level; level 2 lands would be closed to the sale and/or harvest of woodland products.</p>









## AFFECTED ENVIRONMENT 3

This chapter contains a description of the existing physical, biological, and socioeconomic characteristics of the resource area significantly affected by the alternatives described in Chapter 2. This description of the affected environment serves as a baseline for analyzing and determining the effects on resources from the various alternatives. These resource descriptions are discussed only in as much detail as needed to explain the effects of implementation. Where impacts would be slight or nonexistent, the descriptions are brief. Much of the information presented in this chapter is summarized from the DMRA Management Situation Analysis (MSA). The MSA is available for review in the Vernal District Office or the Utah State Office.

### AIR RESOURCES

The present air quality of DMRA is good. The air quality in the resource area is classified as an "attainment area", meaning the area meets the National Ambient Air Quality Standards' primary and secondary air quality standards. The Prevention of Significant Air Quality Deterioration regulations allow the resource area the maximum deterioration increment described under the criteria for a Class II air quality area. Class II air quality allows for some degradation associated with moderate and well-controlled growth. There are no Class I air quality areas in the resource area; however, Dinosaur National Monument is an area of special air quality concern. Presently, the Vernal District does not monitor air quality.

### CLIMATE

DMRA lies within both the Colorado Plateau and the Middle Rocky Mountains physiographic provinces. The climate within these provinces involves a semi-arid continental regime characterized by low relative humidity, abundant sunshine, high evaporation rates, and low to moderate precipitation. Prevailing clear skies with strong daytime insolation and rapid nighttime cooling result in

wide daily temperature variations. In Browns Park the temperature extremes are moderated because of the buffering effect of the Green River. The Uinta Basin experiences a high frequency of inversion and fog during the winter months resulting from nighttime cold air draining from surrounding higher elevations. In the resource area, annual precipitation averages 8-14 inches in the lower elevations and may exceed 20 inches at the higher, mountainous elevations. Most precipitation comes from winter snowfall and intense late summer rains causing saturated soils in the spring and the fall.

### CULTURAL AND PALEONTOLOGICAL RESOURCES

#### CULTURAL RESOURCES

Cultural resources in the Diamond Mountain Resource Area include both historic and prehistoric resources. Evidences of human activity or occupation are reflected in: cultural districts, sites, structures, buildings, objects, artifacts, works of art, and natural features important in human events.

Cultural resource uses are allocated through special designations, such as Areas of Critical Environmental Concern (ACECs) and identification of American Indian tribal, religious, or cultural sites. The probability of finding cultural resources in this resource area is identified and mapped by zones on Map 3-1.

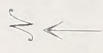
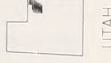




Diamond Mountain Resource Area  
Draft Resource Management Plan -- 1991

6	5	4	3	2	1
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36

SECTIONED TOWNSHIP





The ranked site density zones are based on known site densities correlated to topographic and vegetation variables. The high density zone is the area where site density varies between 10 and 40+ sites per square mile. The moderate density zone contains 10 to 1 site(s) per square mile. Low density areas have less than one site per square mile.

These rankings are based on a predictive model for site location which correlated variables from various Class II statistically-based inventories and Class III site-specific inventories.

The cultural resources in DMRA developed from centuries of human occupation, which have been divided into the following time periods: Paleo-Indian (10,850-5050 BC), Archaic (6050 BC-AD 600), Formative or Fremont (300 BC-AD 1550), and Historic (1750 AD-present) (BLM, 1990).

Cultural sites are generally concentrated near historic springs and seeps and along reliable streams such as Nine Mile Creek, Dry Fork Creek, Ashley Creek, Brush Creek and the Green River. The transition area between vegetation communities (e.g., sagebrush and pinyon-juniper woodlands, riparian and desert shrub, etc.) are also important because they provided a wide variety of plant and animal resources.

The resource area presently has approximately 1,950 recorded cultural sites. They have been initially categorized into the following BLM use categories:

<u>Use Category</u>	<u>Estimated Number of Sites</u>
Information Potential	1,460
Public Values	390
Conservation	100

The site types and numbers currently recorded in the resource area represent only the resource area's cultural resources that have been found. Only 1 percent (or 7,000 public surface acres) of the resource area has been surveyed. From an extrapolation of these figures, DMRA may have more than 150,000 sites.

While many cultural areas are known to exist in the resource area, some areas are known to contain particularly significant or high concentrations of sites. These areas are identified below, however, other areas of cultural significance also exist.

- Nine Mile Canyon is an outstanding area of archeological importance. This canyon forms the

boundary between the Uinta and San Rafael Fremont variants.

- Site densities exceed 100 per square mile. Numerous petroglyphs, pictographs and structures occupy this area. The Ute people also occupied this canyon and left many petroglyphs unique to their culture.
- The series of sandstone hogbacks at the base of the south-facing slopes of the Uinta Mountains also have high site densities. These features have been the focus of several major Fremont rock art studies (Schaafsma, 1971; Castleton, 1978; Castleton and Madsen, 1982; and Burton, 1971). Significant rock art concentrations occur at the Red Mountain-Dry Fork Canyon area, and along Ashley Creek, Spring Creek, and Big and Little Brush Creeks. Moderate density areas for rock art include Asphalt Ridge and Steinaker Draw.
- The north-facing slopes of the Uintas in Browns Park and Little Hole have very high site densities (exceeding 40 per square mile). These areas have large, complex sites which are in good condition. They contain considerable information concerning how prehistoric peoples lived and interacted with other populations in the region. Inventories of these areas indicate prehistoric peoples focused their activities in these areas for the past 3,500 years. The Jarvie National Historic Site is here, and is a good example of the historic values of the area
- Certain areas within the pinyon-juniper woodlands, sagebrush, and riparian vegetation communities have cultural significance for present day Utes as areas of religious importance.
- Three historic trails transect the resource area: the Carter Military Trail, the Vernal to Rock Springs Road and the Price to Myton Road (refer to Map 3-2).

Sites eligible for or listed on the *National Register of Historic Places* (NRHP) within the resource area include: one NRHP Historic District, one NRHP Historic Site, and 13 other sites determined to be eligible for designation as NRHP Historic Sites by the Utah State Historic Preservation Officer (SHPO). For a description of these properties, see Table 3-1, "Cultural Resource Properties." About 350 other sites within the resource area are significant and have been recorded by the professional archeologist responsible for the inventory as eligible for listing on NRHP.



Diamond Mountain Resource Area  
Draft Resource Management Plan -- 1991

6	5	4	3	2	1
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36

SECTIONED TOWNSHIP



MAP 3-2

HISTORIC TRAILS

- A CARTER MILITARY TRAIL
- B VERNAL TO ROCK SPRINGS
- C PRICE TO MYTON ROAD

R 10E R 11E R 12E R 13E R 14E R 15E R 16E R 17E R 18E

T 11S T 10S T 9S T 8S T 7S T 6S T 5S T 4S T 3S T 2S T 1S

R 25E R 24E R 23E R 22E R 21E R 20E R 19E



UTAH



**TABLE 3-1:  
CULTURAL RESOURCE PROPERTIES**

NATIONAL REGISTER PROPERTIES		
John Jarvie Ranch		A 19 <sup>th</sup> Century Ranch in Browns Park. Restored National Historic District and reconstructed to look like it did about 1900. It is managed by Vernal District BLM and is open to the public.
Sand Wash National Historic Site		The site of a historic ferry across the Green River. It is managed by BLM's Moab District.
NATIONAL REGISTER ELIGIBLE PROPERTIES (determined eligible by Utah SHPO)		
Historic Homestead	42DA482	Consists of cabin, dugout, irrigation ditches, fence lines, corral. Post 1900.
Prehistoric Camp	42DA488	Several burned structures, Uinta grey pottery, and stone tools.
Lithic Scatter	42DA498	A mid-plains archaic period tool manufacturing site.
Prehistoric Camp	42DA404/455	Prehistoric camp of large size utilized to produce stone tools.
Prehistoric Quarry Site	42DA457	Prehistoric quarry and campsite where Native Americans utilized Uinta Mountain Group Quartzite to make tools.
Road	42DA395	Jesse Ewing Road. Served as a segment of Ashley Valley to Green River stage route.
Prehistoric Camp	42DA458	A lithic scatter which has an intact slab lined hearth.
Mining Project	42DA466	A small, shallow prospect.
Prehistoric Camp	42DA480	An open camp consisting of several hundred flakes, a mano, and chopper.
Prehistoric Camp	42DA471	A large camp used when quarrying stone to produce tools.
Prehistoric Camp	42DA472	A group of hearths and a lithic scatter.
Lithic Scatter	42DC585	The site of a very large tool manufacturing site.
Fremont Rock Art Site	42UN464	A series of small (<6") figures of persons and animals.

Source: Vernal District Files

The resource area has one National Historic Landmark--The Desolation Canyon, located on the lower Green River. It runs from the Sand Wash Recreation Site near Nine Mile Canyon down river into the Moab District. Current management practices are discussed in the 1979 "Desolation and Gray Canyons of the Green River, River Management Plan".



**PALEONTOLOGICAL RESOURCES**

Within DMRA, geologic formations have been ranked as having high, medium, or low fossil-bearing potential. The formations recognized as having the highest fossil potential are identified in Table 3-2 and depicted on Map 3-3. In particular, the Mesozoic Formations in the Red Fleet area are becoming important due to diversity and density of recently uncovered dinosaur fossils and trackways. This area may be proposed for inclusion into the National Natural Landmark System. Currently about 300 paleontological sites have been found and recorded covering less than 1 percent of the resource area.

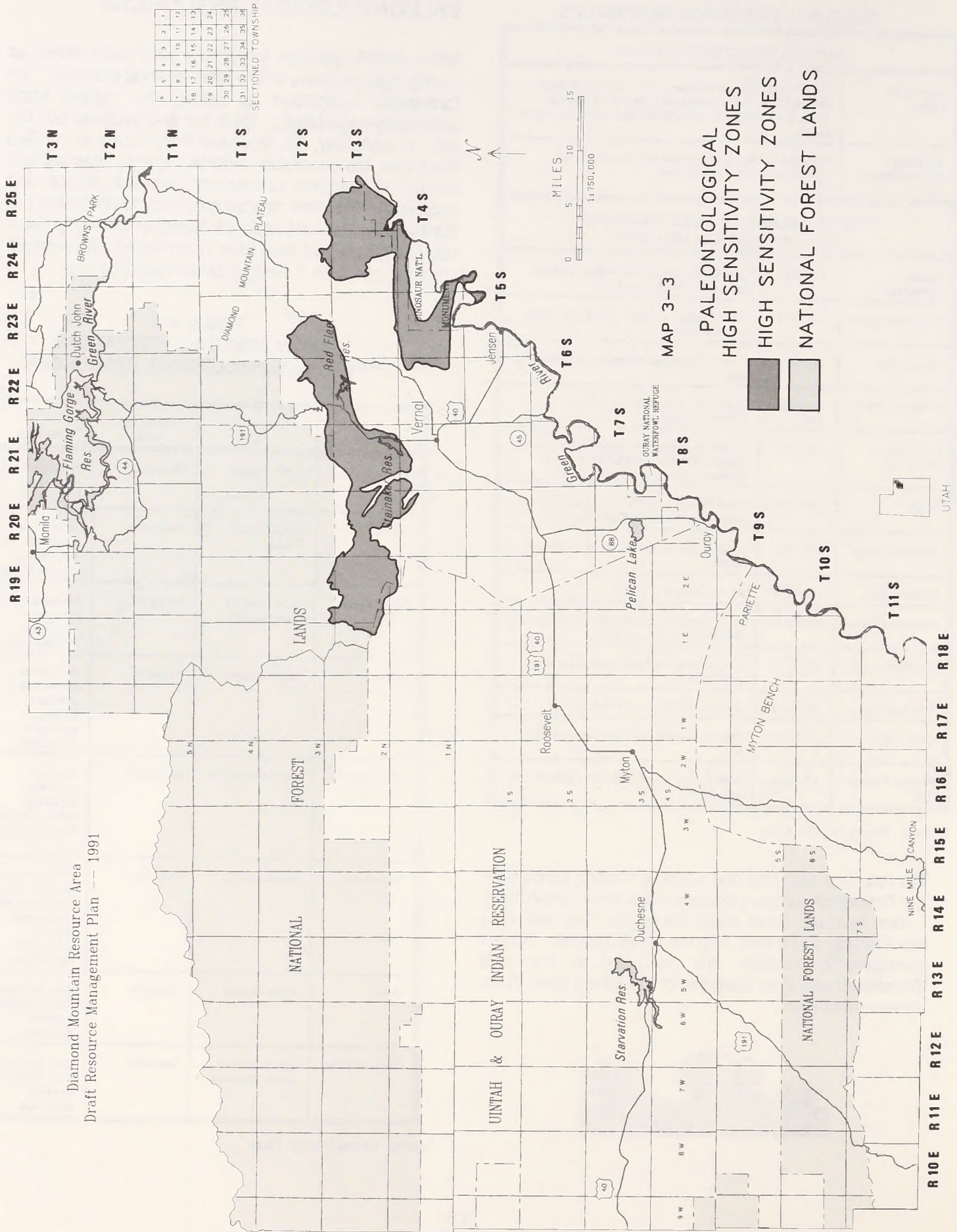
**TABLE 3-2:  
HIGHLY SENSITIVE FORMATIONS  
FOR PALEONTOLOGICAL RESOURCES**

NAME	AGE	GEOLOGIC ERA	REASON
Moenkopi	Lower Triassic	Mesozoic	Presence of early pre-dinosaur tracks
Chinle	Middle/Upper Triassic	Mesozoic	Presence of heretofore unknown dinosaur tracks
Glen Canyon Gr.	Upper Triassic/ Lower Jurassic	Mesozoic	Presence of heretofore unknown dinosaur tracks
Morrison	Upper Jurassic	Mesozoic	World class localities for dinosaurs, reptiles, microvertebrates, etc.
Mesa Verde Gr.	Upper Cretaceous	Mesozoic	Dinosaur trackways previously unknown in this formation in this area.
Green River	Middle Eocene	Mesozoic	Fish, amphibian, bird, large and small mammals, reptiles, etc. Aided in definition of faunal ages.
Uinta	Upper Eocene	Cenozoic	Same as Green River Formation, mammal trackways.
Duchesne River	Upper Eocene/ Lower Oligocene	Cenozoic	Same as Green River Formation, mammal trackways.

Source: Vernal District Files



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## FISH AND WILDLIFE HABITAT

DMRA offers a wide range of wildlife habitats supporting a minimum of 350 known wildlife species. At times wildlife habitat management objectives may conflict between individual species' needs. Hunters, fishing enthusiasts, bird watchers, photographers, scientists, and educators value the area's wildlife and their environs. As private native rangeland becomes developed or as more people utilize the land, it is able to support fewer wildlife species dependent on these native vegetation communities, thus making public lands more valuable as wildlife habitat.

Numerous studies (Geist, 1971, 1975; King, 1985; Brown, 1987; Brody et al., 1989) have documented wildlife responses to increased human activity. These responses include significant negative impacts such as displacement from preferred habitat, lower body weight, elevated metabolism, and reduced fetus survival. Roads evoke an avoidance response and associated decline in animal use of adjacent habitat as well as shifting of home ranges to areas of lower road densities (Brody et al., 1989). Because of the human pressure on existing habitat, it is extremely important that the foregoing be considered when designing any land management strategy for DMRA.

The Bureau's Fish and Wildlife 2000 Plan provides direction for selecting individual species for use in district planning. These Management Indicator Species (MISs) are species for which population and habitat objectives are established for monitoring the non-target effects of the Bureau's planning efforts. Table 3-3 outlines the MIS-habitat relationships for the resource area. MISs within the resource area were selected from the following categories:

- All special status animal species identified from the U.S. Fish and Wildlife Services' (USF&WS) current lists and the State of Utah's native species of special concern occurring within the resource area.
- Species of economic values (those that are hunted, fished, or trapped).
- Species with special habitat needs, including Rocky Mountain bighorn sheep and raptors (not included as special status species).
- Species whose population changes are believed to indicate effects of management on other species and/or habitats.

**TABLE 3-3  
DMRA MANAGEMENT INDICATOR SPECIES  
AND THEIR ASSOCIATED HABITATS**

WILDLIFE SPECIES	HABITAT
Elk Mule deer Goshawk	Old growth conifer
Mallard duck macroinvertebrates river otter	Aquatic Marshes Lakes
Golden eagle Prairie falcon	Cliff rocks
Elk Mule deer Pronghorn antelope Prairie dog Burrowing owl	Grasslands
Elk Mule deer Warbling vireo	Deciduous woodlands
Elk Mule deer Song sparrow Rufous-sided towhee	Riparian shrub
Elk Mule deer Plain titmouse	Pinyon-juniper woodlands
Elk Mule deer Pronghorn antelope Green-tailed towhee	Mountain shrub
Elk Mule deer Pronghorn antelope Vesper sparrow Sage grouse	Sagebrush
Pronghorn antelope Loggerhead shrike	Desert shrub
Common flicker	Primary snag
Mountain bluebird	Secondary snag
Special status animal species	Various: Riparian, pinyon-juniper woodlands, cliffs, desert shrub

Source: DMRA files (Wildlife 2000)



## SPECIAL STATUS ANIMAL SPECIES HABITAT

Table 3-4 provides a current list of 21 special status animal species found within the resource area. All species listed on this table are also listed by the State of Utah as threatened, endangered, or sensitive. The

exceptions are the silverspot butterfly and Tanner's cricket, which appear only on the federal list of category species. Special status animal species recovery plans have not designated any critical habitats in DMRA. However, the Green River is recognized as sensitive habitat for the Colorado squawfish, bonytail chub, and razorback sucker.

**TABLE 3-4:  
SPECIAL STATUS ANIMAL SPECIES OCCURRING OR HAVING POTENTIAL WITHIN DMRA**

COMMON NAME	SCIENTIFIC NAME	STATUS	STREAM MILES OR PUBLIC LAND ACRES	PERCENT OF SUITABLE HABITAT IN RESOURCE AREA
American peregrine falcon	<i>Falco peregrinus anatum</i>	E	70 miles	25
Bald eagle	<i>Haliaeetus leucocephalus</i>	E	70 miles	25
Black-footed ferret	<i>Mustela migripes</i>	E	Unknown	
Bonytail chub	<i>Gila elegans</i>	E	Unknown	
Colorado squawfish	<i>Ptychocheilus lusius</i>	E	22 miles	22
Humpback chub	<i>Gila cypha</i>	E	22 miles	22
Whooping crane	<i>Grus americanus</i>	E	2,500 acres	<1
Colorado cutthroat trout	<i>Salmo clarki pleuriticus</i>	C2	3 miles	3
Razorback sucker	<i>Xyrauchen texanus</i>	C1	22 miles	22
Ferruginous hawk	<i>Buteo regalis</i>	C2	296,000 acres	42
Long-billed curlew	<i>Numenius americanus</i>	C2	2,500 acres	<1
Lynx	<i>Lynx lynx</i>	C2	Unknown	
Mountain plover	<i>Charadrius montanus</i>	C2	296,000 acres	42
Western snowy plover	<i>Charadrius alexandrinus nivosus</i>	C2	Unknown	
Western yellow-billed cuckoo	<i>Coccyzus americanus occidentalis</i>	C3	22 miles	8
Southern spotted owl	<i>Strix occidentalis lucida</i>	C2	Unknown	
Swainson's hawk	<i>Buteo swainsoni</i>	C3	98 miles	36
Spotted bat	<i>Euderma maculata</i>	C2	22 miles	8
White-faced ibis	<i>Plegadis chihi</i>	C2	3,000 acres	<1
Great Basin silverspot butterfly	<i>Peyeria nakomis nakomis</i>	C2	Unknown	
Tanner's black camel cricket	<i>Utabaenetes tanneri</i>	C2	Unknown	

KEY: E=Endangered; C1, C2, C3 = Special Status category (see glossary)

Source: USF&WS, 1980



The riparian ecosystem provides crucial habitat for 14 special status animal species, including raptors, shorebirds, mammals and fish. The Green River, being the largest continuous riparian area within the resource area, is especially crucial. Loss or severe degradation of these habitats could have significant repercussions on any or all of the involved special status animal species. Cliff areas and pinyon-juniper woodlands are also important to numerous other special status animal species.

Approximately 41,000 acres of active prairie dog towns are classified as potential black-footed ferret habitat (refer to Map 3-4). Of these 11 prairie dog towns, resource

area biologists identified Antelope Flat, Eight-Mile Flat, Shiner, Sunshine Bench, and Twelve Mile as having the best potential for ferret reintroduction within the resource area.

### ECONOMIC SPECIES HABITAT

Table 3-5 shows population estimates by herd units and acres of habitat for the three big game management indicator species of DMRA. (Appendix 2 breaks down the big game forage assignments on a grazing allotment basis.) Population estimates are from UDWR aerial trend counts for elk and antelope, and computer models for deer.

**TABLE 3-5:  
BIG GAME POPULATIONS AND ACRES OF  
HABITAT IN DMRA**

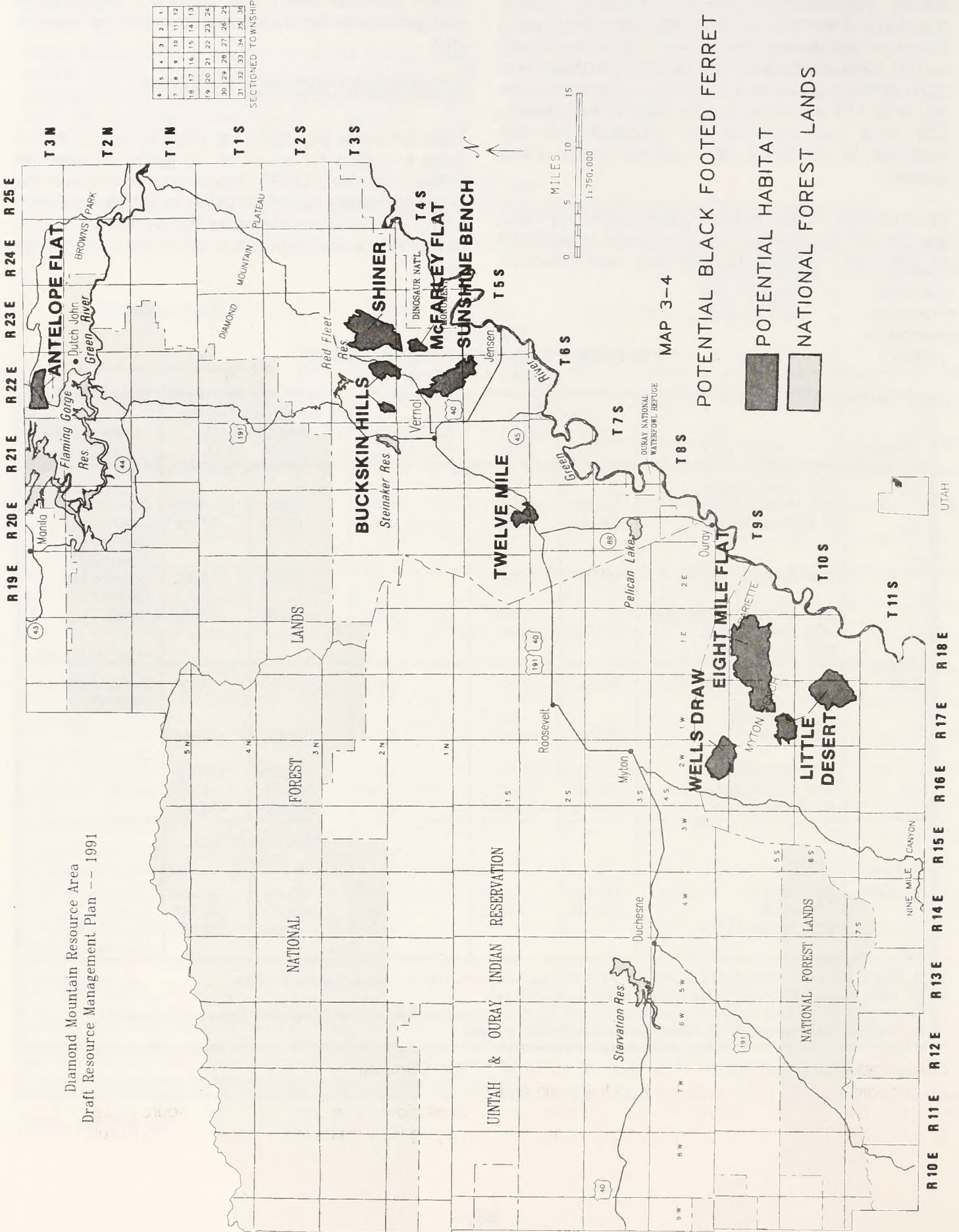
SPECIES	HERD UNIT	APPROXIMATE ACRES IN HERD UNIT		POPULATION EST. ON BLM	APPROXIMATE CRUCIAL WINTER RANGE		HMPS IN HERD UNIT AREA
		TOTAL	BLM		TOTAL	BLM	
Elk <sup>1</sup>	# 6 Ashley-Daggett		80 <sup>1</sup>				Browns Park Browns Park, Diamond Mtn., Ashley Creek Diamond Mtn.- Ashley Cr. Myton
	# 7 Goslin-3 Corners	124,160	64,563	200	4,621	3,642	
	# 8 Ashley-Vernal	407,040	69,197	553	72,254	57,736	
	#9A Ashley-Whiterocks	138,346	34,586	250	26,479	9,992	
	#22 Avintaquin-White River		330 <sup>1</sup>	200	53,769	46,331	
	#29 Anthro-Argyle	747,560	306,500 <sup>2</sup>				
	#35 Range Creek		1,2				
Deer	#22 Lake Fork-Whiterocks	617,180	2,550	115	212,120	2,550	Diamond Mtn.- Ashley Cr.
	#23A Avintaquin		330 <sup>1</sup>				Browns Park, Diamond Mtn., Ashley Cr. Myton
	#25 Daggett	627,000	152,500	3,219	290,300	118,800	
	#26 Ashley-Vernal	844,500	258,700	5,625	212,608	119,168	
	#27 Anthro Mountain	267,500	78,300 <sup>2</sup>	628	220,750	78,300	
#27B Range Creek	794,700	471,400 <sup>2</sup>	1,087	573,900	438,300		
					YEAR LONG CRUCIAL RANGE		
Antelope	# 6 Daggett	110,720	70,400	305	23,169	23,169	Browns Park Myton Diamond Mtn., Ashley Cr.
	# 8 Myton	426,700	85,300	250	168,872	145,757	
	#17 Halfway Hollow			120	32,843	29,634	

1. Due to the small amount of BLM acres in DMRA in these herd units, they will not be discussed further.  
 2. Acres include portions of public land managed by Moab BLM.  
 3. Acreage figures from UDWR herd unit plans, UDWR Big Game Annual Reports, or BLM Geographical Information System.  
 4. Wildlife population levels were estimates from UDWR-BLM analysis.

Source: UDWR and DMRA Files



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6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

SECTIONED TOWNSHIP

MAP 3-4

POTENTIAL BLACK FOOTED FERRET HABITAT

R 10E R 11E R 12E R 13E R 14E R 15E R 16E R 17E R 18E R 19E R 20E R 21E R 22E R 23E R 24E R 25E



UTAH



## Raptors

The resource area provides habitat for the following special status raptor species: peregrine falcon, bald eagle, ferruginous hawk, Swainson's hawk, golden eagle, and spotted owl. General nesting and hunting habitat appear to be adequate in the resource area if human activity doesn't displace the raptors. Nesting season protection buffer zones have been implemented (refer to Appendix 2) but only protect the nest site seasonally. Year-round protection zones are needed to prevent the permanent loss of nest sites from human daily activity or routine maintenance. Past studies concerning the ferruginous hawk (Kung, 1991) showed that oil and gas development displaced the species from a nesting area with intense development activities. Without year-round habitat protection, specific nesting sites could continue to be lost, adversely affecting special status raptor species.

## Rocky Mountain Elk

Elk are common and their numbers increasing in all herd units within DMRA. Elk summer at the higher elevations in the aspen and conifer vegetation communities. Elk have established themselves as year-round residents in some locations normally considered historical winter range. These areas include Diamond Rim, Five Mile Canyon, and the Deep Creek areas. Depending on winter severity, elk winter throughout the south rim of Diamond Mountain, the Myton Bench area, and the area north of Dutch John, Utah. Winter range preference is for the mountain sagebrush-browse vegetation community. (Refer to Map 3-5 for a depiction of their habitat).

## Mule Deer

Mule deer occur throughout the resource area, with the highest concentrations in the Diamond Mountain-Goslin-Three Corners area. Mule deer summer in the higher elevations of the resource area, occupying the mountain sagebrush-browse and aspen and conifer vegetation communities. With heavy snows the northern herds migrate into the Browns Park area to winter. This park is crucial to the northern deer herds due to its size of suitable habitat in an otherwise mountainous region, and the generally mild winter climate. On the south side of the Uintas, the deer generally tend to winter on the mountain sagebrush communities above the basin floor. These benches are significant to the southern deer herds, providing the majority of the suitable native browse and cover needed. In severe winters, the deer will move off the benches into the private hay fields in the basin and compete directly with livestock for hay and cultivated forage. (Refer to Map 3-6 for a depiction of their habitat).



## Pronghorn Antelope

Pronghorn antelope within the resource area are historically native to the Myton Bench and Three Corners areas. Killing of the last known antelope on Myton Bench occurred about 1926 (BLM, 1980); however, reintroductions in 1971 and 1983 have resulted in antelope numbers achieving UDWR's desired management level.

Antelope habitat is characterized by low rolling, wide-open, expansive areas within the shadscale and sagebrush vegetation zones. Observations from UDWR suggest herd numbers are stable. The major herd limiting factors are: lack of permanent water, restrictive fences, illegal hunting, and animal predation.

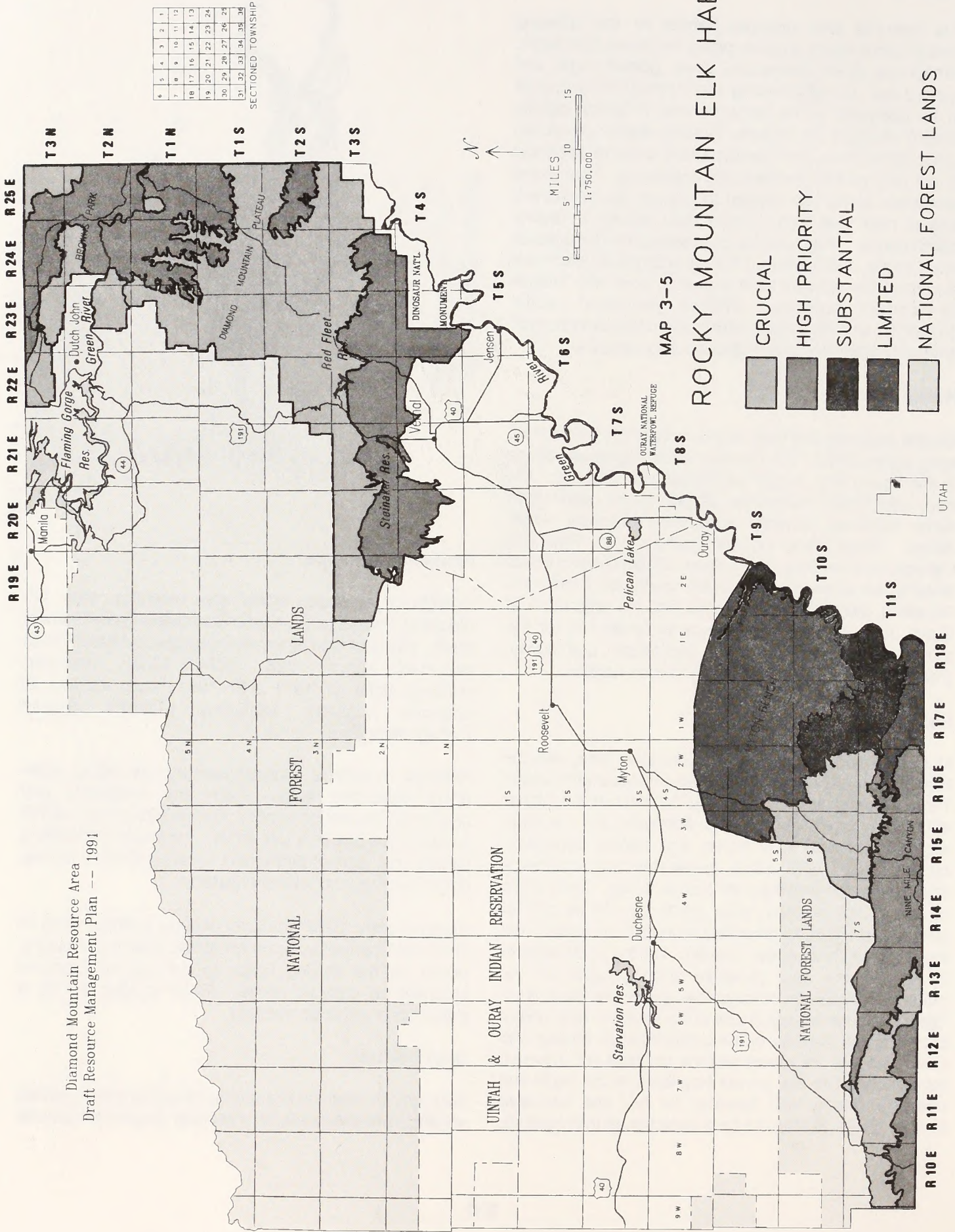
Approximately 15-20 antelope occupy a limited area of Diamond Mountain as summer habitat. Restrictive fencing would be the limiting factor to full use of Diamond Mountain as summer range. (Refer to Map 3-7 for a depiction of antelope habitat.)

## Sage Grouse

Sage grouse exist throughout the resource area in habitat varying from shadscale to mountain sagebrush-browse

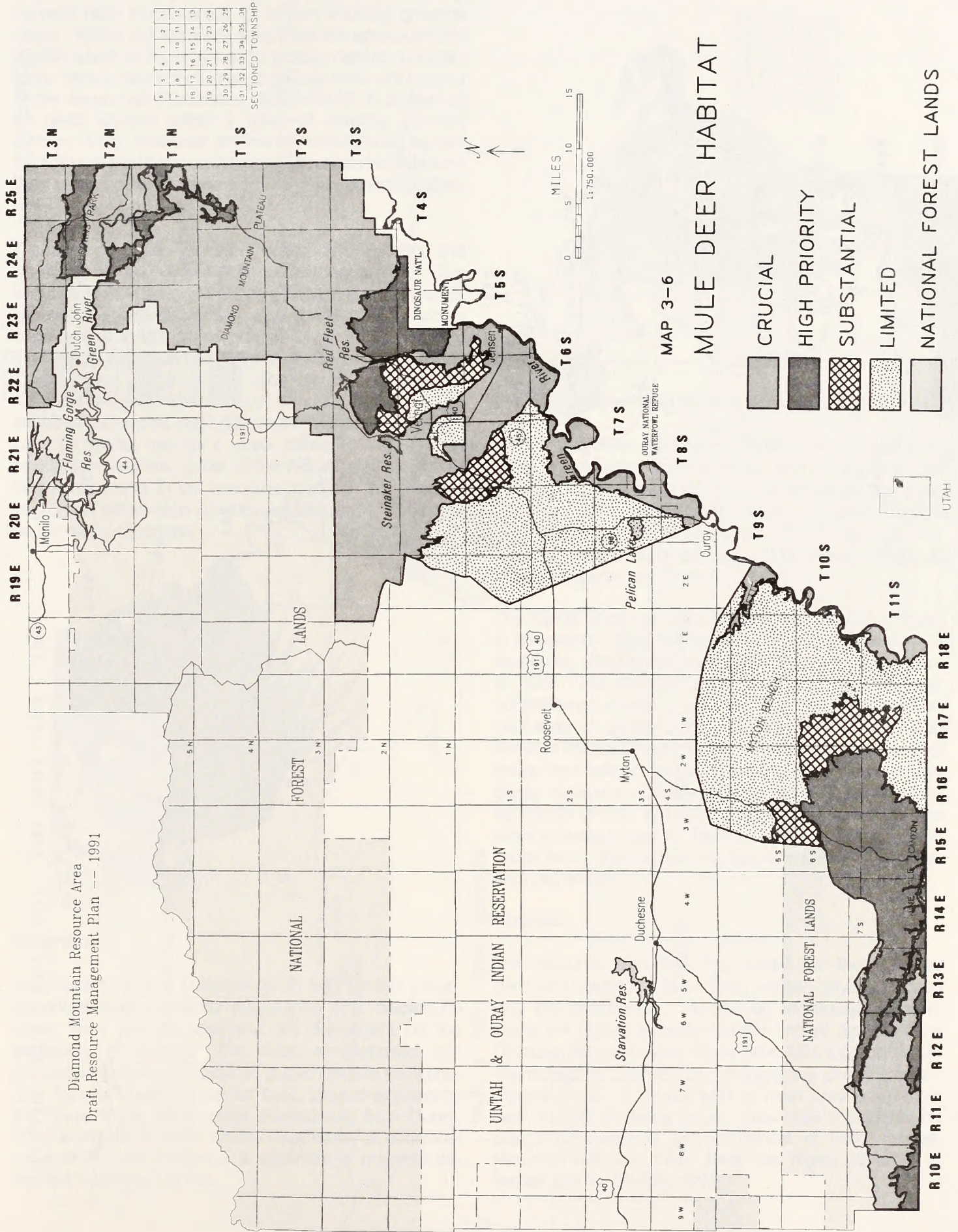


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6	5	4	3	2	1
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19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36

SECTIONED TOWNSHIP

- CRUCIAL
- HIGH PRIORITY
- SUBSTANTIAL
- LIMITED
- NATIONAL FOREST LANDS

MAP 3-6  
MULE DEER HABITAT



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6	5	4	3	2	1
7	8	9	10	11	12
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19	20	21	22	23	24
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31	32	33	34	35	36

SECTIONED TOWNSHIP

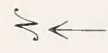
PRONGHORN ANTELOPE HABITAT

- CRUCIAL
- HIGH PRIORITY
- SUBSTANTIAL
- POTENTIAL
- LIMITED
- NATIONAL FOREST LANDS

MAP 3-7

R 10 E R 11 E R 12 E R 13 E R 14 E R 15 E R 16 E R 17 E R 18 E R 19 E R 20 E R 21 E R 22 E R 23 E R 24 E R 25 E

T 10 N T 11 N T 12 N T 13 N



UTAH



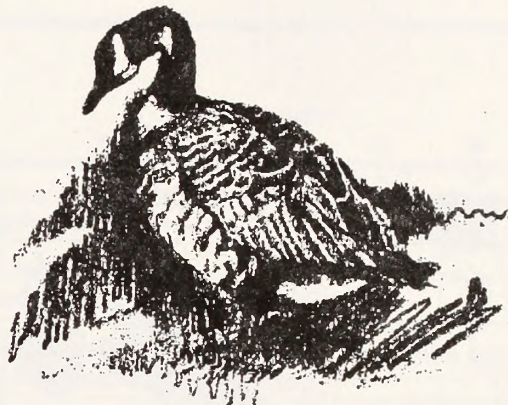
vegetation communities (refer to Map 3-8). Spring surveys have documented 22 known strutting grounds (leks). Within the resource area there are approximately 88,500 acres of important sage grouse habitat on public land. Ninety percent of all sage grouse nests are located under sagebrush (Patterson, 1952) with 60-80 percent of all nests located within 2 miles of strutting grounds (Braun, 1977). However, preliminary unpublished studies of radio collared hens on Diamond Mountain indicate they may travel up to 12 miles from the leks to nest (Barber, 1990).

Strutting grounds, wintering areas, and nesting and brooding areas are crucial to population survival. The removal of 24,000 acres (19,000 private; 5,000 BLM) or 56 percent of sagebrush and cover within 2 miles of known sage grouse strutting grounds on Diamond Mountain in the last ten years has had a significant negative impact on these areas. Sage grouse also rely 100 percent on sagebrush as a winter food source; elimination of sagebrush prevents sage grouse from using these areas. Loss of habitat can be a major cause of sage grouse population declines. Most of the habitat alterations and losses occurring in the resource area are attributed to vegetation conversion practices mainly on private lands on Diamond Mountain.



### Waterfowl

The mallard duck is selected as an MIS for this group. Waterfowl and shorebird abundance and distribution varies from year to year and are dependent on the availability of water. The most concentrated and productive waterfowl habitat on public lands is the 9,000-acre Pariette Wetlands Habitat Area, located adjacent to the Green River, seven miles downstream from Ouray, Utah, along the Pariette Wash. Acquisition of additional water at Pariette Wetlands is essential to maintain the needed waterfowl habitat.



### Fisheries (Other than Special Status Animal Species)

Of the 272 miles of streams, approximately 98 public miles of streams, watercourses, and rivers in DMRA contain habitat suitable for fish. The remainder has steep cliffs or bluffs meeting the stream or course edge, precluding any riparian vegetation. Not all riparian areas support aquatic habitats, but major areas which do support fisheries are listed in Table 3-6.

The typical small stream administered by DMRA is found in an upland-foothill setting. They are small (less than 15 feet wide), with habitat conditions ranging from excellent to poor. The average length of a segment of a BLM-administered stream is less than one mile, interspersed with state or private lands. Opportunities for improved fisheries management exist through land acquisitions of these non-federal lands or cooperative management plans. Habitat is available for a minimum of 32 species of fish within DMRA, including special status species. The most common species include: rainbow, brown and brook trout; channel catfish; flannelmouth sucker; carp; and, red shiner.

### Predator

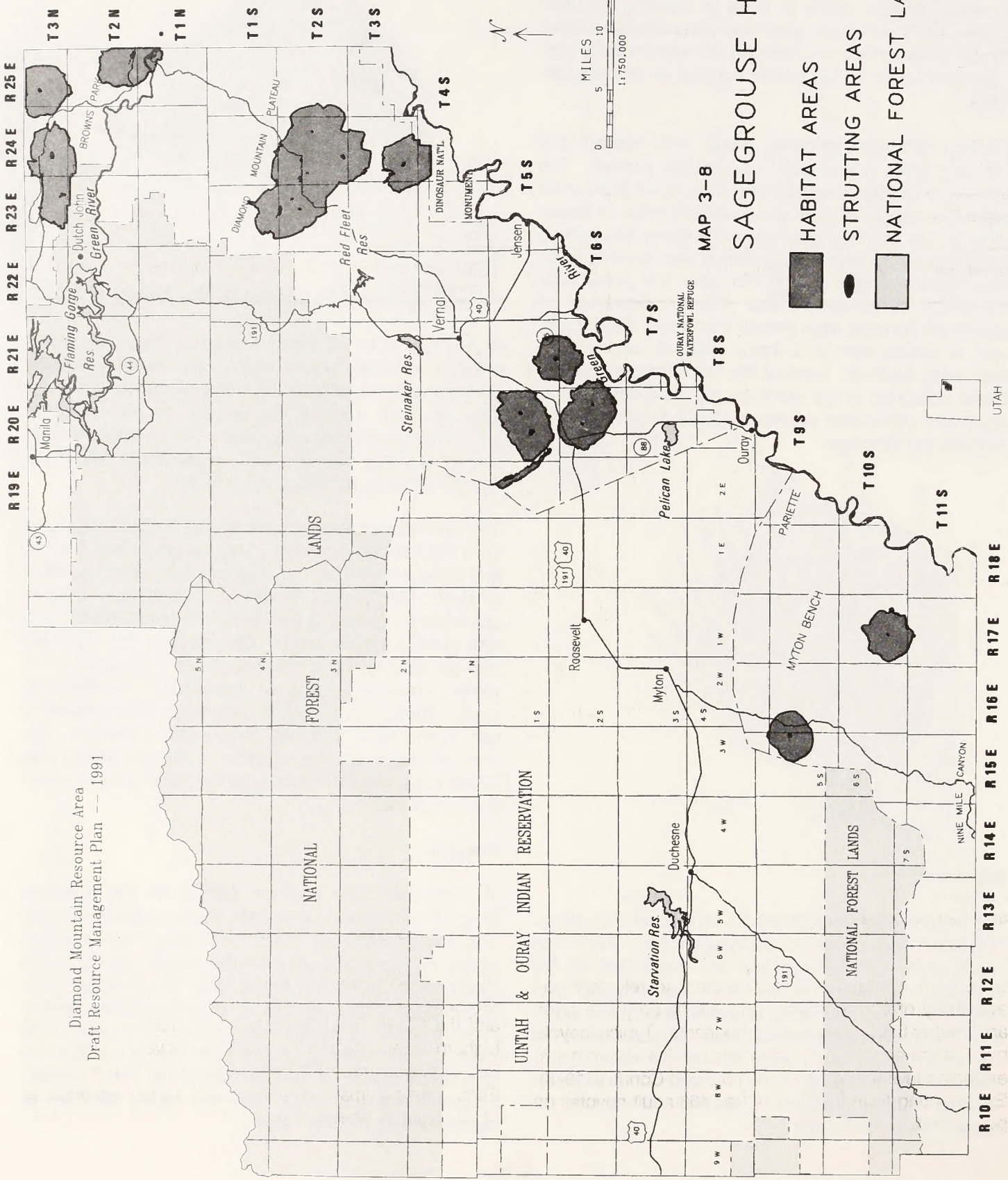
The resource area provides habitat for the following dominant predators: black bear, cougar, coyote, red and gray fox, and bobcat. Black bear and cougar seem to prefer the higher elevation conifer habitat typical of the Diamond Mountain and Argyle-Nine Mile Canyon areas. The cougar is also capable of using the desert canyon-rimrock areas. It moves with its main prey base, mule deer, to their wintering areas. Little data is available on population trends or crucial habitat of both species. Mountain lion and black bear are highly sensitive to human activity (Brody, 1989).



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6	5	4	3	2	1
7	8	9	10	11	12
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25	26	27	28	29	30
31	32	33	34	35	36

SECTIONED TOWNSHIP



MAP 3-8  
SAGEGROUSE HABITAT

- HABITAT AREAS
- STRUTTING AREAS
- NATIONAL FOREST LANDS

R 10E R 11E R 12E R 13E R 14E R 15E R 16E R 17E R 18E  
T 10S T 11S  
UTAH



**TABLE 3-6:  
PRIORITY FISHERIES HABITAT IN DMRA**

NAME	SIZE (SURFACE ACRES)/LENGTH (MILES) ON PUBLIC LAND ADMIN. BY DMRA	HABITAT CONDITION	MANAGEMENT
Green River: Upper Portion Lower Portion	24 miles 21.5 miles	Good Fair-poor	Most parts protected by fence. Grazed by livestock in summer on deferred rotation basis.
Sears Creek	4 miles	Good	Upper stretch protected by fence. Colorado cutthroat trout reintroduced in 1990.
Willow Creek-lower	3 miles	Good	Not grazed heavily due to topography. Length 69% privately owned, including most of headwaters.
Beaver Creek	0.6 miles	Fair	Partially in Wilderness Study Area. Livestock grazing permitted each spring.
Ashley Creek	2 miles	Poor	Spring-fall livestock grazing. Corps of Engineers channelized stream in 1960's. Ashley Spring is a water source for Vernal City.
Nine Mile Creek	9 miles	Poor	No control of grazing over majority of length.
Argyle Creek	2.5 miles	Poor	No control of grazing over majority of length.
Calder Reservoir	1,405 ac ft	Poor	Fenced by UDWR in 1989.
Crouse Reservoir		Fair	Fenced by UDWR in 1989.
Brough Reservoir	150 ac ft	Fair	Winter grazing. Ouray Park Irrigation manages water.
Pelican Lake	1,680 ac ft	Good	Winter grazing. Ouray Park Irrigation manages water.
Red Fleet Reservoir	520 ac ft	NA	Fenced off from livestock. Water is managed by Ashley Valley Irrigation Co. manages water.
Steinaker Reservoir	820 ac ft	NA	Ashley Valley Irrigation Co. manages water.

Source: DMRA Files

Bear baiting is currently allowed in the resource area by permit only, in support of UDWR's authorized annual bear hunt. These permits allow legal hunters to establish a temporary staging site to attract bears. These sites can take on the appearance of unauthorized trash/refuse areas. Generally these bait sites are in remote, little-used areas of the resource area. Most hunters remove all evidence of the site immediately following the hunt. There have been isolated instances in the Diamond Mountain-Browns Park area where these sites have not been completely cleaned up, causing some recreationists to complain about the degradation of the area.

Coyotes exist throughout the resource area, in all habitat types. Their adaptability allows them to rely more on availability of both domestic and wildlife prey in a given area, rather than vegetation components. Typical coyote populations are in the range of one per 2.3 square miles, excluding juveniles (Knowlton, 1972 and Connaly, 1978). Extrapolating from this, DMRA has 466 adult coyotes on public land.

Little is known about the crucial habitat needs of the bobcat, red and gray fox. Bobcats seem to prefer rocky, canyon habitats with ledges providing security and cover for hunting activities. Red fox associate with agricultural fields, but have expanded their habitat to include river bottoms and creeks. Their numbers seem to be increasing. The gray fox prefers a shadscale-sagebrush vegetation community.

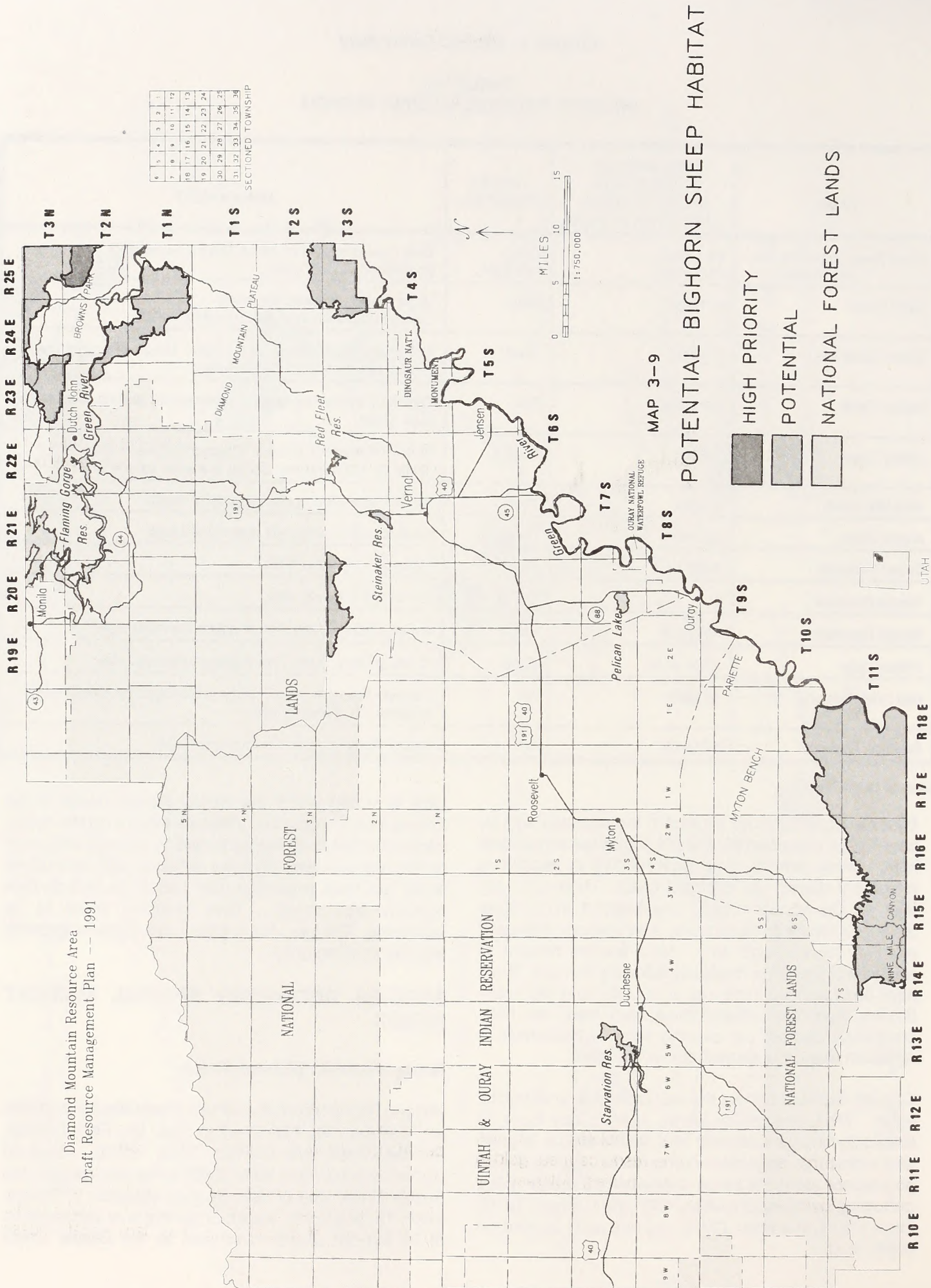
## **SPECIES REQUIRING SPECIAL HABITAT NEEDS**

### **Rocky Mountain Bighorn Sheep**

Historic Rocky Mountain bighorn sheep habitat in DMRA includes the Nine Mile Canyon area, Dry Fork Canyon, and the Green River Corridor (BLM, 1987a). About 60 bighorn sheep inhabit about 5,000 acres year-round in the Beaver Creek area of Cold Springs Mountain in Browns Park. These animals are either survivors or descendants of 21 bighorn sheep introduced to the Beaver Creek



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6	5	4	3	2	1
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36

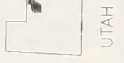
SECTIONED TOWNSHIP



MAP 3-9

POTENTIAL BIGHORN SHEEP HABITAT

-  HIGH PRIORITY
-  POTENTIAL
-  NATIONAL FOREST LANDS





drainage in 1983 by the Colorado Division of Wildlife. Potential reintroduction areas have been identified within the resource area (refer to Map 3-9). Crucial habitat areas for bighorn sheep include the lambing, rutting and wintering areas. Minimum herd sizes for these areas are 100 adult animals.



The habitat requirement for bighorn sheep are limited to good forage sites near escape cover (rough terrain) typical of Browns Park, Island Park, Dry Fork and Nine Mile Canyon areas. They prefer early to mid ecological mountain vegetation associated with ridgetops, slopes, or benches within 100 yards of rocky outcrops, or precipitous cliffs. Over 1,350 acres of vegetation has been treated since 1986 using prescribed burn to create additional habitat for future reintroductions. Additional prescribed burning would be necessary to maintain this species' habitat.

#### **Raptors (Other than Special Status Raptor Species)**

Raptors (birds of prey) occupy an ecological position at the top of the food chain, thus acting as biological indicators of environmental quality and change.

Raptor nesting surveys have been completed on portions of the resource area. Within the resource area, golden eagles are the most common species, followed by burrowing owls and prairie falcon.

The nesting-reproductive season is the critical period in the raptor life cycle. Most species have specific nest site requirements such as: nesting strata, available prey base, and freedom from nest site disturbance. These requirements are key factors in nest site selection and reproductive success. Should any one of these requirements change, that nesting habitat could be adversely affected.

#### **OTHER MANAGEMENT INDICATOR SPECIES**

In 1988, the Vernal District selected the following additional MISs: common flicker, mountain bluebird, green-tailed towhee, loggerhead shrike, Vesper sparrow, warbling vireo, song sparrow, rufous-sided towhee, plain titmouse, and macroinvertebrates. However, little or no data is available on their habitat requirements. Therefore no habitat management objectives have been developed.

#### **OTHER NON-GAME MAMMALS, BIRDS, REPTILES, AND AMPHIBIANS**

The resource area provides habitat for over 51 species of shrews, bats, squirrels, moles, and mice. A minimum of 173 species of non-game birds reside throughout the resource area. At least 7 species of amphibians and 21 species of reptiles also reside here. Reproductive rates of most of these species are high, enabling rapid population expansion, assuming habitat conditions are readily available. No intensive studies have been completed to identify crucial habitat for most of these species.

#### **HAZARDOUS MATERIALS**

No approved hazardous waste disposal sites exist in the resource area.

#### **LANDS AND REALTY**

##### **LAND OWNERSHIP AND DISPOSITION**

Within the planning area, BLM administers a total of 709,000 acres of land surface and minerals estate, plus 145,000 acres of only subsurface mineral estate (non-BLM surface management ownership). (Refer to the land ownership map in the map packet and ownership description within the planning area in Chapter 1.)

Management practices on surrounding private lands may directly influence land use management on public lands. Small parcels of public land may lack legal access



resulting in unauthorized use. The ratio of public land to private lands involving crucial wildlife habitat in areas like Diamond Mountain may be significant to meet wildlife management objectives on public lands. Land ownership adjustments present opportunities to improve the situation.

Land disposal actions are usually in response to public requests or applications. Land title transfers include: exchanges, state selections, acquisitions, sales, or Recreation and Public Purposes (R&PP) transfers.

In the past ten years, 150 acres of public land within DMRA were sold or exchanged under land disposal authorities. About 61,000 acres (9 percent) of BLM-administered lands have been identified for potential disposal via sale or exchange (refer to Map 3-10).

Almost 80,000 acres of non-federal lands have been identified for possible acquisition by BLM. The preferred method of acquisition would be exchange, thus minimizing changes in the total land ownership structure within the resource area. These lands, if acquired, have values that would improve wildlife and riparian habitats and increase protection of recreation and cultural values. Acquiring such lands from willing sellers as opportunities arose, would also improve land manageability through consolidation of ownership.

Approximately 700 public acres are leased under the Recreation and Public Purposes Act. Their uses include: a model airplane airstrip, a Uintah County landfill, and the Stewart Waterfowl Management Area, near Jensen.

The Ashley Creek-Duchesne MFP has identified public lands which could be transferred for community expansion near Vernal and Naples; however, there is no present declared need.

## ACCESS AND ROADS

There is legal access to most of the public land in the resource area. Access to areas of public lands on Diamond Mountain and in the Nine Mile Canyon areas is hampered by surrounding private lands (refer to Map 2-6 for a depiction of the identified areas needing access). The majority of these areas have high recreational (hunting) values.

Within DMRA roads are maintained by: the State of Utah, Daggett, Duchesne and Uintah Counties, U.S. Forest Service, and BLM. Some are maintained by private corporations and private individuals. There are also foot trails maintained by the U.S. Forest Service and BLM. The major roads and trails within DMRA are identified on

the oversized grazing allotment and road map in the map packet.

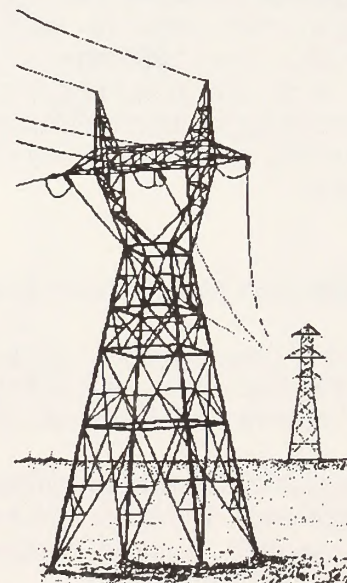
## WITHDRAWAL

Withdrawals are ordered on land or minerals to protect resource values or existing facilities. Approximately 406,200 acres (57 percent) of BLM surface acres and 389,200 acres (54 percent) of the federal locatable minerals in the resource area are segregated by withdrawals (refer to the land ownership map in the map packet). The BLM has reviewed existing withdrawals within the resource area. Table 3-7 summarizes the existing withdrawals and classifications affecting management of BLM-administered lands.

The Browns Park MFP described the creation of a 5,000-acre protective withdrawal in Daggett County on the Green River Scenic Corridor. The withdrawal would have stretched from Little Hole to the Colorado state line, but was never finalized.

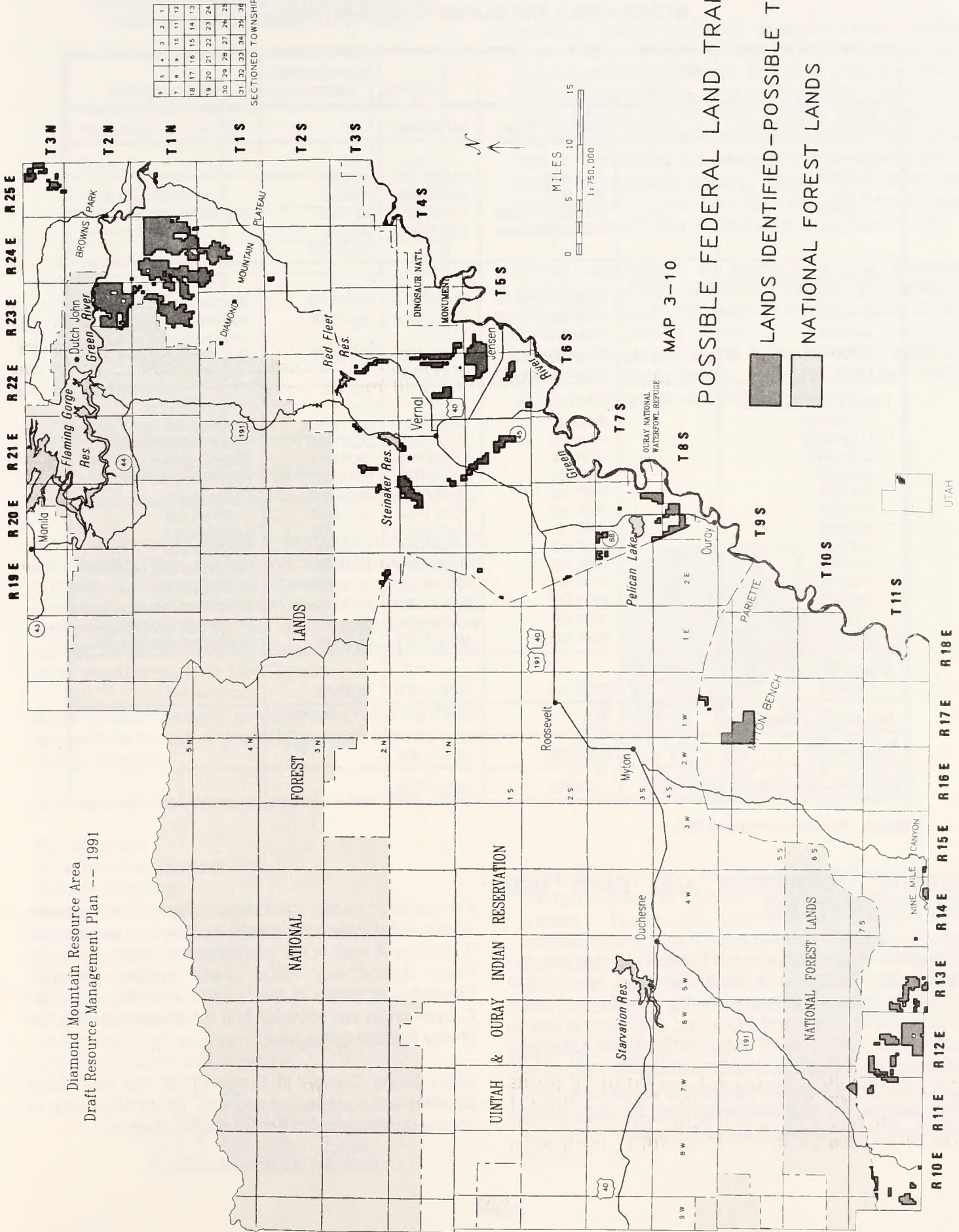
About 383,700 acres (54 percent) of federal surface in the resource area were withdrawn for oil shale protection. The purpose of the withdrawal was to temporarily protect oil shale from lease or other disposal and reserve it for investigation, examination, and classification. Presently, this withdrawal is not being used for its intended purpose. It has resulted in the prohibition of mineral entry on approximately 5 percent (1,106 acres) of the high development potential lands in the resource area, and the sale and exchange of public lands.

All existing water power withdrawals within the resource area are reserved for water power development.





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5	4	3	2	1	
7	8	9	10	11	12
18	17	16	15	14	13
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31	32	33	34	35	36

SECTIONED TOWNSHIP



MAP 3-10

POSSIBLE FEDERAL LAND TRANSFERS

- LANDS IDENTIFIED—POSSIBLE TRANSFERS
- NATIONAL FOREST LANDS

UTAH



**TABLE 3-7:  
WITHDRAWALS AND CLASSIFICATION IN DMRA**

WITHDRAWAL	AFFECTED ACRES	AUTHORITY	DATE	WITHDRAWAL REVIEW	REVIEW STATUS
Oil Shale Withdrawal	383,700	Executive Order	04/15/1930		
Reclamation Withdrawal U-026185 U-18619 U-42905 U-42919	38,345	PLO 2765 PLO 5813 Secretarial Order Secretarial Order	07/30/1964 06/10/1965 11/06/1917 06/11/1943	Current Review Current Review 09/30/83	Recommended part. rev.
Waterpower Withdrawal U-42950 U-42951 U-42984 U-42995 U-56513	85,989	Reservation # 42 Reservation #107 Classification 93 Classification 411 Classification 132	07/02/1910 07/02/1910 11/09/1950 02/27/1926	08/88/78 06/26/78 06/26/78	Recommended part. rev. Recommended part. rev. Recommended part. rev. Recommended part. rev.
Public Water Reserves U-0141805 U-0143422 U-0144914 U-41551C U-41566 U-41597 U-41628 U-41659 U-41660 U-52455 U-63972 U-63973 U-63974	2,824	PWR 107 PWR 107 PWR 107 PWR 106 PWR 152 PWR 107 PWR 107 PWR 107 PWR 107 PWR 107 PWR 107 PWR 107 PWR 107	10/26/1978 10/06/1964 02/08/1965 10/25/1978 10/25/1978 10/25/1982 10/25/1978 10/25/1978 10/25/1978 12/16/1982 02/08/1965 10/25/1978 10/06/1964	02/11/82 06/31/81 06/31/81 06/03/81 02/11/82 02/11/82 02/11/82 02/18/82 06/03/81 01/03/83 06/03/81 06/31/81 07/29/82	Continue wdl Recommended part. rev. Recommended part. rev. Recommended part. rev. Continue wdl Continue wdl Continue wdl Continue wdl Recommended part. rev. Continue wdl Recommended part. rev. Recommended part. rev. Recommended part. rev.
Browns Park U-63975		PWR 106	10/25/1978	05/20/82	Continue wdl
Administrative Sites	240				
Jones Hole		PLO 4090	09/19/1966		
Diamond Admin. Site		U-041339	02/02/1960		

Source: BLM Utah Withdrawal Files

## UTILITY CORRIDORS AND LAND USE AUTHORIZATIONS

The resource area has about 300 active rights-of-way for: power transmission and distribution lines, oil and gas pipelines, water pipelines, reservoirs, and ditches; access roads, public roads and highways; and communication sites. The energy "boom" of the 1980s caused a dramatic increase in the number of facilities associated with oil and gas development on the Myton Bench. Table 3-8 depicts the number of authorizations and the approximate acreages involved over the past ten years.

No corridor routes have been designated; however, corridors have become established by use (refer to the Alternative A map in the map packet for their locations). Major rights-of-way follow these existing corridors. Mountainous terrain in the Browns Park and Nine Mile Canyon areas can severely limit the placement of rights-of-way through these areas.

Jesse Ewing Canyon in Browns Park has four major pipelines and has reached capacity. Small distribution or access facilities are not tied to these corridors.



**TABLE 3-8:  
LANDS AND REALTY AUTHORIZATIONS  
OVER 10-YEAR PERIOD (1980-1990)**

LAND USES	NUMBER OF AUTHORIZATIONS	ACRES
Powerlines	14	1,250
Roads	62	1,020
Oil & Gas Pipelines	30	1,650
Pipeline Facilities	5	120
Water Pipelines	1	140
Water Facilities	21	700
Telephone Lines	8	40
Communication	3	3
Sales	3	170
Exchanges	5	80
R&PP	1	5

Source: BLM Automated Lands and Minerals Record System, 1990

Future demands for electricity to supply populations on the Wasatch Front in Utah and southern California are presently being appraised (personal communication, Deseret Generation and Transmission Cooperative, 1991). Transmission line routes may cross the DMRA following existing transmission rights-of-way. An industry-preferred route would cross Nine Mile Canyon.

Existing rights-of-way for communication sites with DMRA concentrate around Asphalt Ridge, Little Mountain, and Goslin Mountain.

Existing avoidance areas described in the MFPs are:

- Red Mountain
- Six Mile Draw Roadless Area
- Pariette Wetlands
- Green River Scenic Corridor
- Developed or inventoried recreation sites
- Sage grouse strutting areas
- Scenic corridors
- Archeological sites
- Fragile watersheds
- Threatened and endangered species habitats
- Crucial big game winter habitat



## LIVESTOCK MANAGEMENT

Livestock grazing is allowed on approximately 705,550 acres of federal surface lands in DMRA, including Bureau of Reclamation withdrawals. Livestock grazing on BLM-managed public land is authorized under Section 3 of the Taylor Grazing Act of 1934. Federal acres closed to livestock grazing total approximately 3,450 acres (less than 1 percent of the resource area). Of the areas closed to livestock grazing, about 2,950 acres are scattered isolated tracts and 500 acres are concentrated along the Green River Scenic Corridor in Browns Park.

Formal adjudication of livestock grazing privileges completed during 1958-1967 resulted in significant reductions. Within the resource area, a total of 50,300 Animal Unit Months (AUMs) are currently authorized livestock preference: 34,090 AUMs for cattle, 16,088 for sheep, and 120 for horses. Presently there are 14,387 AUMs in nonuse as suspended preference.



Currently there are 97 grazing permittees and 108 allotments (see the oversized allotment map in the map packet). Twenty (20) allotments are covered under allotment management plans (AMPs). There are 88 cattle allotments, 16 sheep allotments, and 4 dual-use allotments. Appendix 8 provides comprehensive livestock information on an allotment basis for the resource area.

Livestock grazing occurs year-round. The lower elevations in primarily the shadscale and sagebrush vegetation zones are utilized during the fall, winter and spring seasons. The higher elevations of mostly mountain sagebrush communities are used during the summer months.



Each DMRA grazing allotment has been placed into one of three "selective management" categories to establish priorities for management. The criteria used in placing an allotment into a category included rangeland condition, present and potential resource production, resource use conflicts, and the opportunity for economic returns from public investments. The three categories used and the objective for each category are shown in Table 3-9. Refer to Appendix 8 for allotment-specific information regarding current management categorization.

**TABLE 3-9:  
SELECTIVE MANAGEMENT**

Category	Objective	No. of Allotments
Improve	Improve current unsatisfactory resource conditions	39
Maintain	Maintain current satisfactory resource conditions	38
Custodial	Manage custodially, while protecting existing resource values	31

Source: DMRA files

A number of rangeland projects have been constructed to improve the effectiveness of livestock grazing. Allotment boundaries are generally defined by fences, except where natural barriers effectively control livestock. Some allotments managed under AMPs are further divided by interior fences to pastures, which control livestock movement within the allotment. Table 3-10 provides a summary of rangeland projects on DMRA, through 1989.

**TABLE 3-10:  
RANGELAND PROJECTS, THROUGH 1990**

Project Type	Units
Management Facilities	73 ea
Vegetation/Land Treatments	33,900 acres
Fence (incl. Enclosures)	321 miles
Water Developments	445 ea

Source: DMRA Files

Within the resource area, livestock water is scarce. Most perennial streams, large reliable springs, and seeps are in private ownership. Ephemeral drainages, mostly held in public ownership, only run water for short periods during spring runoff or following storm events. Therefore, numerous springs and reservoirs have been developed to provide water for livestock and wildlife.

Several vegetation treatments have been undertaken to change the composition of the plant community. These treatments have involved prescribed burning, chainings, plowing and reseeding. Range improvements have been funded by BLM, other cooperative government agencies, and grazing permittees.

## MINERAL RESOURCES

### GEOLOGIC SETTING

Within the resource area, geology plays an important role in determining the character and distribution of many of the resources subject to this plan. Rocks spanning nearly 2 billion years of geologic time occur in the resource area; their composition includes all three major rock types - sedimentary, igneous, and metamorphic, although sedimentary rocks are predominant. The immense span of time represented by these rocks reflects periods of mountain building and erosion punctuated by numerous invasions of the sea. Each period has left its imprint upon the character of the rocks, both in terms of composition and structure, directly affecting resources on the land.

Naturally, the wide variety of mineral resources - both solid and fluid, occur as a consequence of our geologic history in northeastern Utah; but geology has a profound influence on other resources as well. Groundwater, solid, vegetation, visual resources and recreational resources, each owe some important part of their character to the geologic setting within which they occur.

Figure 3-1 depicts the vertical succession of geologic formations within the resource area and adjacent lands in northwestern Colorado. This correlation diagram also depicts lateral variations in these formations and their age. Annotation of the figure illustrates the importance of many of the formations for fluid and solid minerals as well as other resource values. The four major subdivisions of geologic time. The Precambrian, the Paleozoic, Mesozoic, and the Cenozoic are recognizable in the rocks of the resource area by their overall character expressed by color, topographic expression, and composition. Distribution of these is shown in Map 3-11.

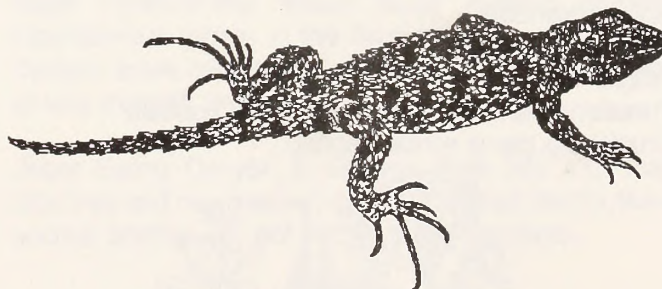




FIGURE 3-1

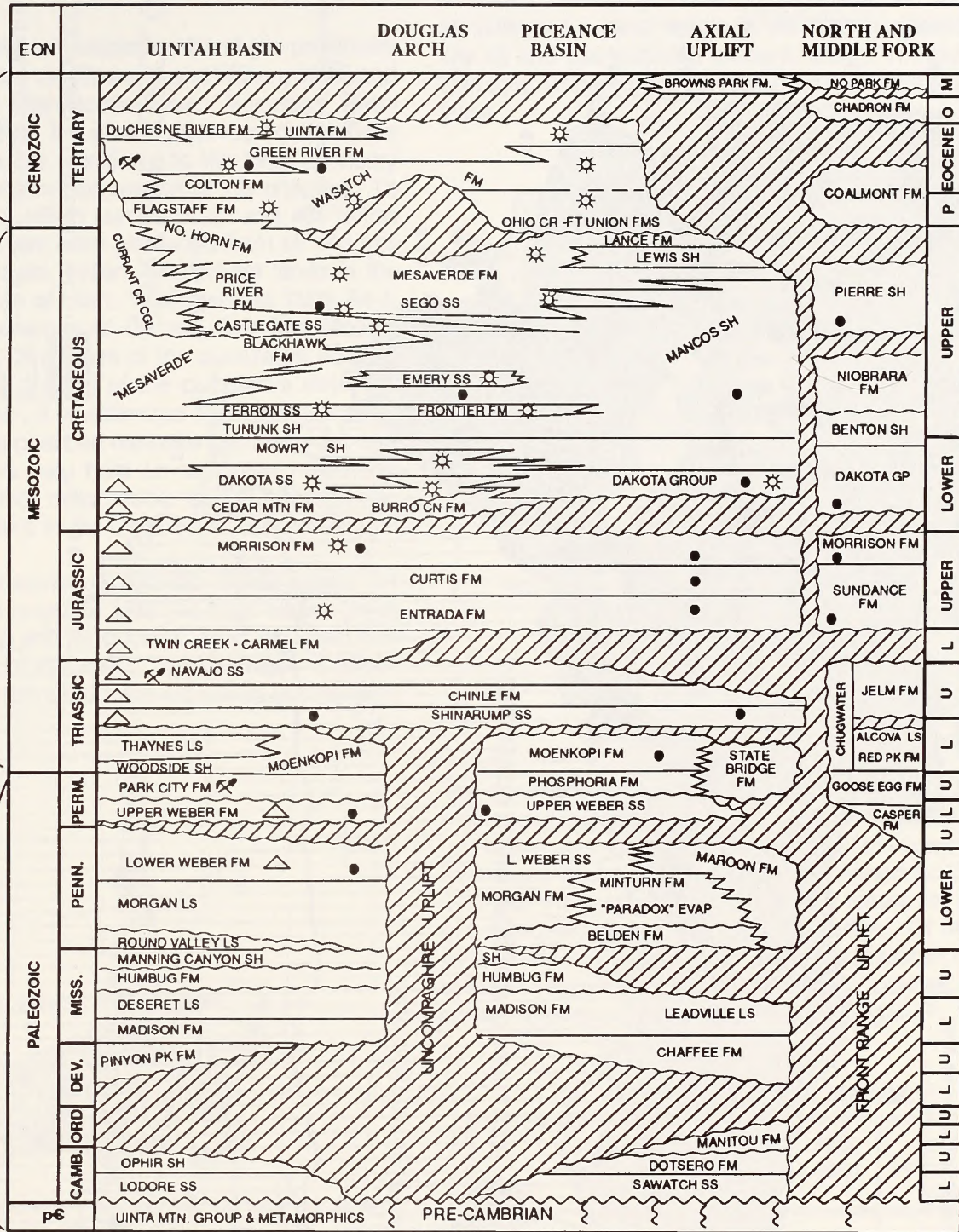
CORRELATION DIAGRAM OF GEOLOGIC FORMATIONS  
NORTHEAST UTAH AND NORTHWEST COLORADO

POTENTIAL  
RESOURCE  
VALUES GENERALLY  
OCCURRING IN EACH EON

SAND & GRAVEL  
LOCATABLE MINS  
OIL & GAS  
OIL SHALE  
GILSONITE  
TAR SAND  
BUILDING STONE  
MAMMALIAN  
FOSSILS

COAL  
URANIUM  
TAR SAND  
SLICK ROCK  
COUNTRY  
REPTILIAN  
FOSSILS

BUILDING STONE  
LOCATABLE  
MINERALS  
PHOSPHATE



- LEGEND
- OIL AND GAS PRODUCTION
  - ☀ GAS PRODUCTION
  - ⚒ SOLID MINERAL PRODUCTION
  - △ VISUAL RESOURCES

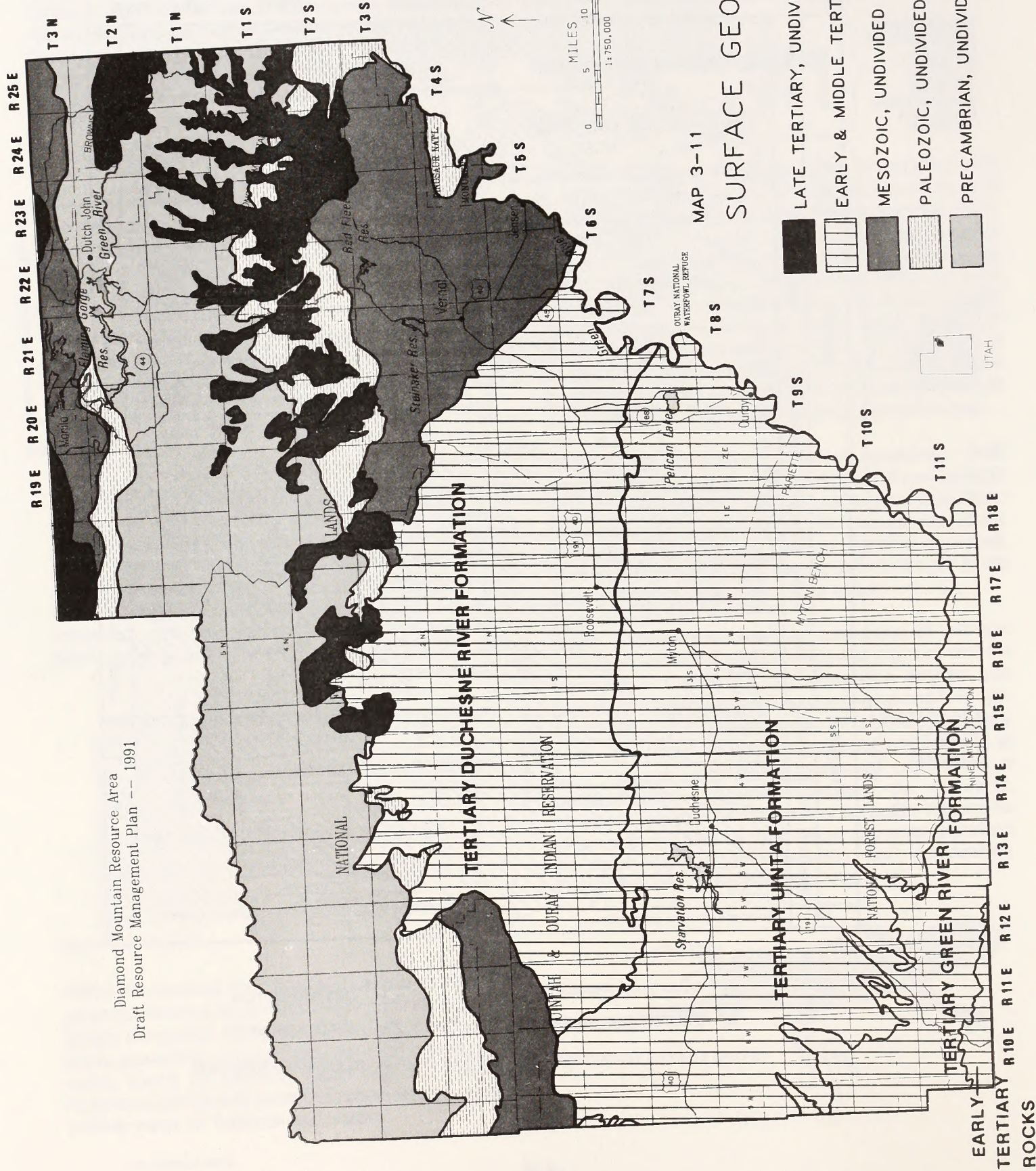
LEGEND SYMBOLS INDICATE RESOURCE PRODUCTION FROM THE INDICATED FORMATION



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6	5	4	3	2	1
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36

SECTIONED TOWNSHIP



MAP 3-11  
SURFACE GEOLOGY

EARLY  
TERTIARY R10E R11E R12E R13E R14E R15E R16E R17E R18E  
ROCKS



UTAH

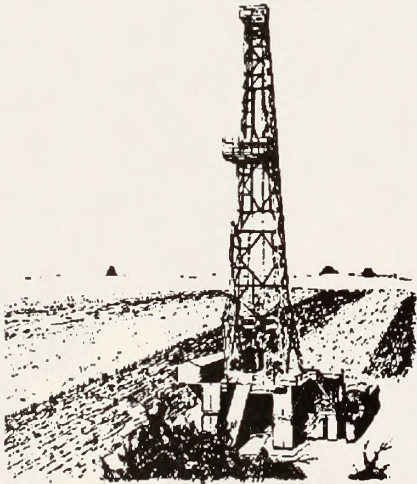


## LEASABLE MINERALS

### Oil and Gas

DMRA encompasses two separate oil and gas provinces: the Uinta Basin Province (Spencer and Wilson, 1988) and the Northeastern Utah-Southwestern Wyoming Basin Province (Law, 1988). The oil and gas resources in these regional provinces are significant to the local economy (refer to the socioeconomic section of this chapter). To date, close to 240 million barrels of oil and 485 billion cubic feet of gas have been produced from oil and gas fields on federal, state, Indian, and private lands in the resource area (State of Utah, 1989) (refer to Table A4-1, Appendix 4, "Occurrence of Oil and Gas Resources"). This production is 28 percent of the cumulative state oil production and 14 percent of the cumulative state gas production. Further, it is estimated that unconventional resources, such as coal bed methane gas reservoirs and tight gas reservoirs may hold an estimated five trillion (Mayor, 1990) and 28 trillion cubic feet of gas (Spencer and Law, 1988, 1990) in the Uinta Basin, respectively.

As of 1989, approximately 692,400 public acres (81 percent) within the resource area had been leased for oil and gas exploration and production. The Clay Basin Gas Storage Unit occurs in DMRA. Approximately 2 billion cubic feet of gas were stored and recovered in 1989 from this unit.

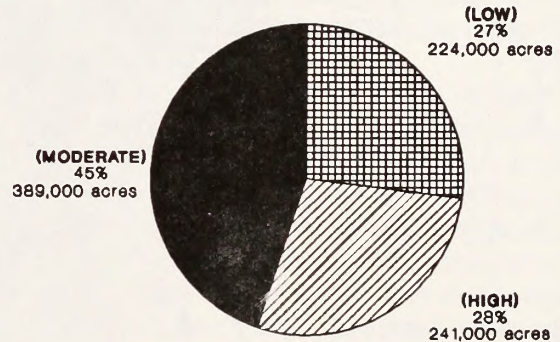


Oil and gas resources on the BLM-administered oil and gas mineral estate are classified as having either high, moderate, or low oil and gas potential of occurrence. High potential lands are defined as those lands currently producing oil or gas or having high current industry interest. Moderate potential lands are defined as those lands which have had oil and gas indications in areas of favorable geologic conditions. Low potential areas are those lands where either the geologic conditions appear to be unfavorable for the accumulation of oil and gas or

where little or no information is available to evaluate the oil and gas potential. Map 3-12 shows the distribution of high, moderate, and low potential lands in the Diamond Mountain Resource Area. The amount of BLM administered mineral estate in the high, moderate, and low oil and gas potential areas is shown in Figure 3-2. Currently, 98 percent of the high potential lands are under lease.

Figure 3-2

OIL AND GAS POTENTIAL  
ON BLM SURFACE ADMINISTERED LANDS



The mineral estate managed by BLM for oil and gas resources are leased through quarterly competitive oil and gas lease sales. A detailed discussion of the current BLM oil and gas leasing process appears in Appendix 4. Table 3-11 lists the number of active federal leases for oil and gas exploration issued by BLM for DMRA. Of the total amount of leased acreage on BLM-administered mineral estate in Daggett, Duchesne, and Uintah Counties, 99,400 acres (12 percent) are producing oil and gas.

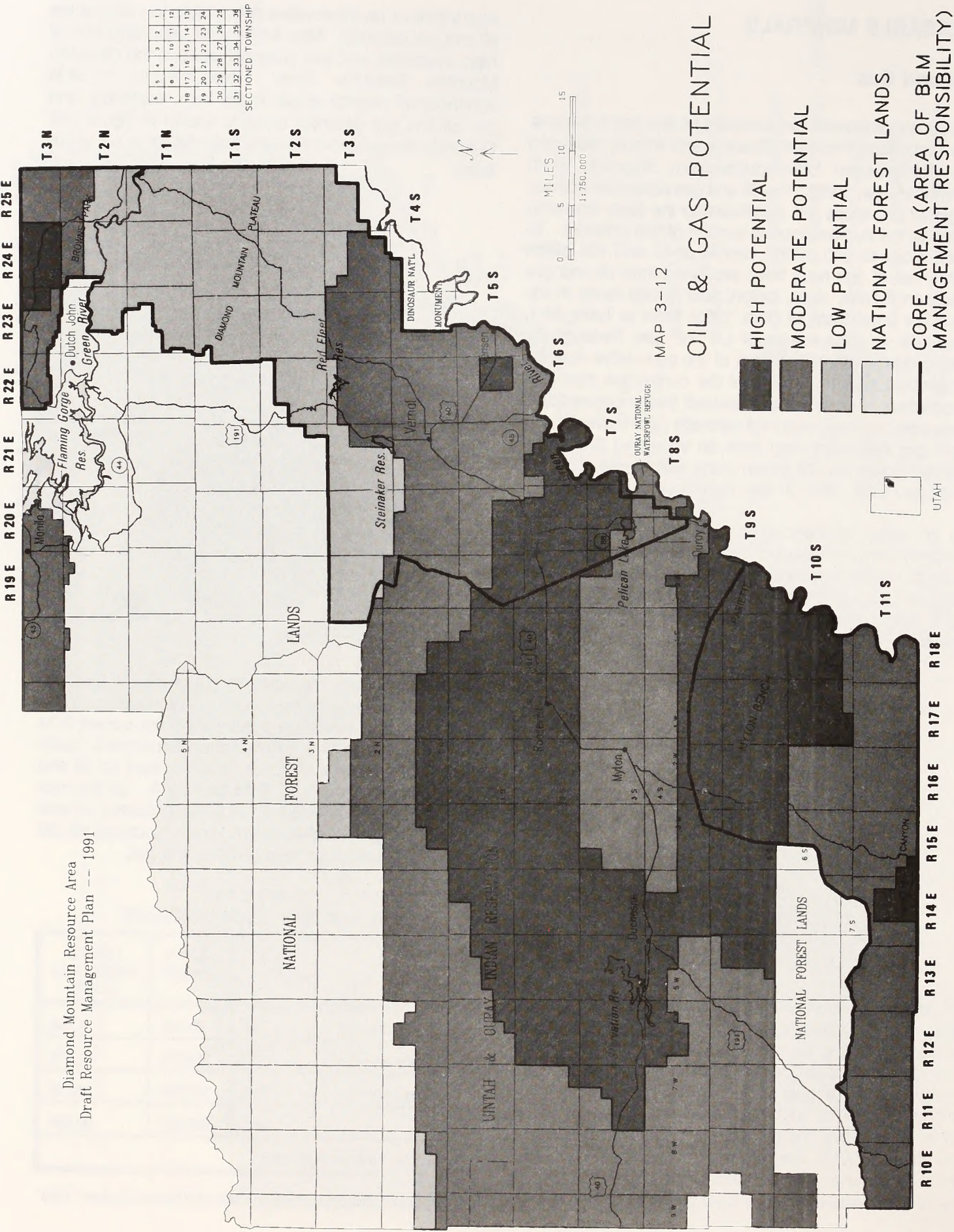
TABLE 3-11:  
OIL AND GAS LEASE ACREAGE

	*NO. LEASES	ACRES LEASED	LEASED PRODUCING ACRES
Daggett County	66	82,200	7,163
Duchesne County	390	334,900	37,515
Uintah County	375	275,300	54,718
Total	831	692,400	99,396
* Current to December 1990			

Source: BLM Automated Lands and Minerals Record System, 1990



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6	5	4	3	2	1
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36

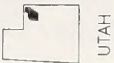
SECTIONED TOWNSHIP



MAP 3-12

OIL & GAS POTENTIAL

-  HIGH POTENTIAL
-  MODERATE POTENTIAL
-  LOW POTENTIAL
-  NATIONAL FOREST LANDS
-  CORE AREA (AREA OF BLM MANAGEMENT RESPONSIBILITY)



UTAH



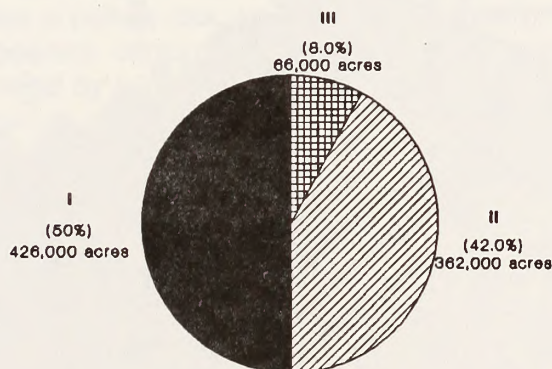
The BLM-administered lands leased for oil and gas resources are placed into one of the following oil and gas leasing categories:

- Category 1 - open to leasing, subject to standard terms and conditions
- Category 2 - open to leasing, subject to seasonal or other minor constraints
- Category 3 - open to leasing, subject to "No Surface Occupancy" or other major constraints
- Category 4 - closed to leasing

These categories have been amended to include combined hydrocarbon leasing in the Special Tar Sands Areas. Figure 3-3 identifies the current amount of BLM-administered mineral estate placed in each of the categories. No category 4 areas currently exist within the resource area.

Figure 3-3

OIL AND GAS LEASING CATEGORY TYPES  
GENERAL



**Conventional Resources**

Oil and gas resources in DMRA are both conventional and unconventional. Conventional oil and gas resources, discussed here include crude oil, natural gas, and natural gas liquids that exist in conventional reservoirs or in a fluid state suitable for recovery using traditional development practices (Mast, et al., 1989).

The occurrence of oil and gas resources in DMRA may be described by: the presence of reservoir rocks, oil/gas traps, and source rocks; and, the grouping of fields and prospects into "plays" having similar reservoirs, traps, source rocks and geologic histories. Appendix 4

thoroughly discusses the occurrence of oil and gas resources within DMRA.

Based on historical and reasonable foreseeable development, DMRA may be divided into the following five different oil and gas producing regions (refer to Map 3-13 and Appendix 4, "Reasonable Foreseeable Oil and Gas Development"):

- Myton Bench-Nine Mile Canyon Region
- Horseshoe Bend-Ashley Valley Region
- Diamond Mountain Plateau Region
- Clay Basin-Manila Region
- Indian Reservation Region

During the period 1980-1990, 85 percent of the oil development occurred in the Myton-Nine Mile Canyon oil and gas producing region, while the predominant (88 percent) gas development occurred in the Horseshoe-Bend-Ashley Valley oil and gas producing region.

Drilling activity and seismic exploration in DMRA has decreased from the 1986 high of 97 processed "applications for permit to drill" (APDs), and 8 miles of seismic activity, to a low in 1989 of 26 APDs and no seismic activity. Such activity increased in 1990 (32 APDs and 7 miles of seismic activity) with expectations the increase will continue. Oil and gas operations, including geophysical exploration are discussed thoroughly in Appendix 4, "Oil and Gas Operations".

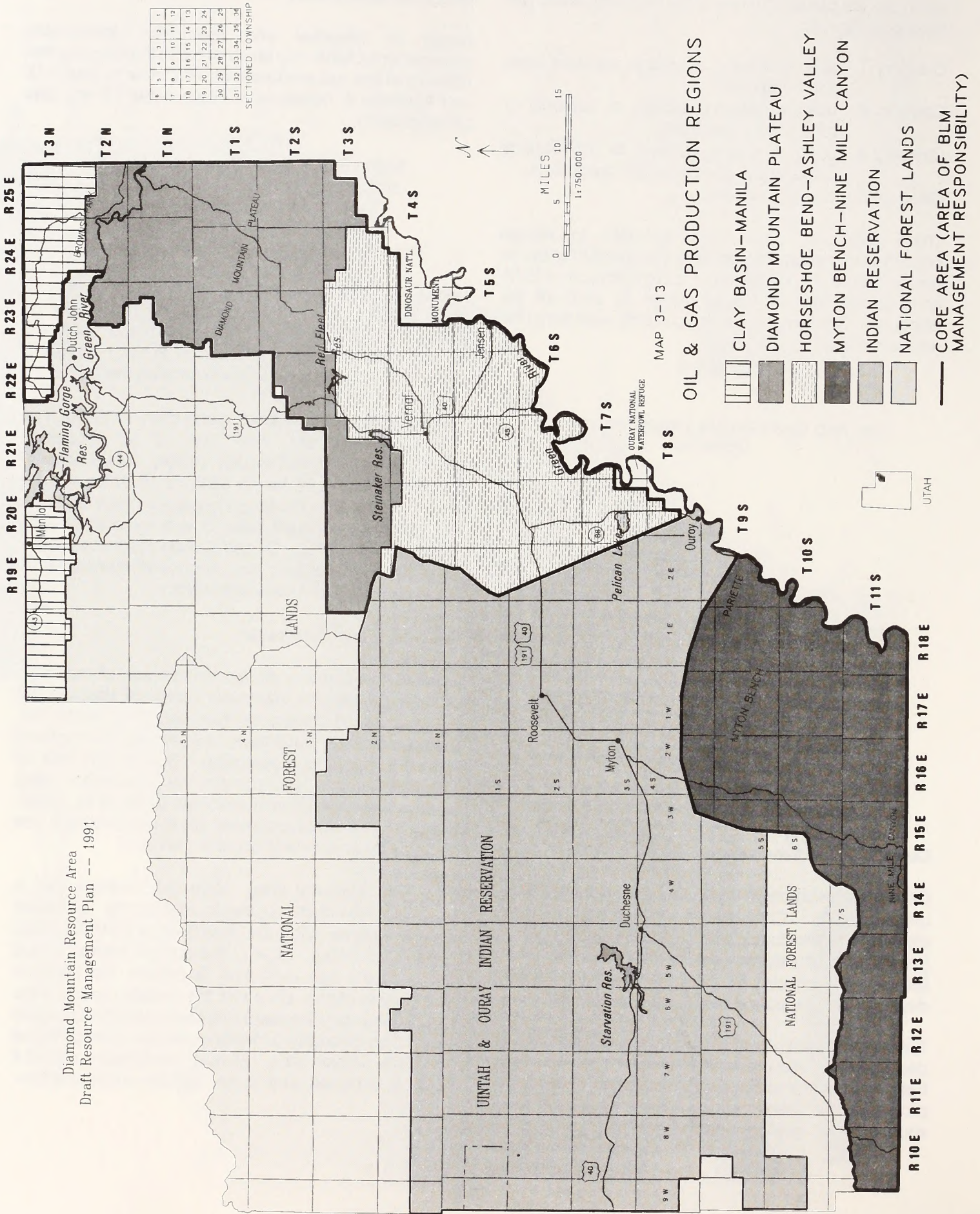
**Unconventional Resources**

Unconventional resources are defined as: oil occurring within immobile and intractable heavy oil deposits, tar deposits, or oil shales; or, gas occurring within low-permeability tight sandstone, low-permeability fractured shale reservoirs, or coal beds. Due to this lack of mobility, oil and gas cannot be recovered using conventional development practices (Mast, et al., 1989). Two unconventional resources (coal bed methane gas and tight gas reservoirs) occur in DMRA.

**Coal Bed Methane Gas.** Coal bed methane gas is produced from fractured, buried coal seams. Estimated in-place reserves within the Uinta Basin are 5-trillion cubic feet (Mayor, 1990). Most of the current interest in coal bed methane gas extraction is outside the southern boundary of DMRA. Based on the geologic trends of the gas-bearing coal beds within the Mesaverde Group, future exploration for coal bed methane gas may extend into the Nine Mile Canyon area. All such exploration, should it occur, is expected prior to the 1993 tax credit deadline.



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**Tight Gas Reservoirs.** Tight gas reservoirs are those gas-bearing rocks having low permeabilities (Spencer and Law 1990; Spencer, 1989). Artificial stimulation of the reservoir, such as hydraulic fracturing of the formation, is usually needed in order to produce the gas.

The U.S. Geological Survey and the Department of Energy have identified the Uinta Basin and the Green River Basin among those basins having the greatest resource potential for tight gas sandstone reservoirs. The U.S. Geological Survey estimates the Tertiary and Cretaceous sandstone tight gas reservoirs in the Uinta Basin may contain from 5- to 28-trillion cubic feet of gas (Law, et al., 1986 and Spencer and Law, 1988, 1990).

Tight gas sandstone reservoirs are producing gas in the Uinta Basin (Mesaverde Group and Wasatch Formation) and in the Clay Basin (Mesaverde Group) (Law, et al., 1986). The State of Utah and the U.S. Geological Survey have designated sandstone reservoirs in the Wasatch Formation and the Mesaverde Group as tight gas sandstone reservoirs in DMRA.

### Tar Sands

A tar sand deposit may be characterized as a body (or bodies) of porous rock, saturated by very thick immobile hydrocarbon compounds (bitumen) which cannot be recovered by conventional oil producing methods. Yet bitumen in tar sands sometimes may be recovered by conventional mining methods. In some instances, the resource may be recovered in place, using direct application of heat or solvents.

Tar sand deposits in Utah are among the most notable deposits of North America, accounting for nearly 95 percent of North America's resources, with an estimated 25 billion barrels of bitumen in place (Campbell, 1975). Within the resource area there are four important deposits: the Asphalt Ridge-White Rocks Deposit; the Pariette Deposit, the Sunnyside Deposit (northern portion), and the Argyle Canyon-Willow Creek Deposit. The Asphalt Ridge-White Rocks deposit, found west of Vernal, ranks among the most important of the Utah deposits (BLM, 1984). The remaining three deposits rank lower, but are still important for their oil and gas potential.

In the early 1980s, at the request of Congress, eleven of the richest Utah tar sand deposits were designated as Special Tar Sand Areas (STSAs) by the Mineral Management Service. Four of these STSAs cover the deposits identified previously. In general, the areas included within STSAs have the highest potential for the occurrence and development of tar sands. In addition, some of these STSAs fall within lands having significant

potential for conventional oil and gas deposits. These include the Argyle Canyon-Willow Creek, Sunnyside, and Pariette STSAs. Table 3-12 provides reserve estimates for the deposits in the resource area.

**TABLE 3-12:  
ESTIMATED RESOURCES IN DMRA  
SPECIAL TAR SAND AREAS**

SPECIAL TAR SAND AREA	ESTIMATED IN-PLACE RESOURCES (BBLs)
Argyle Canyon/Willow Creek	60-90 million
Asphalt Ridge/White Rocks	1.22-1.31 billion
Pariette	12-15 million
Sunnyside	1.5-4 billion*
*Figure includes reserves for both the northern and southern portions of the STSA. The southern portion of the STSA is located in the Price R.A.	

Source: BLM, 1984b

Total acreage of lands in these STSAs is approximately 123,000 acres. Of this total, only 66,200 acres include oil and gas and bitumen reserved to the federal government.

Resource area tar sands are found in host rocks which mostly include Tertiary sediments of the Green River, Uinta, and Duchesne River Formations. The White Rocks deposit is in the older Jurassic Glen Canyon Sandstone. The Eocene Green River Formation is regarded as the principal source rock for the bitumen in all of the Uinta Basin deposits including the Whiterocks deposit.

Tar sand deposits on Asphalt Ridge currently are being mined by Uintah County for paving materials. Processing is required to bring the product up to engineering standards required for state and federal highways. This would generally be true of all deposits in the resource area.

There was significant interest in tar sands during the energy "boom" of the early 1980s. Current interest is ongoing but low by comparison, centering on experimental recovery methods on pilot areas.

There are currently three authorized Combined Hydrocarbon Leases (CHLs) in the resource area covering about 2,800 acres. The leases are located within the Pariette, Sunnyside (northern portion), and Asphalt Ridge-White Rocks Canyon STSAs. The Pariette and Sunnyside STSAs are attractive primarily for their oil and gas potential. Therefore, development on the leases in those STSAs would most likely be for oil and gas, but



development on the lease in White Rocks would be for tar sand.

## Phosphate

Minable deposits of phosphate occur on both the north and south flanks of the eastern Uinta Mountains. The best deposits are located near Flaming Gorge and Vernal.

Deposits in the Flaming Gorge Field are the least attractive of the two because of a complex geologic structural setting and greater conflicts with other land uses. Little, if any, of the phosphate deposit in this field occurs at or near the surface of lands subject to this plan.

Of the two fields, the Vernal Field is most attractive for future development. Extensive areas of relatively high grade deposits occur at or near the surface. This makes these areas especially attractive for low cost strip mining. By present day technology, the Vernal deposit is only marginally economical; however, increases in demand over the next 20 years could significantly increase prices. A price increase would allow economic development by both strip mining and underground mining methods.

The Vernal Field includes the Ashley-Brush Creek Known Phosphate Leasing Area (KPLA) (refer to Map 3-14) and is the only active phosphate mine in the state. Surface and near-surface outcrops of the phosphatic Meade Peak Member of the Permian Park City Formation, exist along the south-facing slopes of the Uintas, from Dry Fork to Split Mountain. The best quality deposits are located between Ashley Creek and the west edge of Diamond Mountain Plateau, just east of Little Brush Creek. In the KPLA, there are about 19,500 acres of federal subsurface minerals, of which approximately 63 percent is managed by other federal agencies. The remainder of the KPLA, about 18,800 acres, consists of non-federal mineral estate, not subject to federal leasing. This KPLA includes lands having both the highest potential of occurrence and highest potential for development in the resource area.



There are two authorized prospecting permit areas in DMRA, totaling about 1,900 acres. Seventeen (17) of these permit areas are no longer active. There are three presently inactive Preference Right Leases within the resource area totaling about 4,000 acres. There is one authorized competitive lease in the resource area totaling about 2,300 acres and it too is inactive.

The resource area has five non-competitive leases, totaling of 5,800 acres. These leases are believed to be the areas that would be developed over the life of this plan.

## "Gilsonite"

"Gilsonite" is a black, pitch-like substance which occurs in pure form in veins in the Tertiary sediments of the Uinta Basin. It is a petroleum substance of uniform composition and texture. It dissolves into resins and dyes in all proportions, and is also mixable with petroleum and other asphaltic materials. "Gilsonite" compounds are often quite strong and offers resistance to heat, acids, and alkalis, making them valuable for weatherproofing (Stern, 1960). Only a handful of "Gilsonite" veins occur in DMRA.

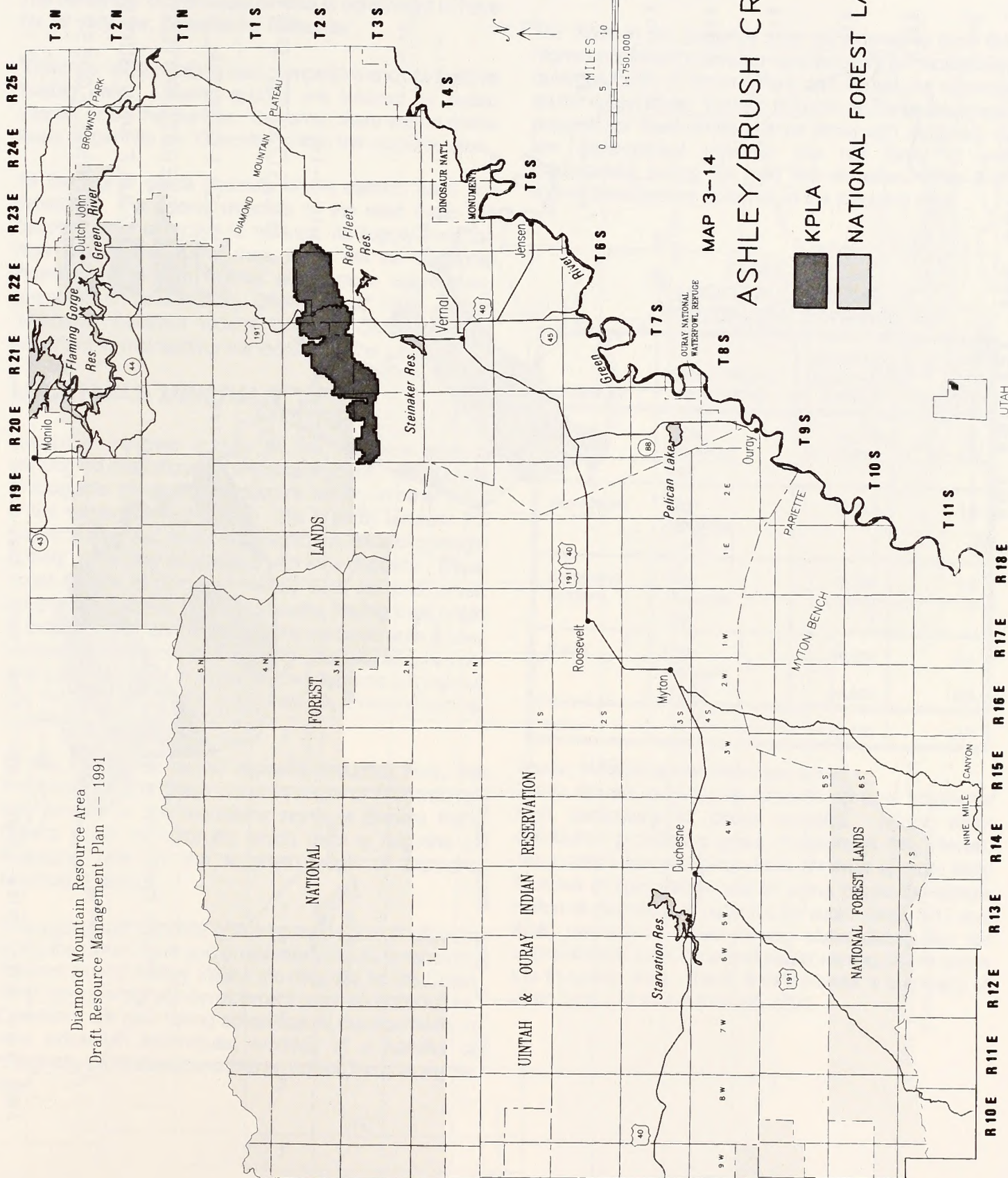
The best known and currently most productive "Gilsonite" dikes occur in three groups east of the Green River within Book Cliffs Resource Area. Across the Green River in DMRA, the number of veins exposed at the surface drops considerably. These tend to be shorter, narrower, and of lesser overall quality than their eastern basin counterparts. Only a few of these veins exist in the DMRA core area.

The overall decrease in vein size and "Gilsonite" quality within the DMRA is attributed to a change in host rock, as the composition of the Uinta Formation changes from a uniform sandstone to weaker, shaly units. The "Gilsonite" veins also penetrate upward and downward into the beds of adjacent formations. Known veins in the Duchesne River Formation are relatively few, yet "Gilsonite" potential may still be quite high along southern exposures of this formation. Significant occurrences may lay hidden from view beneath the Duchesne River Formation in the more suitable host rocks of the Uinta Formation below. Likewise, "Gilsonite" occurrence below the Uinta Formation, in the Green River Formation are known. The degree to which "Gilsonite" occurs in the formations above and below the Uinta Formation is unknown. to date, commercial interest has focused solely upon the most accessible deposits.

Map 3-15 shows "Gilsonite" potential on federal minerals within the resource area. The lands with the highest "Gilsonite" potential in the resource area are associated



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6	5	4	3	2	1
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36

SECTIONED TOWNSHIP

MAP 3-14

ASHLEY/BRUSH CREEK KPLA

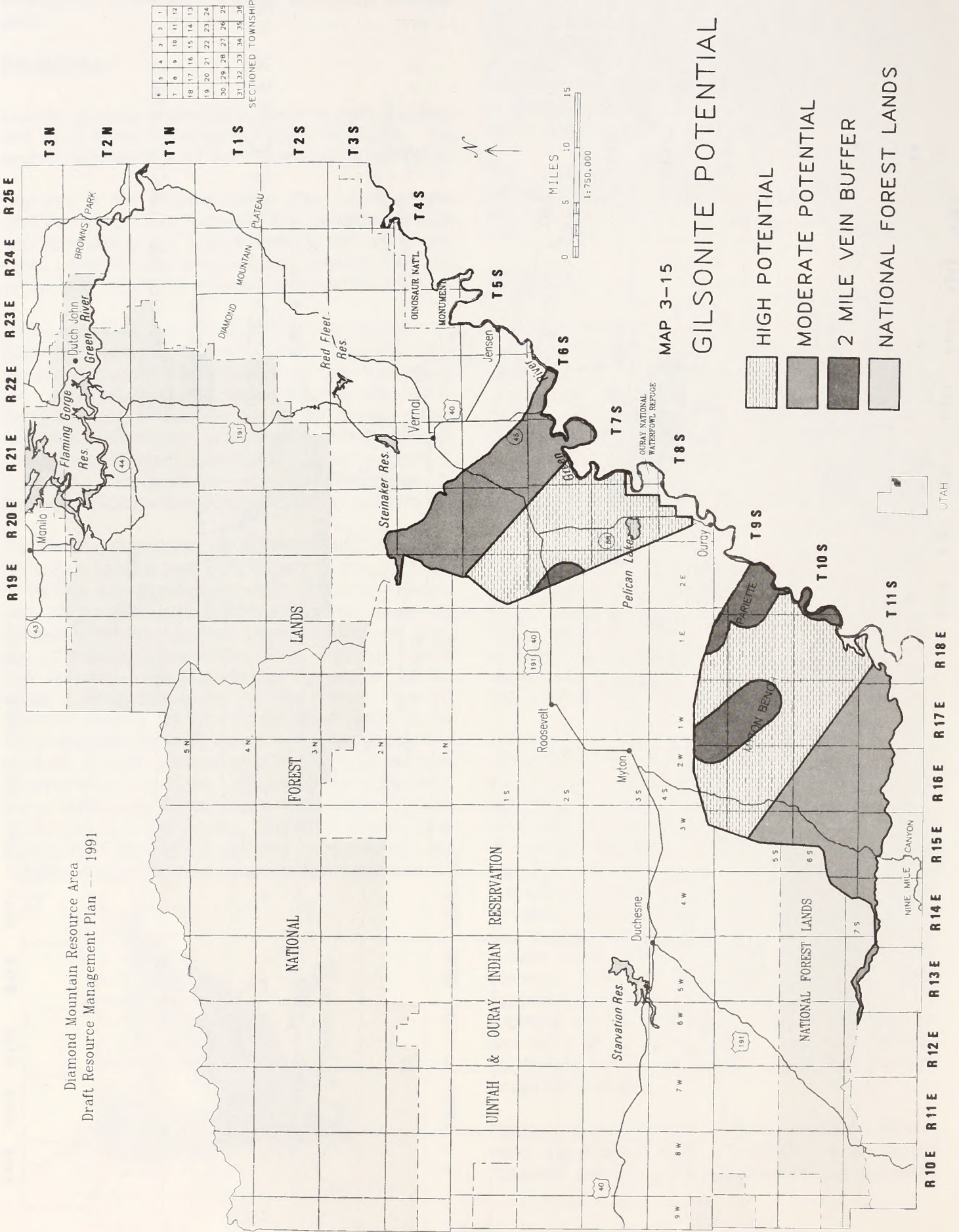
- KPLA
- NATIONAL FOREST LANDS

R10E R11E R12E R13E R14E R15E R16E R17E R18E

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6	5	4	3	2	1
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
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31	32	33	34	35	36

SECTIONED TOWNSHIP



with known "Gilsonite" veins. These are lands within two miles of known veins. The total number of federal acres in these high potential areas is 38,350. In addition, there are about 149,500 acres of additional high potential mineral estate outside of the buffers, and 133,500 acres of moderate potential mineral estate in addition to this. The remainder of the resource area is considered to have no, or very low, potential for "Gilsonite".

"Gilsonite" is allocated by non-competitive and competitive leasing only. Leasing actions are initiated by public interest or by the Bureau. Currently, there are no active lease or permits for "Gilsonite" within the resource area.

As the higher grade deposits of the eastern basin are exhausted, the poorer deposits of the west basin will become more attractive to mining. As supply from the high grade veins diminishes, there will be additional incentive to explore frontier areas more aggressively (personal communication, Geo-Kinetics, 1990). High "Gilsonite" potential federal lands in DMRA, will be important in maintaining the industry in the future.

**LOCATABLE MINERALS**

Locatable minerals activity in the resource area is considered insignificant when compared with higher levels of locatable minerals development activity in other parts of the western United States. This is partly because the resource area was never exposed to the kinds of geologic activity commonly associated with lode deposits. These could include deposits of metals such as gold, silver, copper, and others. Placer deposits, having their origin in lode deposits, are also rare in the resource area. Other varieties of locatable minerals like uranium, silicon, iron, and gypsum, occur in small isolated deposits throughout the resource area, but none may be characterized as significant.

Of the lode (base metal) deposits occurring here, the most important of these occur in rocks of Precambrian age located in the mountains north of Browns Park. Others occur in outcrops which form a ridgeline of limestone hills on the southern edge of Diamond Mountain Plateau.

Although placer deposits of fine gold do occur in alluvium along the Green River and on elevated alluvial terraces on the east side of Ashley Valley, the deposits on the Green River have the highest development potential in the future. Operators are now taking advantage of developments in new extraction techniques, working at a handful of marginally profitable operations on private lands along the river.

Minor occurrences of radioactive minerals occur in the Morrison and Uinta Formations and in the Mesaverde Group. However, recent studies by the Department of Energy conclude that, although occurrence potential is high, it is unlikely that beds of economic importance occur in the resource area.

The lands in the resource area considered to have the highest potential for development include the Precambrian outcrops north of Browns Park and the alluvial deposits on the Green River. Table 3-13 summarizes development potential for these lands. Lands listed with moderate or low development potential are not likely to see development during the next two decades. Map 3-16 shows development potential in the planning area.

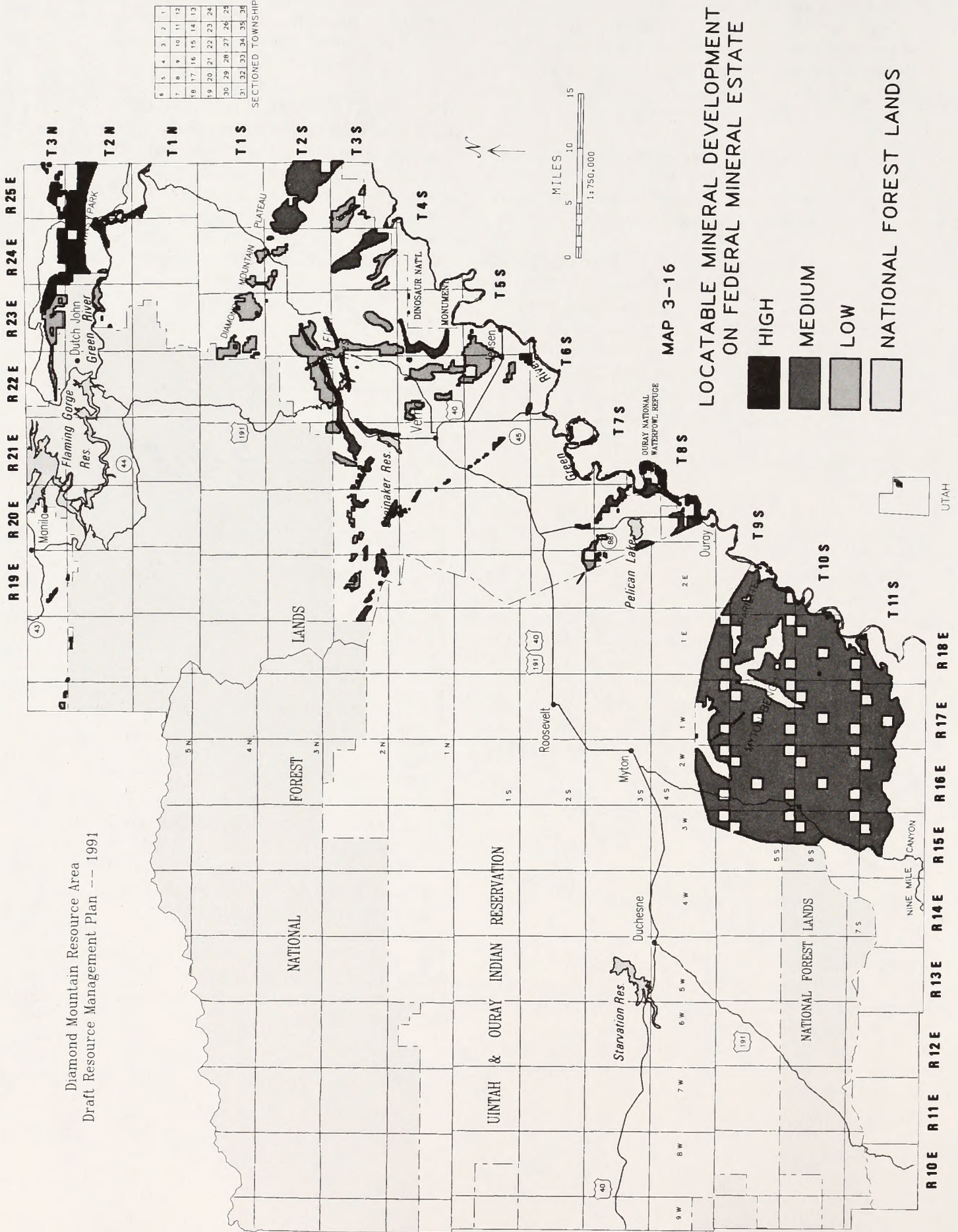
**TABLE 3-13:  
LOCATABLE MINERAL  
DEVELOPMENT POTENTIAL**

COMMODITY	DEVELOPMENT POTENTIAL	FEDERAL MINERAL ACRES	PERCENT
Metals	High	14,540	1.7
	Moderate	12,200	1.4
	Low		
Non-Metals	High	10,650	1.3
	Moderate		
	Low		
Containing Uranium	High	15,300	1.8
	Moderate	4,800	.6
	Low		
Placer	High	34,500	0.4
	Moderate	23,800	2.8
	Low		
Total:		84,740	10.0

Source: DMRA Geographic Information System  
Public interest in locatable minerals remains somewhat high, particularly for placer minerals. Mining claim distribution provides a good measure of this interest. The public's interest in locatable minerals is most likely founded in speculation and in some cases the simple notion of discovery or potential for such. Maps 3-17 and 3-18, respectively show mining claim distribution for approximately 2,690 lode and placer mining claims within the tri-county area. Table 3-14 includes a summary of claim type and status through 1990.



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MAP 3-16

LOCATABLE MINERAL DEVELOPMENT POTENTIAL  
ON FEDERAL MINERAL ESTATE

- HIGH
- MEDIUM
- LOW
- NATIONAL FOREST LANDS

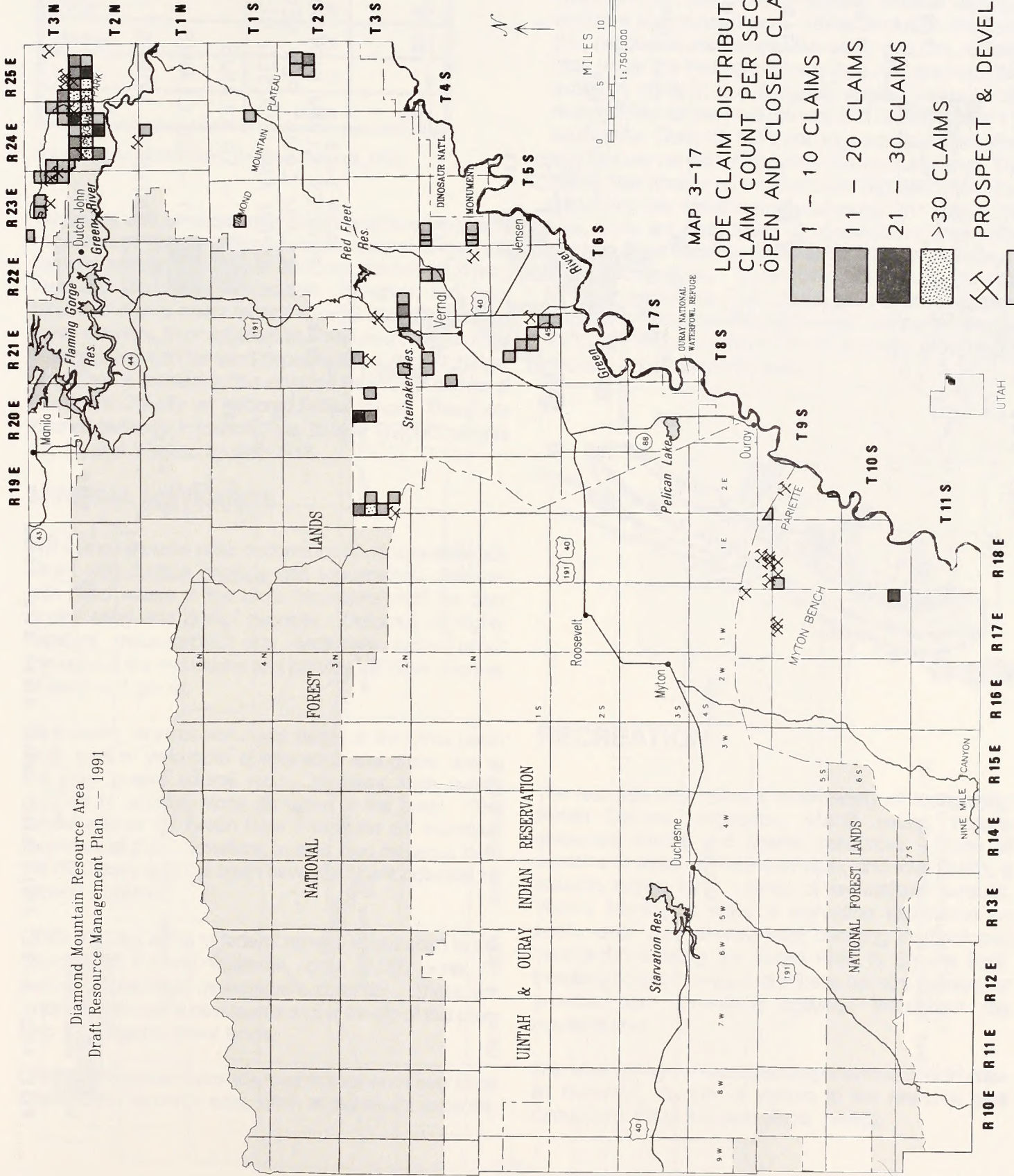
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R 19E R 20E R 21E R 22E R 23E R 24E R 25E

UTAH



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6	5	4	3	2	1
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36

SECTIONED TOWNSHIP

MAP 3-17

LODE CLAIM DISTRIBUTION  
CLAIM COUNT PER SECTION (3/90)  
OPEN AND CLOSED CLAIMS COMBINED

- 1 - 10 CLAIMS
- 11 - 20 CLAIMS
- 21 - 30 CLAIMS
- >30 CLAIMS
- PROSPECT & DEVELOPMENT SITES
- NATIONAL FOREST LANDS

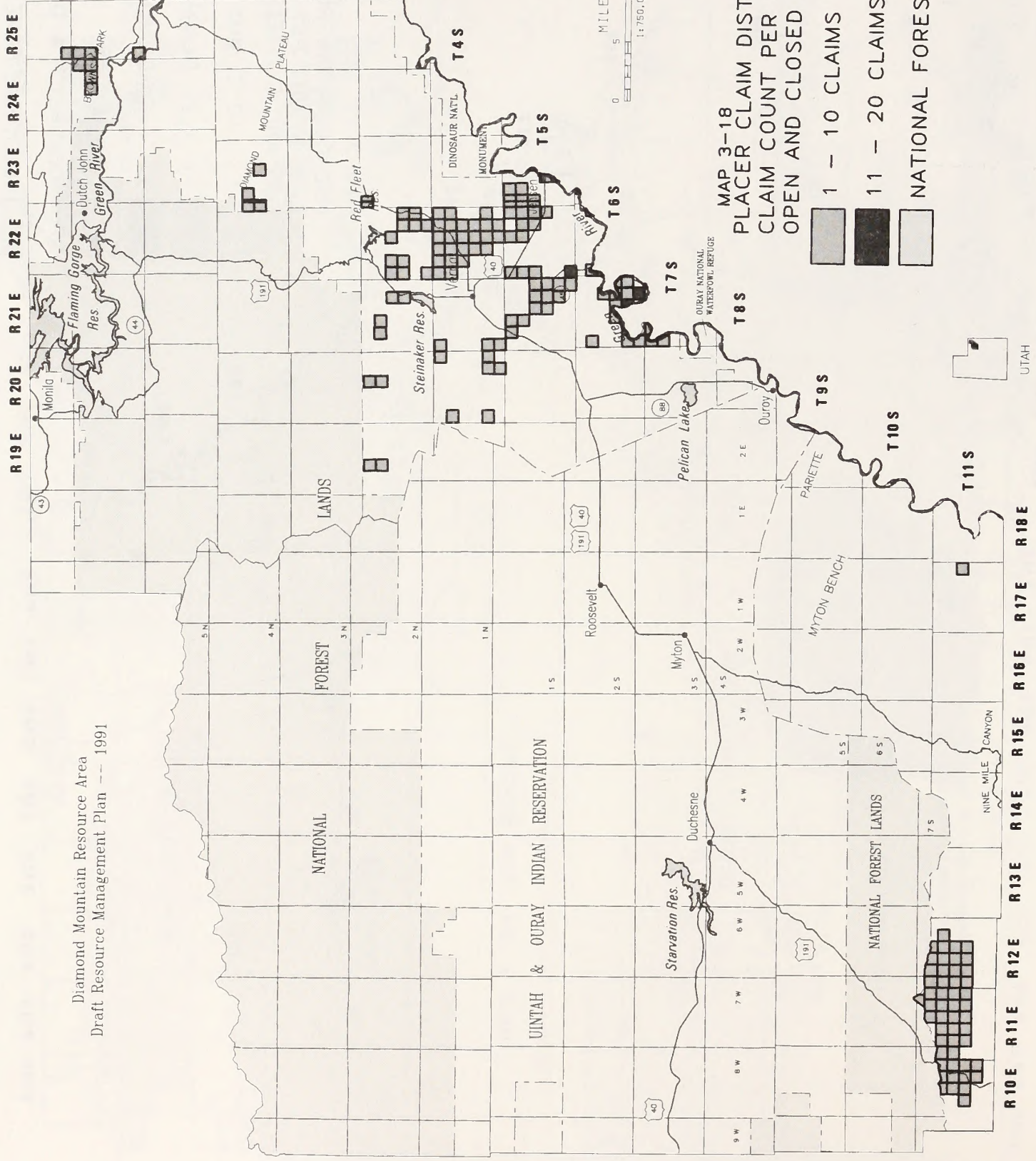
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R 19E R 20E R 21E R 22E R 23E R 24E R 25E

T 3N  
T 2N  
T 1N  
T 1S  
T 2S  
T 3S

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13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36

SECTIONED TOWNSHIP



MAP 3-18  
PLACER CLAIM DISTRIBUTION  
CLAIM COUNT PER SECTION (3/90)  
OPEN AND CLOSED CLAIMS COMBINED

- 1 - 10 CLAIMS
- 11 - 20 CLAIMS
- NATIONAL FOREST LANDS

R 10E R 11E R 12E R 13E R 14E R 15E R 16E R 17E R 18E  
R 19E R 20E R 21E R 22E R 23E R 24E R 25E



UTAH



**TABLE 3-14:  
MINING CLAIMS OCCURRING WITHIN DMRA**

CLAIM TYPE	NUMBER OF CLAIMS	
	OPEN	CLOSED
Lode	1,557	2,883
Placer	660	487
Mill Site	473	244
Tunnel	3	0
All Types	2,693	3,614

Source: BLM Mining Claim Database Records, 1990

Tar sands and oil shale were once considered locatable minerals and staked as placer claims subject to the 1872 General Mining Law. Now both are subject to leasing laws and are closed to location. However, two large blocks of claims cover federal mineral estate containing these minerals, in or adjacent to, the resource area. One is associated with tar sand deposits along Asphalt Ridge. The other is located in the extreme southwest corner of Duchesne County on National Forest lands. These are located generally in townships 9, 10, and 11 south, ranges 10, 11, and 12 east, on Map 3-18.

## MINERAL MATERIALS

Within the resource area, occurrence of mineral materials varies with surface geology and topography. Streams with head waters in the Uinta Mountains yield the best quality sand and gravel deposits. Outcrops of highly resistant metamorphic and carbonate rocks occur throughout the mountains and provide excellent sources of sand and gravel.

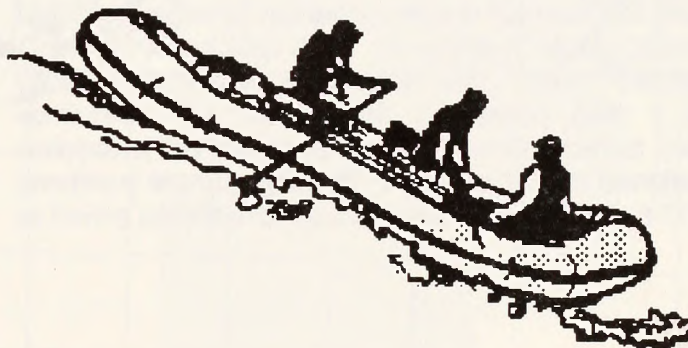
Conversely, streams with head waters in the Uinta Basin itself, tend to yield poor quality sand and gravel due to the poor quality source rock. However, high quality sources of building stone do occur in the basin. Thin sandstones of the Green River Formation are important examples of this. Therefore, in their own respects, both the mountains and the basin have significant potential for mineral materials.

Of the 814,200 acres of federal mineral estate open to the disposal of mineral materials, only 76,290 acres (9 percent) have high development potential. These are lands most likely for development over the life of this plan. Map 3-19 depicts these lands.

County governments provide road maintenance over large areas of the resource area, often at significant expense.

A network of well-placed material sites throughout the resource area helps to keep these costs as low as possible. Since federal lands cover such large areas, the county governments depend upon BLM for sites in remote areas.

There are two categories of mineral material disposal: exclusive and nonexclusive. Under exclusive disposals (i.e., negotiated and competitive sales, free use, material sites under the Federal Highway Act), the applicant has exclusive rights to the materials applied for and sole responsibility for the development and reclamation of the source site. Currently there are only negotiated sale sites and free use permits active within the resource area. The public has access to nonexclusive disposal sites (i.e., community pits and common use areas). In the resource area, there are both types of nonexclusive sites. The Wrinkles Road Building Stone common use area covers about 30,800 acres. Community pits include the Wild Mountain pit and the Docs Beach pit. Agreements allow disposal of materials from some free use permit sites to the public under provisions similar to those provided for disposal from community pits.



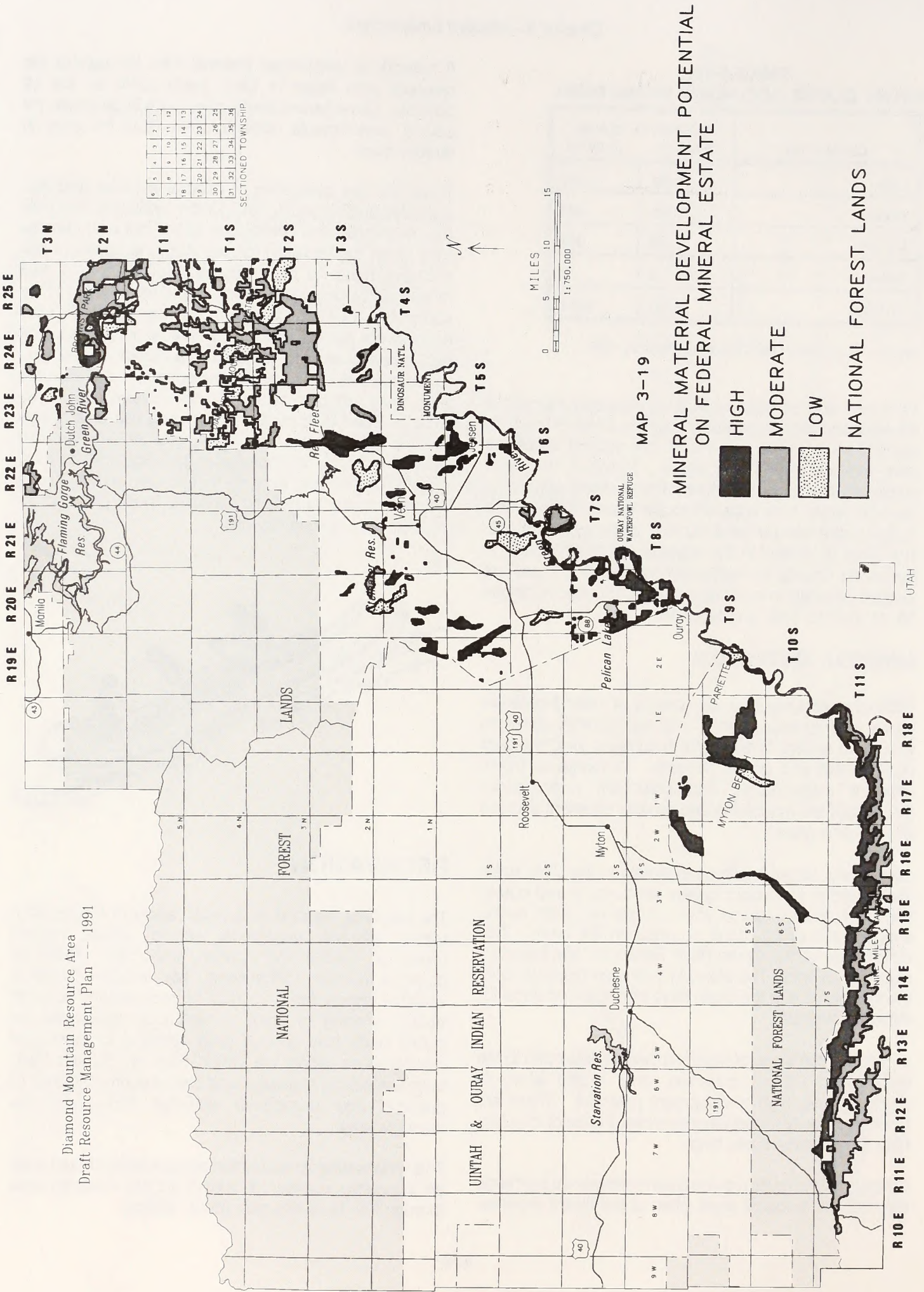
## RECREATION

The resource area offers a wide variety of topography, terrain features, vegetation, scenic values, historic resources, wildlife and riparian resources. These all combine to make northeastern Utah, and thus DMRA, a valuable region for a myriad of recreational pursuits. Visitors wishing to enjoy a recreation experience on public lands may choose from camping in developed campgrounds along the Green River in Browns Park, travelling scenic highways and back-country byways, or primitive and unconfined activities throughout the resource area.

This wide variety for recreation opportunities should draw an increasing number of visitors to the resource area through the life of this plan (BLM, 1989b).



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## RECREATION OPPORTUNITY SPECTRUM

BLM uses the Recreation Opportunity Spectrum (ROS) as one tool to identify types of recreation settings and opportunities. It also helps identify the capability of public land to provide specific types of recreation experiences. Impacts to specific ROS classes can be used to identify and quantify effects of various activities to different types of recreation opportunities. Appendix 5 cites the factors considered for each ROS class.

To facilitate its use in planning the ROS is divided into the following six classes, listed in order of importance, from high to low: Primitive; semiprimitive nonmotorized; semiprimitive motorized; roaded natural; rural and, modern urban. ROS classes in DMRA were established as a result of an inventory conducted in 1980 and updated in 1990. Map 3-20 indicates locations of various ROS classes in the resource area. Table 3-15 cites the approximate acres in each class.

**TABLE 3-15:  
RECREATION OPPORTUNITY SPECTRUM  
(IN PUBLIC ACRES)**

OPPORTUNITY CLASSES	PUBLIC ACRES
Primitive	0
Semi-Primitive, Non-Motorized	60,776
Semi-Primitive, Motorized	513,662
Roaded Natural	114,956
Rural	19,606
Urban	0
Area Total	709,000

Source: DMRA Geographic Information System

## RECREATION MANAGEMENT AREAS

Special Recreation Management Areas (SRMAs) are areas heavily used for recreation. They require special management to ensure the protection of identified recreation values. Two areas are currently designated SRMAs: Browns Park (about 18,650 public acres) and Pelican Lake (about 1,060 public acres). Refer to Map 3-21 for these SRMAs locations.

In 1984, the Browns Park SRMA was designated as the Green River Scenic Corridor Area of Critical Environmental Concern (ACEC). This action was taken to protect scenic, historic, cultural, biologic, and scientific

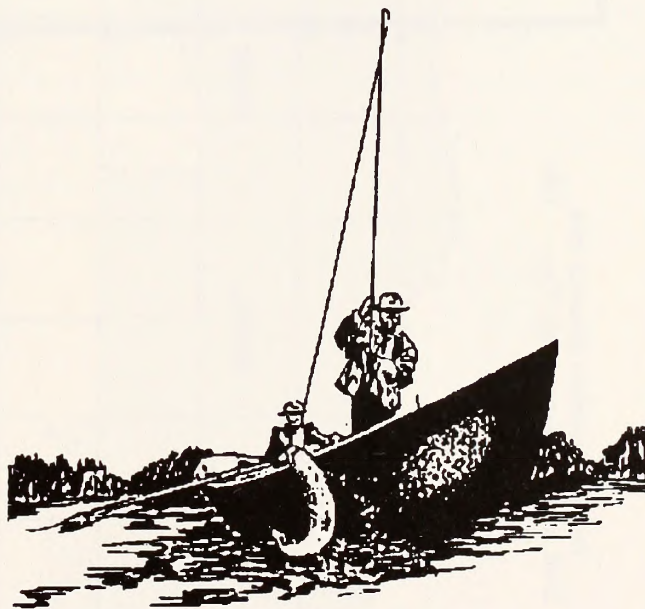
values. A 1991 interagency review of recreational use of the Green River from Flaming Gorge Dam to the Colorado state line anticipates recreation pressure to continue to increase at approximately 3-4 percent per year. Suggestions for maintaining the high quality recreation experiences include: increased and improved recreational facilities along the river, and implementing a reservation system for use on the river (Pratt, et al., 1991).

The remainder of DMRA, not included in the SRMAs, is included in the Diamond Mountain Extensive Recreation Management Area (ERMA). Recreational pursuits center around unconfined activities such as hunting, fishing, sightseeing, and off-highway driving. Two exceptions are found in Dry Fork Canyon and Sand Wash.

Public land along Dry Fork Creek, in scenic Dry Fork Canyon, near Vernal contains a small picnic area, heavily used in the spring of the year. BLM operates a ranger station at Sand Wash on the Green River near Nine Mile Canyon. It is the main launch point for raft trips down the Green River through Gray and Desolation Canyons.

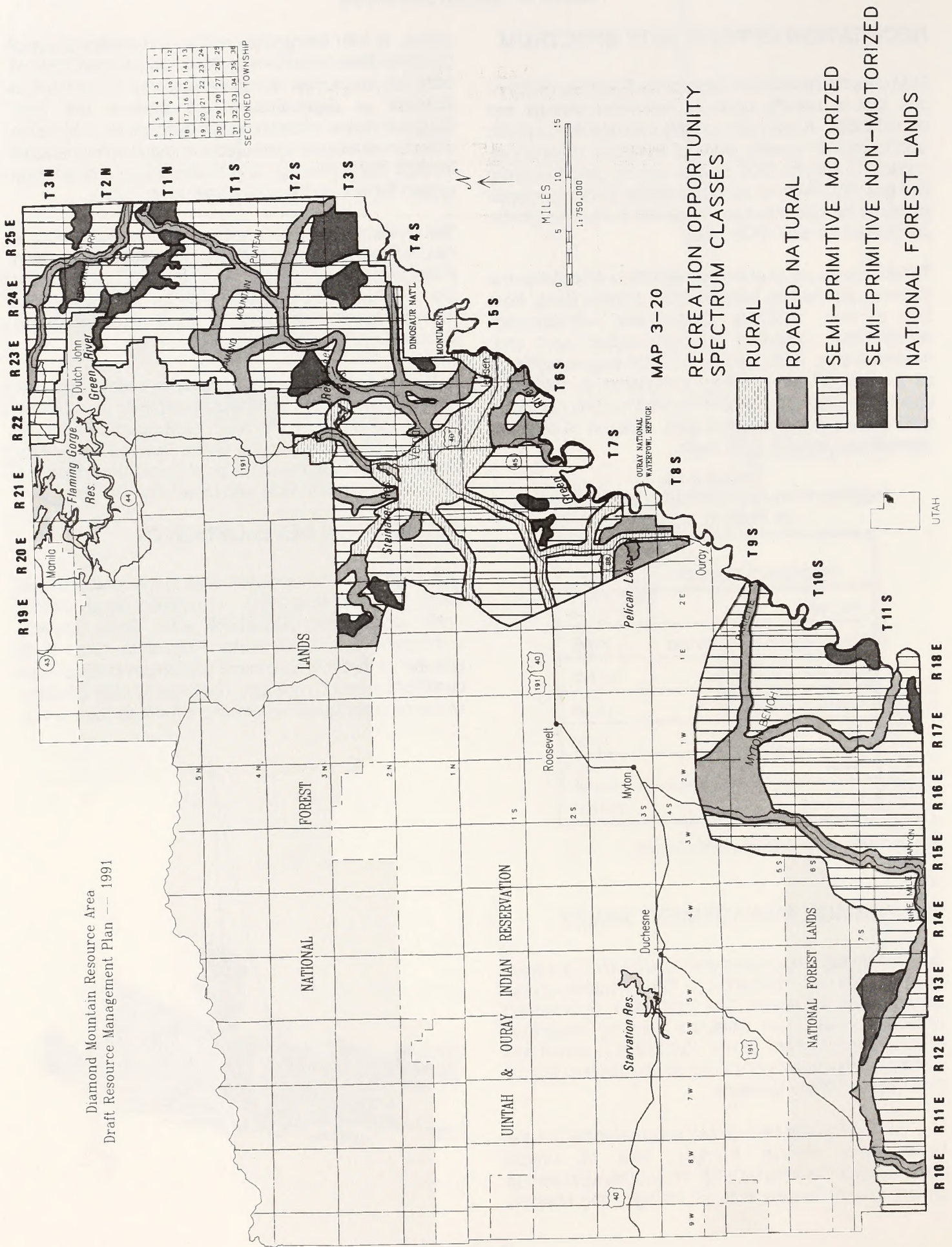
## RECREATION DEVELOPMENTS

DMRA manages 10 recreation sites in the resource area (Table 3-16 and Map 3-21). In addition, Moab District under cooperative agreement with Vernal District, administers the Sand Wash Recreation Site; it is anticipated that this agreement will remain in effect until conditions warrant a change. There are 38 sites identified as having potential for development (refer to Table 3-17).





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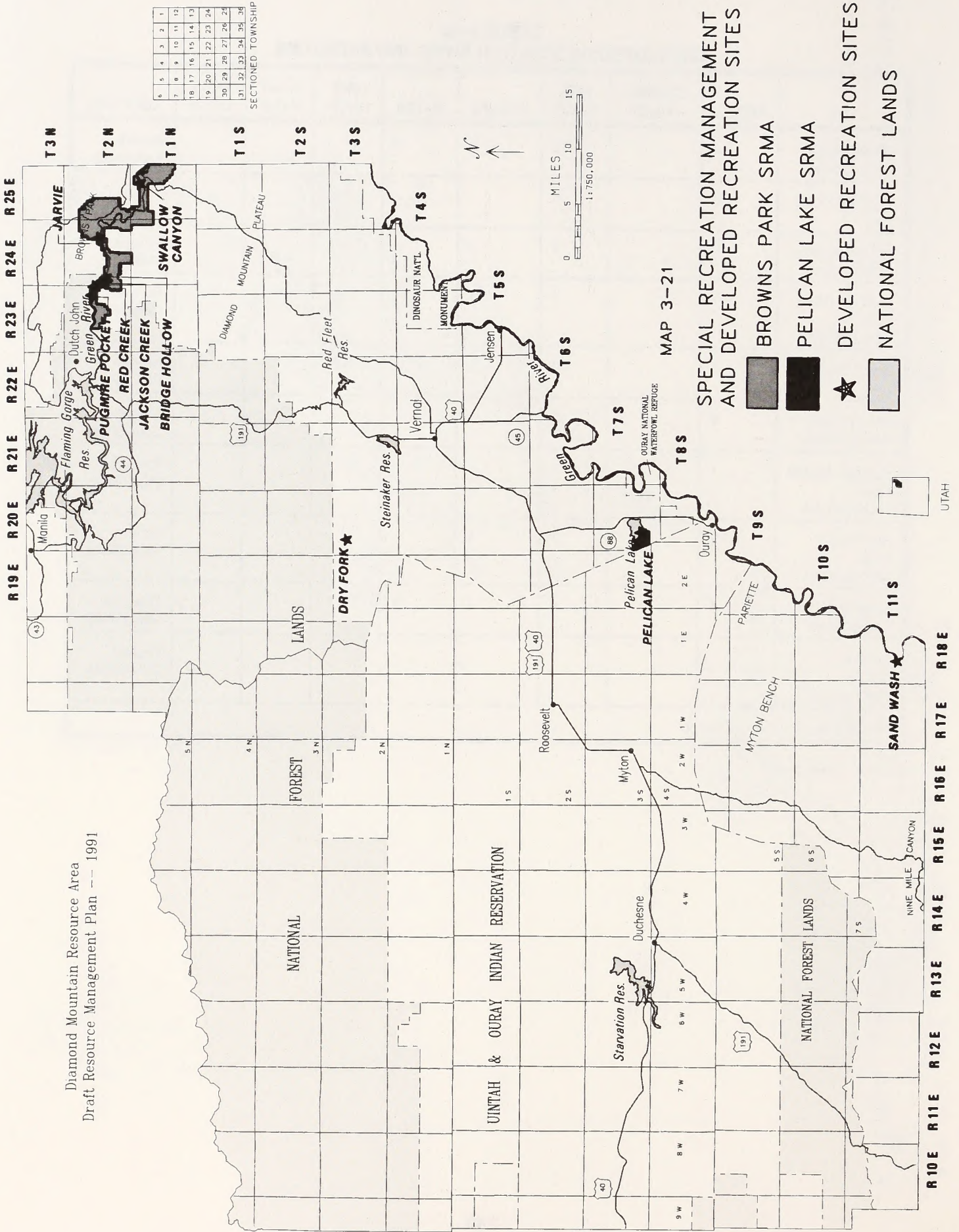
**TABLE 3-16:  
DEVELOPED RECREATION SITES AND FACILITIES**

SITE	TABLES	COVERED TABLES	FIRE RINGS	TOILETS	WATER	RAFT RAMP	BOAT RAMP	BOAT DOCK	LOCATION
Bridge Hollow Campground	12		12	2	1	1			Browns Park SRMA
Dry Fork Picnic Area	9		6						Diamond Mtn. ERMA
Indian Crossing Campground	6		1	2		1			Browns Park SRMA
Jackson Creek Float Campground	1		1	1					Browns Park SRMA
Jarvie Historic Site	4		2	1	1				Browns Park SRMA
Pelican Lake Campground	9	5	13	2			1	1	Pelican Lake SRMA
Pugmire Pocket Float Campground	1		1	1					Browns Park SRMA
Red Creek Float Campground	2		2	1					Browns Park SRMA
Sand Wash* Campground	4		6	2	1				Diamond Mtn. ERMA
Swallow Canyon Raft Ramp						1			Browns Park SRMA
*Administered by Moab District									

Source: DMRA files



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


6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

SECTIONED TOWNSHIP



MAP 3-21

SPECIAL RECREATION MANAGEMENT AREAS  
AND DEVELOPED RECREATION SITES

-  BROWNS PARK SRMA
-  PELICAN LAKE SRMA
-  DEVELOPED RECREATION SITES
-  NATIONAL FOREST LANDS





**TABLE 3-17:  
POTENTIAL RECREATION SITES**

NAME OF SITE	NAME OF SITE
Allen Draw Camp Site	Jones Hole Picnic Site
Ashley Creek Camp Site	Little Mountain Overlook
Aspen Picnic Site	Little Mountain Picnic Site
Bear Hollow Camp Site	Little Swallow Canyon Camp Site
Big Tree Camp Site	Lone Tree Camp Site
Brough Reservoir Recreation Site	Long Bend Camp Site
Butch Cassidy Camp Site	Pariette Camp Site
Cottonwood Grove Camp Site	Pariette Recreation Site
Devil's Hole Boat Camp Site	Pine Pocket Picnic Site
Diamond Mountain Picnic Site	Pine Ridge Picnic Site
Dry Hollow Camp Site	Plateau Picnic Site
Fire Flat Picnic Site	Pot Creek Camp Site
Gadson Draw Picnic Site	Red Mountain Recreation Site
Grassy Draw Camp Site	Riverside Camp Site
Hatch Cove Camp Site	Rye Grass Camp Site
Horseshoe Bend Camp Site	Sears Canyon Camp Site
Hoy Mountain Camp Site	Three Corners Camp Site
Jones Hole Camp Site	Wickiup Camp Site

Source: DMRA files

## RECREATION OPPORTUNITIES

The entire DMRA is used for hunting, generally concentrated in the fall and winter months. Fishing is also a popular pursuit with most use occurring along the Green River in Browns Park. Observing wildlife species in their natural environs is becoming a very popular activity. No cave resources are presently known within the resource area. The following opportunities have been identified under current management.

DMRA has nominated several roads in the resource area for inclusion in the Back-country Byway System. These roads would be signed and managed to protect the values responsible for their designation. Included are the following roads: Jones Hole (30 miles in length), Diamond Mountain-Browns Park-Clay Basin Loop (90 miles), Red Cloud Loop (5 miles on BLM), and Myton to Wellington (45 miles). The Myton to Wellington was recently designated as a federal back country byway in

1991. Other roads would be added as they qualify for inclusion.

Several trails are identified for bicycles: Dinosaur National Monument-Chew Ranch road tour (24 miles in length), Bonanza Loop (48 miles), Vernal-LaPoint Loop (49 miles), and Asphalt Ridge (7 miles).

There is one existing motorbike four-wheel drive trail on the scenic Red Mountain near Vernal. Two hiking and horseback trails are in use and maintained: Sears Canyon trail follows the canyon from Diamond Mountain into Browns Park ending at the Jarvie Historic Site; and Green River foot trail along the Green River in Browns Park. The Sears Canyon trail is gaining regional significance as the site of the "Outlaw Trail" ride, an activity associated with Vernal's annual Outlaw Trail Festival.

The Green River offers outstanding river rafting. The section of river between Little Hole and the Colorado state line runs through the Browns Park SRMA (discussed earlier in this section). The middle and lower sections of the river between Split Mountain and Sand Wash (a distance of 102 miles) receives very limited use. This section has the potential of becoming a very popular river rafting area by people preferring slow-moving water.

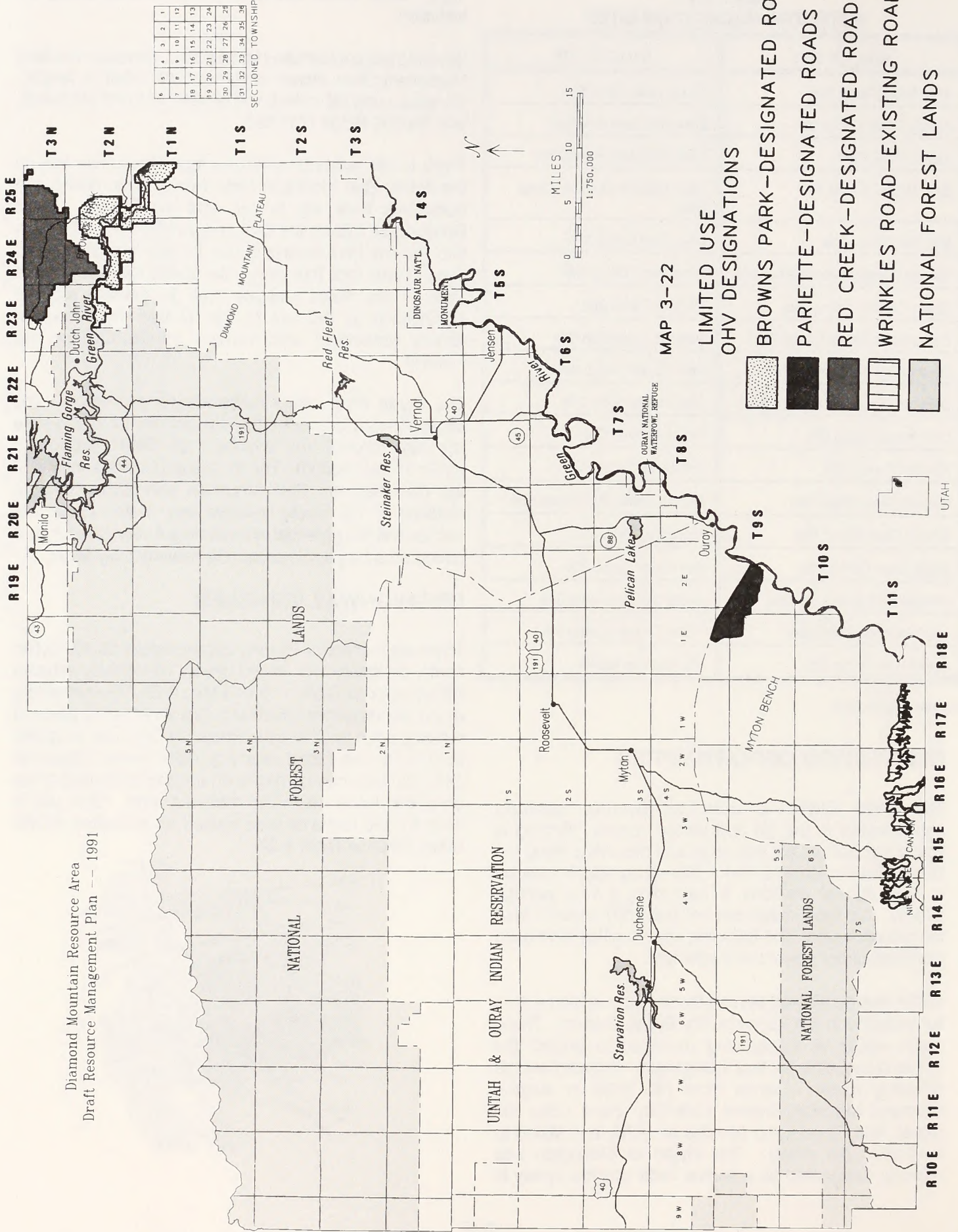
## OFF-HIGHWAY VEHICLES

There are four areas, totaling approximately 56,400 public acres, designated for limited use by off-highway vehicles (OHV), refer to Table 3-18 and Map 3-22. The remainder of the resource area (652,600 public acres, or 92 percent) remains open to OHV use. Presently OHV use on public lands is concentrated near populated areas. Seasonal OHV use also can be heavy on traditional hunting areas on public lands within the resource area. OHV use in 1990 for the resource area totaled an estimated 31,400 hours (refer to Table 3-22).





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SECTIONED TOWNSHIP					
6	5	4	3	2	1
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36

MAP 3-22

LIMITED USE  
OHV DESIGNATIONS

- BROWNS PARK-DESIGNATED ROADS
- PARIETTE-DESIGNATED ROADS
- RED CREEK-DESIGNATED ROADS
- WRINKLES ROAD-EXISTING ROADS
- NATIONAL FOREST LANDS

UTAH



**TABLE 3-18:  
OHV DESIGNATION IN DMRA  
(IN PUBLIC ACRES)**

NAME OF AREA	DESIGNATION				Totals
	Limited Use on Roads				
	Closed	Existing	Designated	Open	
Browns Park	0	0	19,148	0	19,148
Parlette Wetlands	0	0	7,839	0	7,839
Wrinkles Area	0	13,810	0	0	13,810
Red Creek Watershed	0	0	24,552	0	24,552
Other Lands in RA	0	0	0	643,651	643,651
<b>Totals</b>	<b>0</b>	<b>13,810</b>	<b>51,539</b>	<b>643,651</b>	<b>709,000</b>

Source: BLM, 1987a

## RIPARIAN RESOURCES

Among the most productive and important ecosystem, riparian areas make up approximately 2 percent of the public lands within DMRA. Characteristically, riparian areas display a greater diversity of plant, fish, wildlife and other animal species and vegetation structure than adjoining vegetation communities. Healthy riparian systems filter and purify water as it moves through the riparian zone, reduce sediment loads and enhance stream bank stability and contribute to groundwater recharge and base flows (see Figure 3-4).

DMRA contains approximately 60,300 acres of riparian lands, including 272 miles of perennial and intermittent streams. Of this, only 15,650 acres are public land (refer to Map 3-23). An ongoing riparian inventory, begun in 1989, has evaluated approximately 125 miles (or 64 percent) of the stream riparian communities on public land. Of the streams inventoried, 24 percent were found to be in an early vegetation ecological condition, 55 percent in mid, and 21 percent in late. Approximately 18 percent of the mid and early ecological stage riparian is due to the presence of noxious weeds on the Upper Green River. The remaining streams have yet to be evaluated. Table 3-19 provides a summary of the ecological condition of the inventoried streams within the resource area. (Appendix 8 depicts the current ecological condition and management priority for these streams by grazing allotment.)

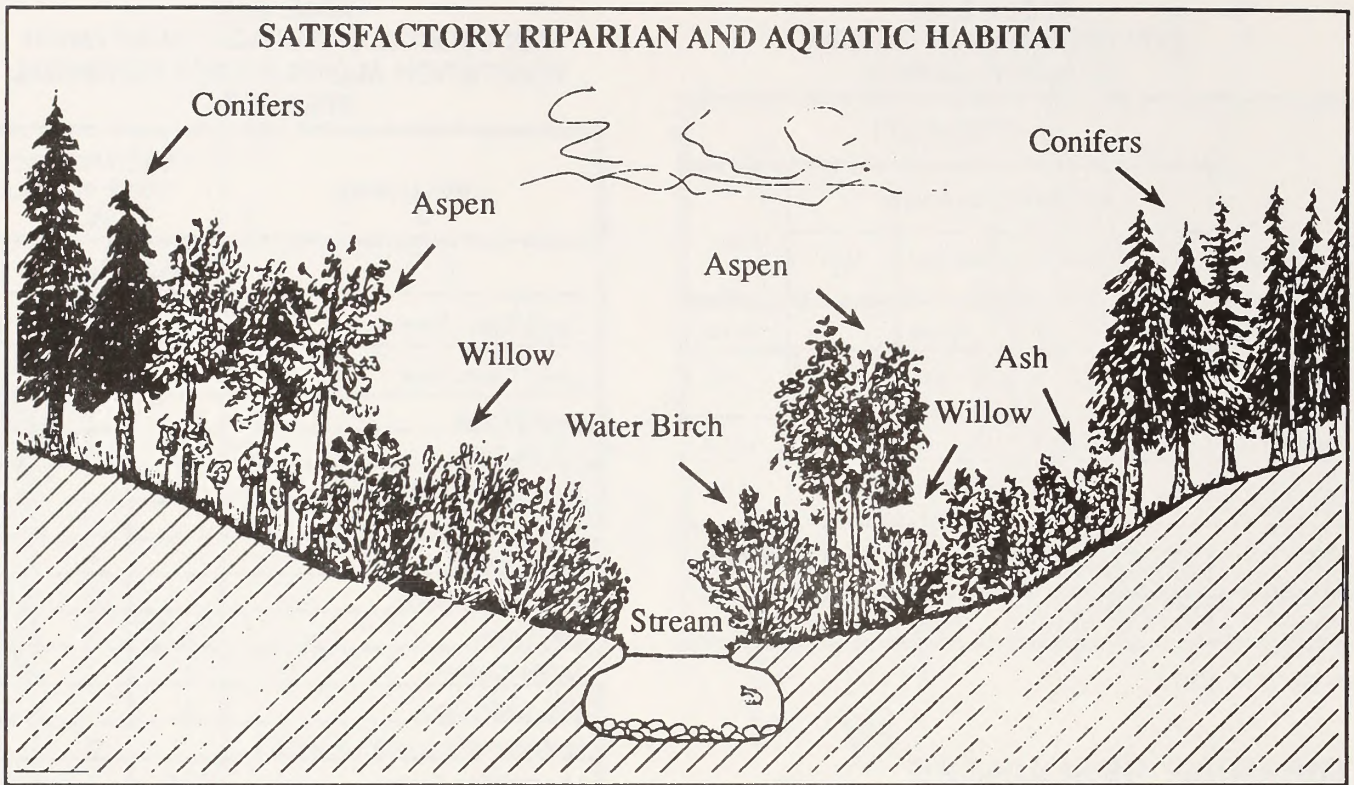
**TABLE 3-19:  
ECOLOGICAL CONDITION OF RIPARIAN  
VEGETATION ALONG SELECT PERENNIAL  
STREAMS**

STREAM NAME	VEGETATION SERAL STAGE IN PUBLIC MILES		
	Early	Mid	Late
Upper Green River		22	2
Lower Green River	12		9.5
Ashley Creek		2	
Spring Creek		2.5	
Lower Willow Creek			3
Beaver Creek		1	
Birch Creek		1	
Little Brush Creek		2	
Red Creek	1		
Martin Draw	4		
Clay Basin Creek	5		
Grindstone/Spring Creek Wash		5	
Upper Willow Creek	.2		
Lower Tolivers Creek		1.5	
Lower Sears Creek		1	
Jackson Creek		1	
Little Davenport Creek			1
Gorge Creek			1
Brush Creek	1.5		
Upper Tolivers Creek			1.5
Upper Sears Creek			3
Diamond Gulch		7	
Pariette Wash		10	
Mosby Creek		1	
Nine Mile Creek		9	
Argyle Creek	2.5		
Four Mile Wash		1	
Pelican Lake Wash		1.5	
Dry Fork Creek			2
Crouse Creek			2
Coyote Creek			1
Pot Creek		.2	
Smelter Creek			.3
Deep Creek		.3	
<b>Total:</b>	<b>29.2</b>	<b>69</b>	<b>26.3</b>
<b>GRAND TOTAL</b>	<b>124.5</b>		

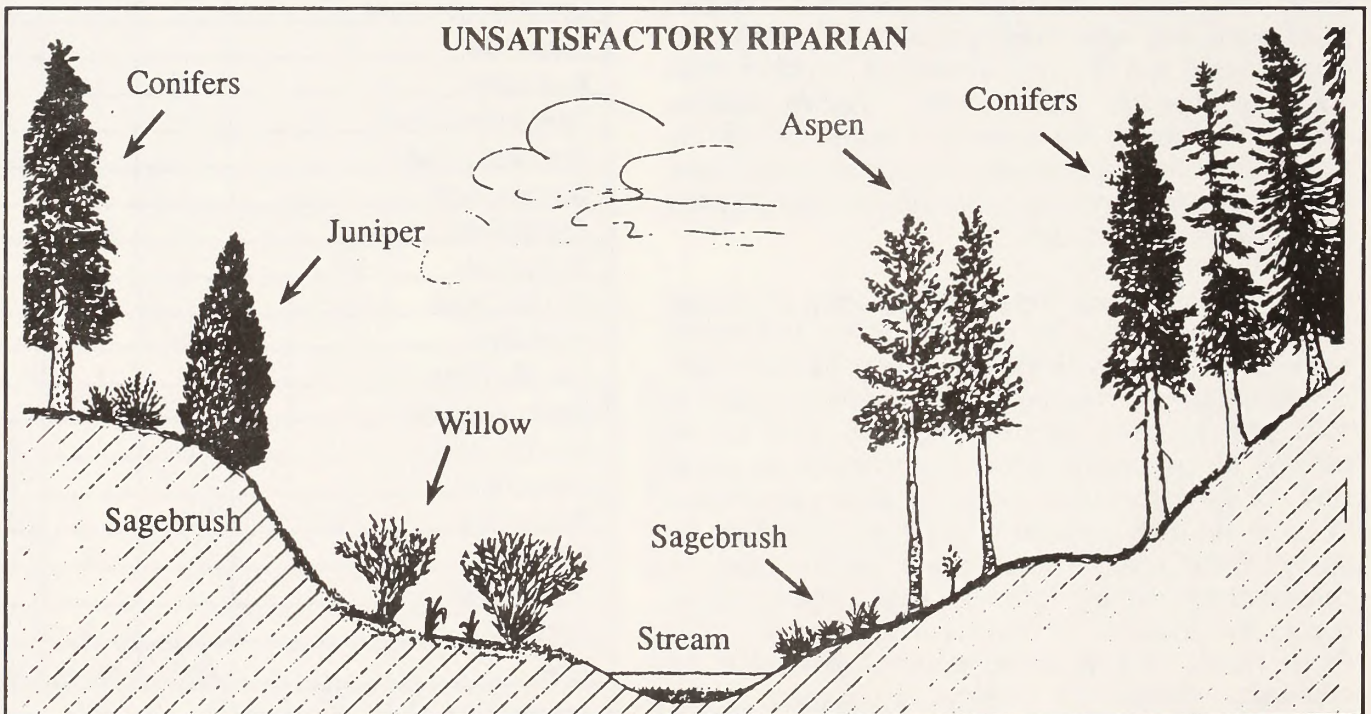
Source: DMRA files



FIGURE 3-4



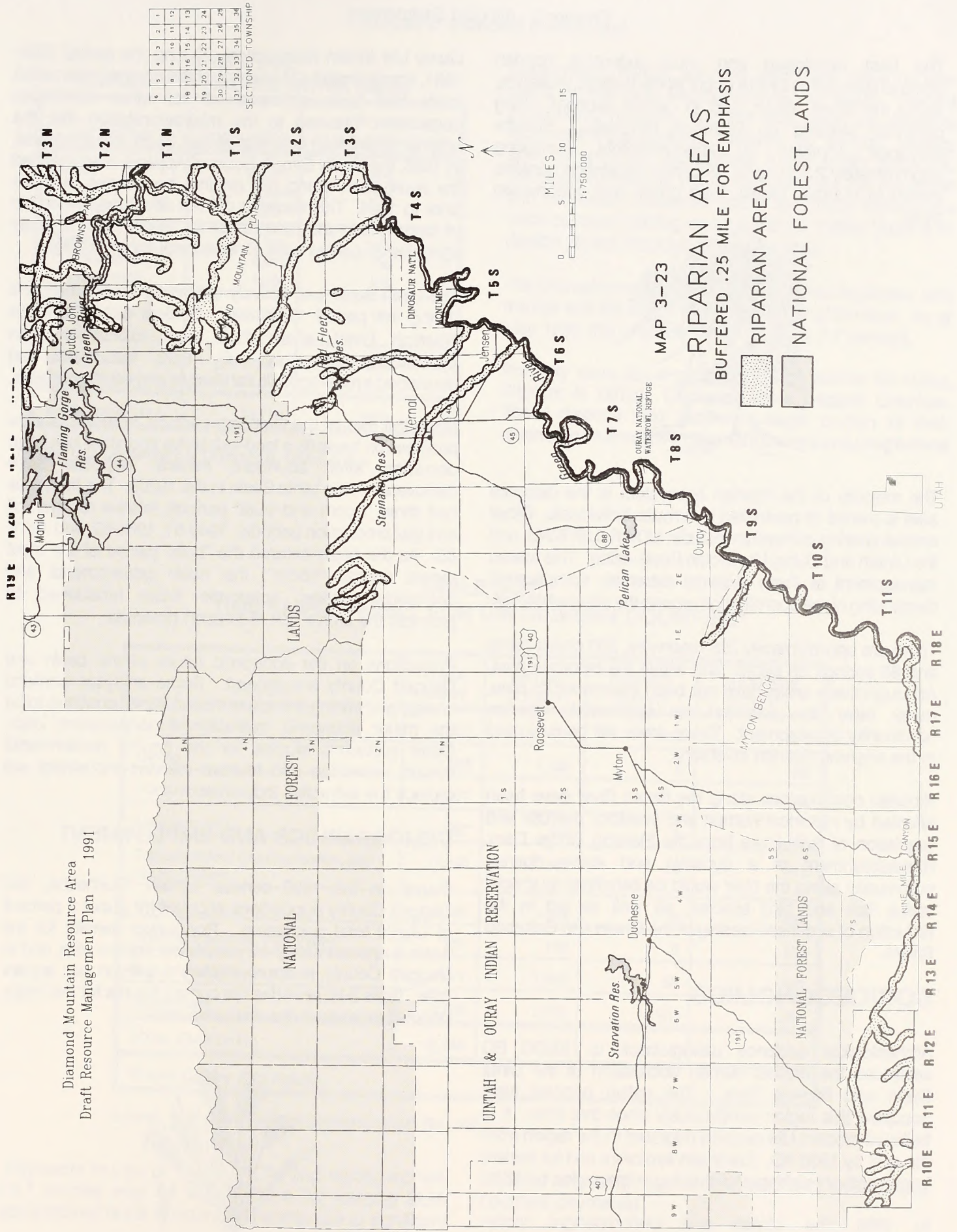
Satisfactory riparian habitat is characterized by good vigor and canopy coverage, abundant reproduction of palatable plant species, and well developed, overhanging streambanks. Gravels dominate the stream substrate, which provides good habitat for fish spawning and aquatic invertebrates.



Unsatisfactory riparian habitat is characterized by poor vigor and canopy coverage, low species diversity, and a lack of reproduction of woody plant species. Unpalatable plants, such as sagebrush are increasing in abundance. Aquatic habitat is characterized by eroded streambanks, and a "dished-out" appearance (because the banks are not overhanging). Fine materials (silt) dominate the substrate, which provides poor habitat for fish spawning and invertebrates.



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The best developed and most extensive riparian communities within DMRA occur at the Pariette Wetlands, along the Green River, and in certain sections along perennial streams on Diamond Mountain. Pariette Wetlands contains 20 impoundments inundating approximately 2,530 acres. Riparian vegetation consists mainly of bulrush, cattail, reed grass, and cottonwood trees.



The majority of the riparian ecosystem in the resource area is owned or controlled by private individuals. Other entities sharing ownership include: UDWR, USF&WS, and the Uintah and Ouray Ute Indian Reservation. This makes management of these systems extremely complicated, demanding close coordination among the affected parties.

There are approximately 225 reservoirs, 200 check dams and 85 springs on public land within the resource area. Although these areas have not been inventoried to date, many have the potential for appreciable riparian community development. These areas will be evaluated in the ongoing riparian inventory.

Riparian communities along the Green River have been affected by historical human and livestock overuse and regulation of river flows from the Flaming Gorge Dam. Reestablishment of a dynamic and stable riparian community along the river would be beneficial to special status fish and bird species, as well as aid in the reduction of sediment-loading of the Green and Colorado Rivers.

## SOCIOECONOMICS

Archeological evidence dating back to 10,850 BC witnesses the earliest human occupation of the Uinta Basin and Browns Park. The native peoples have occupied this region continuously since that time. It is believed modern Ute peoples migrated to the region from the east by 1500 AD. European explorers and fur traders began actively visiting and working in the region by 1776.

In 1886, the Uintah and Uncompahgre Indian Reservations were combined into the present Uintah and

Ouray Ute Indian Reservation. During the period 1894-1981, approximately 24 percent of the original reservation lands had been siphoned off for other non-Indian purposes. This led to the misinterpretation that the original reservation boundaries had been disestablished. In 1985, the Tenth Circuit Court of Appeals reestablished the reservation along the original boundaries in place prior to 1894. This decision did not affect the ownership of lands within the reservation for which BLM or other agencies or parties have jurisdictional responsibility.

The Uinta Basin was actively settled by Euro-Americans during the period 1878-1890. Settlers came from the Wasatch Front where they were experiencing an agricultural depression. By 1890, the basin had developed a rural-agricultural lifestyle and economic base.

Since the turn of the twentieth century, however, a slow progression towards a land-extractive economy has been occurring after abundant mineral deposits were discovered in the Uinta Basin in the 1920s. The basin has had three "boom and bust" periods relative to peak oil and gas production periods: 1948-51, 1964-69, and 1981-85. As the basin entered the "bust" period of the most recent energy "boom", the basin governments and commerce entities' economic focus broadened to promote the area's rich recreation potential.

Projections on the economic future of the basin and Daggett County are divided. Some analyses contend energy and mining extractive industries will continue to be the major economic mainstay of northeastern Utah. Other economic studies for the county governments predict recreation and tourism (service industries) will replace the extractive industries.

## DEMOGRAPHICS AND EMPLOYMENT

Based on the 1990 census, Uintah, Duchesne, and Daggett County populations account for about 3 percent of Utah's total population. Population density for the basin is approximately 4.2 people per square mile, and in Daggett County is approximately 1 person per square mile. Table 3-20 provides the current figures for the major population areas in the resource area.





**TABLE 3-20:  
POPULATION FIGURES WITHIN DMRA**

COUNTIES	POPULATION	% OF POPULATION IN THE UINTA BASIN
Uintah:	22,211	42%
Vernal	6,644	12%
Naples	1,334	3%
Duchesne:	12,645	24%
Roosevelt	3,915	7%
Duchesne	1,308	2%
Daggett:	690	1%
Manila	207	
Uintah-Ouray Indian Reservation	17,224	33%
Total Uintah Basin	52,770	100%

Source: U.S. Department of Commerce, 1990 Census

Government, mining, services, and trade make up two-thirds of the total employment in the basin. Recent projections, however, suggest that trade will probably move to the top position, followed by service, mining, and government respectively (Uinta Basin Economic Development District, 1990). Estimates are that the tourist and recreation industries could eventually replace the once-dominant mining sector (UBEDD, 1990). Table 3-21 depicts recent employment for the area.

The unemployment in the Uinta Basin has fluctuated with the rise and fall of energy development of the area. As of May 1990, the unemployment rate was 7.7 percent.

Property taxes are a major source of income for taxing districts in Uintah, Duchesne, and Daggett Counties. These districts also receive a large portion of their revenue from intergovernmental transfers including federal

**TABLE 3-21:  
1990 EMPLOYMENT FOR UINTA BASIN COUNTIES\***

INDUSTRY	UINTA BASIN	UINTAH COUNTY	DAGGETT COUNTY	DUCHEсне COUNTY
Agriculture	1,237	700	112	425
Mining	1,555	1,459	3	465
Construction	277	167	3	110
Manufacturing	327	184	3	110
Transportation, Communication, and Public Utilities	1,040	602	26	412
Trade	2,380	184	29	867
Finance, Insurance, Real Estate	251	116	0	135
Service and Miscellaneous	1,971	1,459	53	459
Government	3,208	1,737	182	1,289
<b>TOTAL EMPLOYED</b>	<b>12,245</b>	<b>7,538</b>	<b>405</b>	<b>4,303</b>
*Fourth Quarter 1990 Figures				

Source: Utah Department of Employment Security, 1991

Payments in Lieu of Taxes (PILTs) and royalty monies. PILT monies may be a justification for keeping BLM-administered lands in federal ownership due to significant

incomes to local governments (Table 3-22 shows these counties' payments).



**TABLE 3-22:  
1989 FEDERAL PAYMENT IN LIEU OF TAXES  
AND ROYALTY DISBURSEMENTS  
TO COUNTIES IN DMRA**

COUNTIES	PILT PAYMENTS	ROYALTY PAYMENTS
Daggett	\$ 35,000	\$ 507,000
Duchesne	334,908	685,000
Uintah	614,261	9,234,000
TOTAL	\$984,169	\$10,426,000

Source: Utah State Office files

During the energy boom of the mid-1980s, the Uinta Basin communities evolved into a diverse society. Infrastructure problems were dealt with during this energy boom. The social demands were met with the construction of new roads, schools, housing, and hospitals. Population growth fluctuations in the Uinta Basin are attributed primarily to the oil and gas industry. Laborers generally come to this area for jobs provided by the oil and gas industry in the areas of geophysical exploration, drilling, production, and oil field services. Permanent residents in the area are usually employed for oil and gas production and oil field services, while drilling and geophysical exploration normally employs residents and non-residents for shorter terms. Future population growth in the Uinta Basin will continue to fluctuate. For the most part, the communities should be able to absorb the effects of population growth except for the need to construct more schools, expand hospital facilities, and increase police protection.

## RELATED ECONOMIC ACTIVITY

The economy of Uintah County depends on three primary industries: mineral development, tourism, and agriculture.

Agriculture, while not as major factor as it once was, still defines the cultural base for the region. Woodland products from the public lands support this largely rural lifestyle.

## Minerals

Minerals activities employ an average of 1,600 people in the Uinta Basin (Utah Dept. of Employment Security, 1991). In addition to the income and employment aspects, oil and gas activity within the basin affects both the revenues and costs of the State of Utah and local taxing jurisdictions. Once issued, lessees pay annual rentals and/or royalties to the federal government based on leased acreages and amount of oil and gas recovered.

One-half of the lease rental and royalty monies collected are returned to the involved states. Of the monies returned to the State of Utah, a portion is returned to the counties as compensation for the impact of oil and gas exploration and development. In 1989, \$10.4 million was returned to the Daggett, Duchesne, and Uintah Counties as their share of these royalties.

Additional oil and gas operation revenues are generated by the state and local taxing districts through the levying of different taxes, including: sales tax, severance tax, property tax, etc.

County governments are the largest consumers of solid minerals. They rely on public lands as sources of road quality sand and gravel. Private and commercial users look to the public lands as important sources of mineral materials for a variety of construction-related projects.

## Recreation

Increasing numbers of tourists visit northeastern Utah. Existing travel routes link the extremely popular areas of southern Utah's Canyonland country with Yellowstone and Grand Teton areas to the north. The Dinosaur National Monument, Flaming Gorge Reservoir, and the upper Green River are destination points. The Ashley National Forest, several state parks, and extensive undeveloped public lands all lend themselves to the idea of large open play areas, suitable for recreation. The net economic value per day for recreation visitor days is \$25 (personal communication, Reed Stalder, BLM Recreation Specialist, Utah State Office, 1991).

The Vernal District prepares an annual report on recreation use of public lands. Table 3-23, "Recreation Management Information System Report" summarizes recreation use in the district for 1989.





**TABLE 3-23:  
RECREATION USE - DIAMOND MOUNTAIN RESOURCE AREA, 1990**

RECREATION ACTIVITY	BROWNS PARK SRMA		*PELICAN LAKE SRMA		DMTN ERMA		TOTAL USE IN DMRA	
	# of Visits	Total Visitor Hours	# of Visits	Total Visitor Hours	# of Visits	Total Visitor Hours	# of Visits	Total Visitor Hours
OHV Travel	400	1,400	0	0	8,500	30,000	8,900	31,400
Other Motorized Travel	800	2,800	200	500	6,500	19,500	7,500	22,800
Nonmotorized Travel	1,000	4,000	0	0	2,500	10,000	3,500	14,000
Camping	6,200	62,000	500	5,000	10,000	100,000	16,700	167,000
Hunting	2,200	17,120	200	800	50,000	500,000	52,400	517,920
Land Based	3,000	6,000	0	0	10,000	40,000	13,000	46,000
Fishing	12,000	54,000	4,000	20,000	4,000	16,000	20,000	90,000
Boating	12,000	48,000	0	0	300	1,200	12,300	49,200
Other Water Base	0	0	0	0	0	0	0	0
Winter Sports	0	0	0	0	2,000	4,000	2,000	4,000
Snowmobiling	0	0	0	0	500	1,000	500	4,000
<b>TOTALS</b>	<b>37,600</b>	<b>195,320</b>	<b>4,900</b>	<b>26,300</b>	<b>94,300</b>	<b>721,700</b>	<b>136,800</b>	<b>943,320</b>
Net Economic Value	\$5,452,000		\$684,875		\$19,635,400		\$24,960,000	

\*Use was significantly lower in 1989 because of drought and fish winter kill during winter of 1988-89.

Source: BLM Recreation Management Information System, 1990

Hunting is one of the traditional recreational pursuits in Utah. In 1989, northeastern Utah accounted for the following portion of the state's hunter-day visitation (Loomis et al., 1985 and Bangarter, 1989):

Birds and Upland Game	\$ 382,200
Elk	1,305,100
Antelope	7,000
Moose	1,600
Deer	<u>1,699,700</u>
Regional Economic Value	\$3,395,600

Percent of Hunter Days	Economic Value Per Day
------------------------	------------------------

Upland Game	11	\$14
Elk	16	41
Antelope	17	39
Moose	11	19
Deer	6	41

Based on this, the regional economy which includes not only the Uinta Basin, but also the trading center of Salt Lake and various northwestern Colorado and southwestern Wyoming communities, receive annually the following income from hunting:

### Agriculture

Agriculture was the basin's major economic base until the early 1900s. Today farm and ranch incomes account for approximately five percent of the tri-counties' personal income. Important agricultural crops for the basin are wheat, barley, corn, and alfalfa hay. Since 1924, cattle and calf production in Utah has increased to become the dominant portion of agricultural sales. Agricultural employment plays a minor role in basin economy. Presently an AUM is valued at \$9.19 as determined by the Agricultural Statistic Service, USDA (1991).



## Woodlands

Basin residents are dependent on fuelwood from public lands to heat their homes. The lack of public land fuelwood would significantly affect resident's heating costs. Estimates are that at least 20 woodcutters earned all or a significant portion of their incomes selling wood cut from the resource area in 1989. The economic value of a cord of wood is \$150 (personal communication, Boyd Christensen, BLM Forestry Specialist, Utah State Office, 1991).

In 1989, \$13,200 was paid to BLM for wood products harvested from the resource area. Of this amount, approximately \$4,500 was for personal use firewood and \$6,000 for commercial firewood. An additional \$2,600 was received for other forest products, such as cedar posts used as fence posts.

## SOILS AND WATER

### SOILS

The soils in DMRA developed in parent materials derived primarily from the sedimentary rock of the Uinta Mountains and the West Tavaputs Plateau forming the boundaries of the Uinta Basin, and the Uinta and Owyukuts Mountains forming Browns Park.

From 1978-1987, the soils within the resource area south of the Green River were surveyed in a cooperative effort between the U.S. Soil Conservation Service (SCS) and the Bureau of Land Management. These inventories were incorporated into the draft Uinta and Duchesne Counties' soils survey documents, prepared by the SCS. The Daggett County area, north of the Green River, was inventoried in 1985-87 as part of the Henry's Fork (Utah and Wyoming) soil survey. The soil inventories are still in a draft working form and will be published sometime between 1992 and 1995.

The resource area's soil resources are composed of a wide variety of soil types and characteristics. There are 330 different soil mapping units in DMRA. Units are characterized by depth, texture, slope, and climatic differences. A brief description of the major or significant soils follows. (For detailed information on soils occurring within the resource area, refer to the soil survey documents and Management Situation Analysis, located at the DMRA office).

**Desert Soils** (Shadscale-Salt shrubs, 130,000 acres) - These soils are generally level to steep on alluvial fans, terraces, and pediment slopes. Most soils are shallow,

some deep, well drained, gravelly, and very gravelly sandy loams, loams and clay loams, non-saline to slightly saline, and moderately alkaline to very strongly alkaline. The hazard of water erosion is mostly slight, largely due to surface rock fragments (desert pavement). Vegetation is predominantly shadscale and salt desert shrubs; elevation is 4,600 to 6,000 feet; annual precipitation is six to eight inches.

**Desert and Semi-Desert Soils** (Black Sage, 144,200 acres)- These soils are mostly strongly sloping to moderately steep on fans, terraces, shoulder slopes, and hill slopes. Most are shallow with some deep, well-drained gravelly sandy loams to shaly and cobbly clay loams, non-saline, and moderately to strongly alkaline. The hazard of water erosion is primarily slight and moderate. Black sage is the primary vegetation type; elevation is from 5,000 to 8,000 feet; precipitation averages eight to sixteen inches annually.

**Semi-Desert, Upland and Mountain Soils** (Big sagebrush and browse, 264,250 acres) - These soils are mostly deep and very deep, well-drained sandy loams, gravelly loams, and loams on pediment toe slopes, footslopes, and fan terraces; non-saline and moderately alkaline to neutral at higher elevations. The hazard of water erosion is mostly slight. Big sagebrush and browse are the main vegetation types; elevation ranges from 5,000 to 9,000 feet with annual precipitation from 8 to 20 inches.

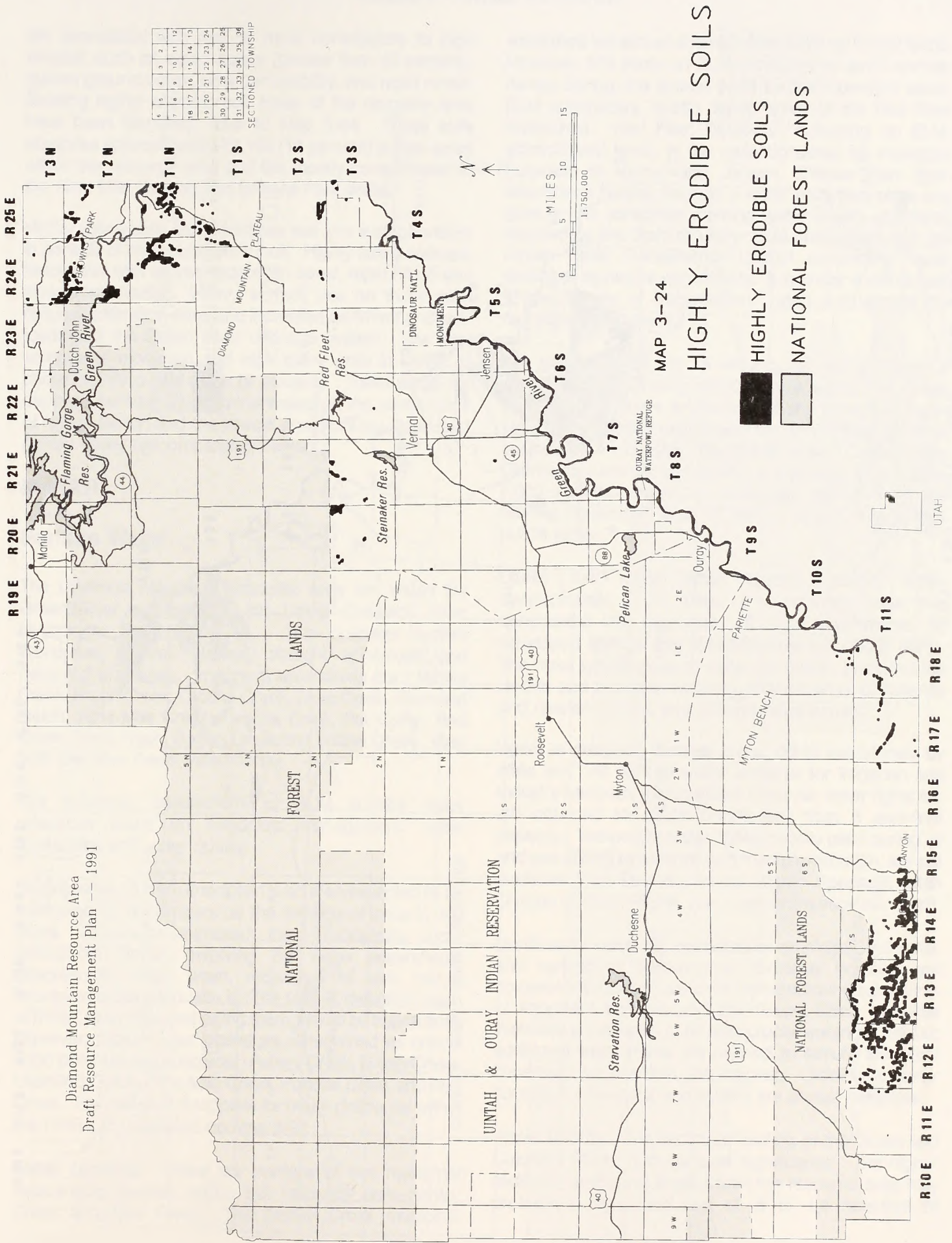
**Semi-Desert and Upland Soils** (Pinyon and Juniper, 110,500 acres) - These soils are mostly shallow, well-drained gravelly and cobbly loams and clay loams on pediment shoulders and backslopes; non-alkaline and moderately to strongly alkaline. The hazard of water erosion is from slight to very high. Pinyon and juniper are the primary vegetation types; elevation is from 6,000 to 8,000 feet and average annual precipitation is from 10 to 14 inches.

**Mountain and High Mountain Soils** (Conifer forest, 25,300 acres) - Soils are primarily deep and very deep, well-drained, cobbly and gravelly loams to loams on strongly sloping to very steep mountain and pediment back slopes. Also shallow and deep, well-drained, cobbly and stony sandy loams on gently sloping to steep mountain and pediment slopes (ponderosa pine). Soils are non-saline, slightly acid to mildly alkaline with slight to moderate hazard of water erosion. Conifer forest is the primary vegetation type, elevation is from 7,500 to 10,500 feet and average annual precipitation is 16 to 20 inches.

Soil types characterized as being highly erodible or highly saline are of management concern. Highly erodible soils

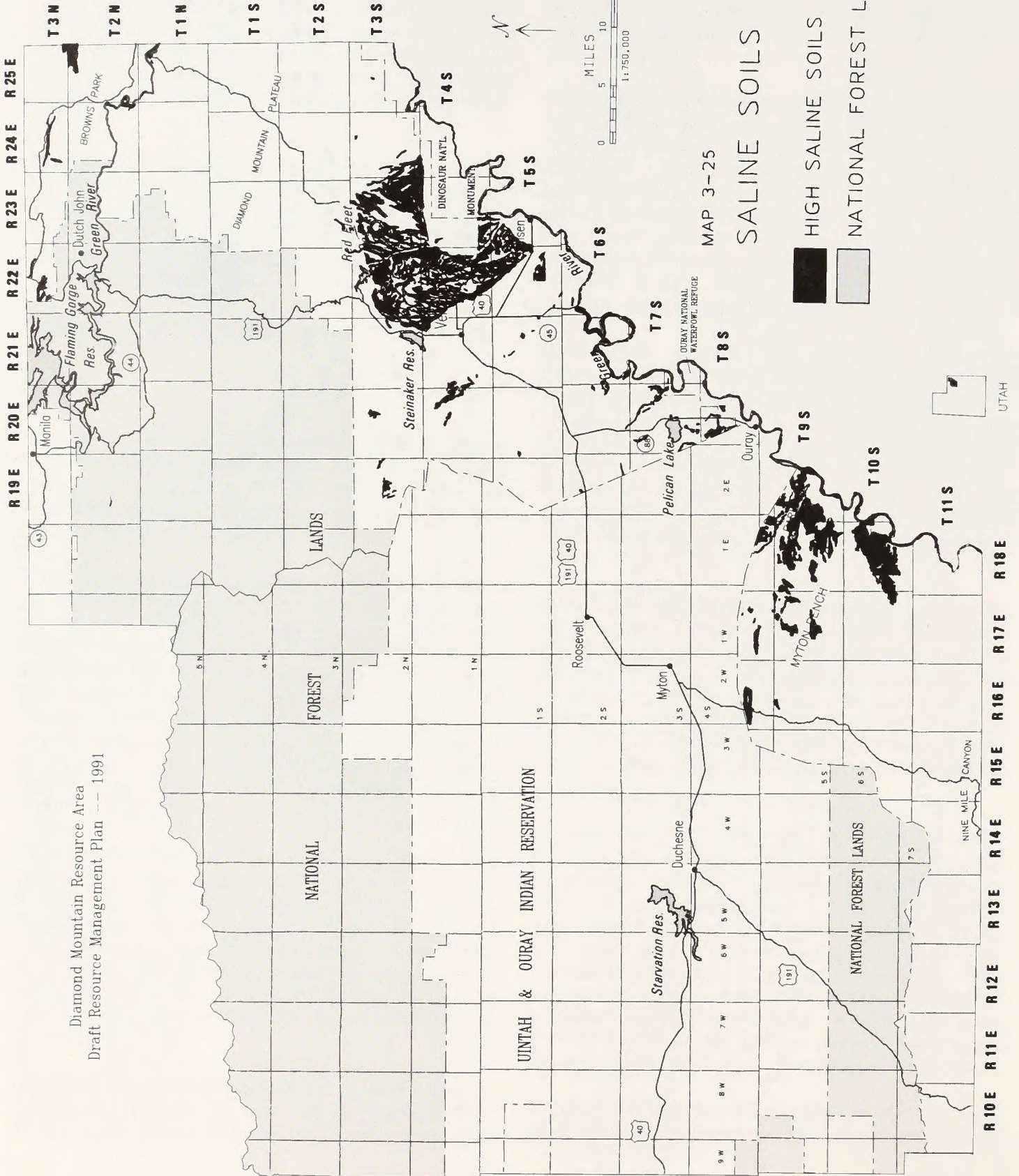


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6	5	4	3	2	1
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36

SECTIONED TOWNSHIP

MAP 3-25

SALINE SOILS

- HIGH SALINE SOILS
- NATIONAL FOREST LANDS

R 10E R 11E R 12E R 13E R 14E R 15E R 16E R 17E R 18E

R 19E R 20E R 21E R 22E R 23E R 24E R 25E

T 3N

T 2N

T 1N

T 1S

T 2S

T 3S

T 4S

T 5S

T 6S

T 7S

T 8S

T 9S

T 10S

T 11S

UTAH



are associated with one or more contributors to high erosion, such as steep slopes (greater than 40 percent), sparse ground cover, slow permeability, and rapid runoff. Existing highly erodible soil areas of the resource area have been identified, refer to Map 3-24. These soils comprise approximately 72,100 (10 percent) public acres within the resource area and are mostly concentrated in the Nine Mile Canyon and Browns Park areas.

Highly saline soils can contribute salt into surface waters in periods of high sediment runoff. Highly saline soils are associated with sparse vegetation cover, rapid runoff and slow permeability. Heavy surface use on these soils reduces infiltration rates and increases sediment and salt-loading of the Green River drainage system. The total acreage of moderate and high saline soils in DMRA is about 62,750 public acres (9 percent). These areas are depicted on Map 3-25, concentrated on the eastern half of Myton Bench and the lowest areas of Clay Basin and Ashley Valley (encompassing Vernal).

## **WATER**

### **Surface Water**

The Diamond Mountain Resource Area lies within the Green River sub-basin of the Upper Colorado River Hydrologic Region No. 14. This drainage system comprises several relatively straight ephemeral and perennial drainages. Important watersheds are: Ashley Creek, Brush Creek, Crouse Creek, Deep Creek, Diamond Gulch, Nine Mile Creek, Pariette Draw, Pot Creek, Red Creek, Sand Wash, Spring Creek and Willow Creek. Map 3-26 identifies these watersheds.

The following descriptions of BLM surface water resources focus on floodplain management, water availability, and water quality.

**Floodplains.** A base floodplain is an area expected to be inundated by floodwaters on the average of once in 100 years. As to be expected, these floodplains occur throughout DMRA, involving the major watersheds. Theoretically, every wash, regardless of size, has a floodplain associated with it. The task of delimiting each of these, much less managing them, would be impractical. However, those major drainages determined as critical flood potential areas include: Ashley Creek, Brush Creek, Diamond Gulch, Nine Mile Creek, Pariette Draw, and Red Creek. The 100-year floodplain for major drainages within the DMRA are depicted on Map 3-27.

**Water Quantity.** There are portions of two municipal watersheds located within the resource area--Ashley Creek and Red Fleet. The Ashley Creek municipal

watershed lies almost entirely within National Forest lands. However, 670 acres on BLM-administered lands contain Ashley Spring, the access point for the municipal water. BLM administers 18,660 public acres of the Red Fleet Watershed. Red Fleet Reservoir, occurring on BLM-administered lands, is the collection area for municipal purposes in Vernal and Jensen. Water from both watersheds passes through a water treatment plant and goes to the consumer meeting water quality standards required by the State of Utah. BLM cooperates with the Uintah Water Conservancy District concerning water quality of municipal watersheds. It is under a withdrawal to the Bureau of Reclamation. Map 3-28 shows the municipal watersheds.

The resource area has 15 water-power site withdrawals affecting approximately 93,900 acres along the Green River. Management is unaware of any proposed large-scale impoundment projects on the Green River within its boundaries. However, the Uintah Water Conservancy District is currently completing a feasibility study for a 7,000 acre-foot reservoir, tentatively identified as the "Sadler Reservoir", east of Vernal, which could affect public lands.

DMRA has many small springs, seeps, water developments. To date, the resource area has constructed 225 reservoirs, 19 water catchments, 85 developed springs and approximately 200 check dams. The most typical uses of water on public lands include wildlife and livestock watering, maintenance of fisheries and riparian habitat, and mineral development.

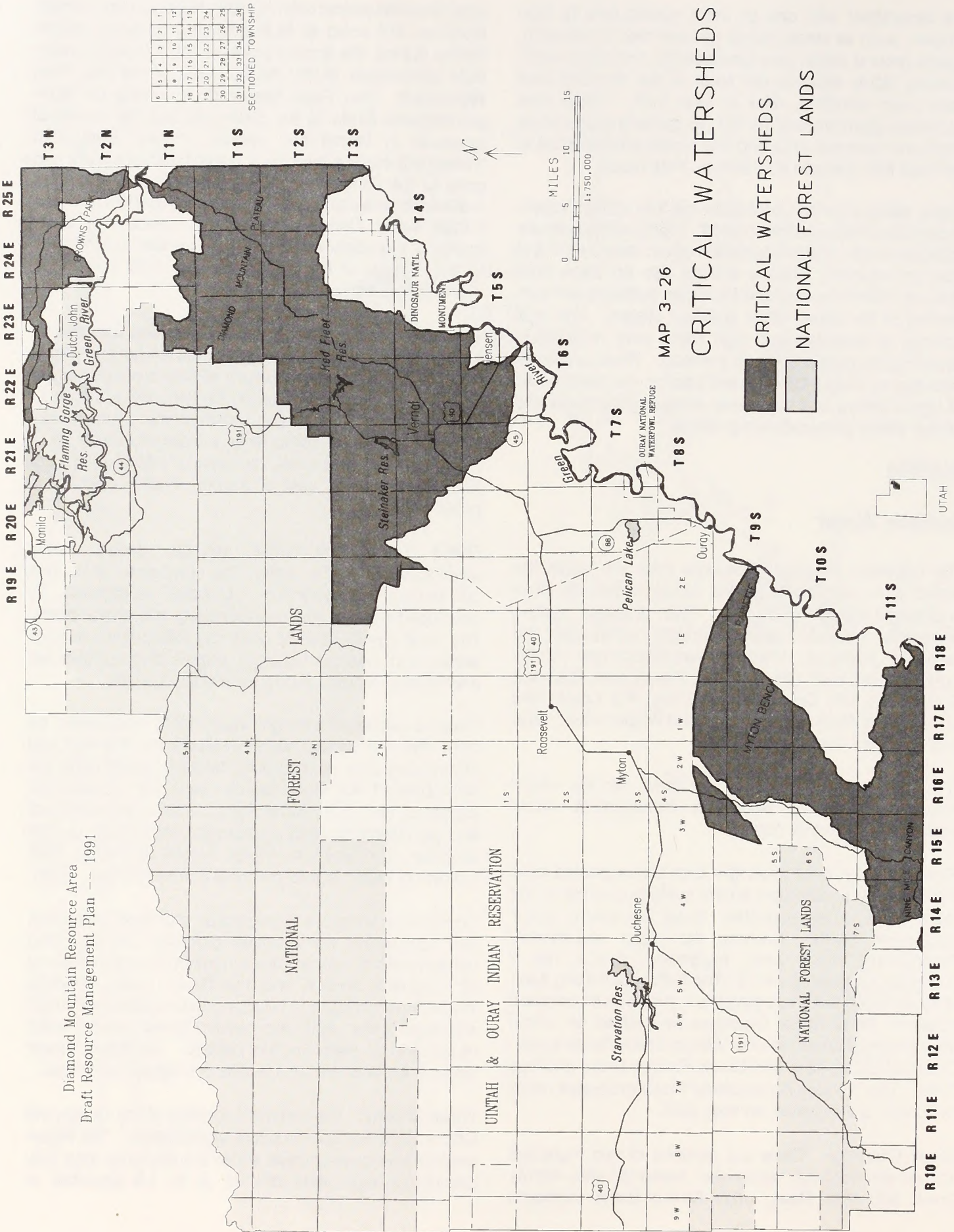
Water is allocated through water rights established by state law. All surface water available for irrigation and industry has been appropriated; however, water rights are still obtained for stock ponds less than 3 acre-foot capacity. Temporary water rights, usually used during oil and gas drilling operations and road construction, are still available (Ted Baldwin, Water Rights Specialist, Utah Division of Water Rights, personal communication, 1990).

Conflicts for water are expected as municipal, industrial, and agricultural consumptive demands increase and compete with nonconsumptive instream flow requirements of important streams and the Green River. Pariette Wetlands is managed to provide crucial waterfowl habitat; additional water rights are needed to secure the water necessary to maintain the habitat. Additional water sources for livestock and wildlife are always beneficial.

**Water Quality.** The sediment loading of the Green and Colorado Rivers is of national significance. The higher sediment-producing areas within the resource area may produce a high yield rate of .5 to 1.0 acre-foot of



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6	5	4	3	2	1
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36

SECTIONED TOWNSHIP

MAP 3-26

CRITICAL WATERSHEDS

- CRITICAL WATERSHEDS
- NATIONAL FOREST LANDS

R 10E R 11E R 12E R 13E R 14E R 15E R 16E R 17E R 18E

R 19E R 20E R 21E R 22E R 23E R 24E R 25E

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T 1S  
T 2S  
T 3S

T 4S

T 5S

T 6S

T 7S

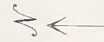
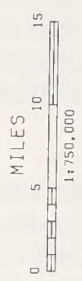
T 8S

T 9S

T 10S

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LANDS

FOREST

NATIONAL

UINTAH & OURAY INDIAN RESERVATION

NATIONAL FOREST LANDS

MYTON BENCH

NINE MILE CANYON

Starvation Res

Duchesne

Myton

Roosevelt

Pelican Lake

OURAY NATIONAL WATERFOWL REFUGE

DIAMOND MOUNTAIN PLATEAU

Red Fleet Res.

Steinaker Res.

DINOSAUR NAT'L MONUMENT

Vernal

Jensen

Green River

Ouray

Flaming Gorge Res

Dutch John Green River

Manila

Dutch John

Green River Park

43

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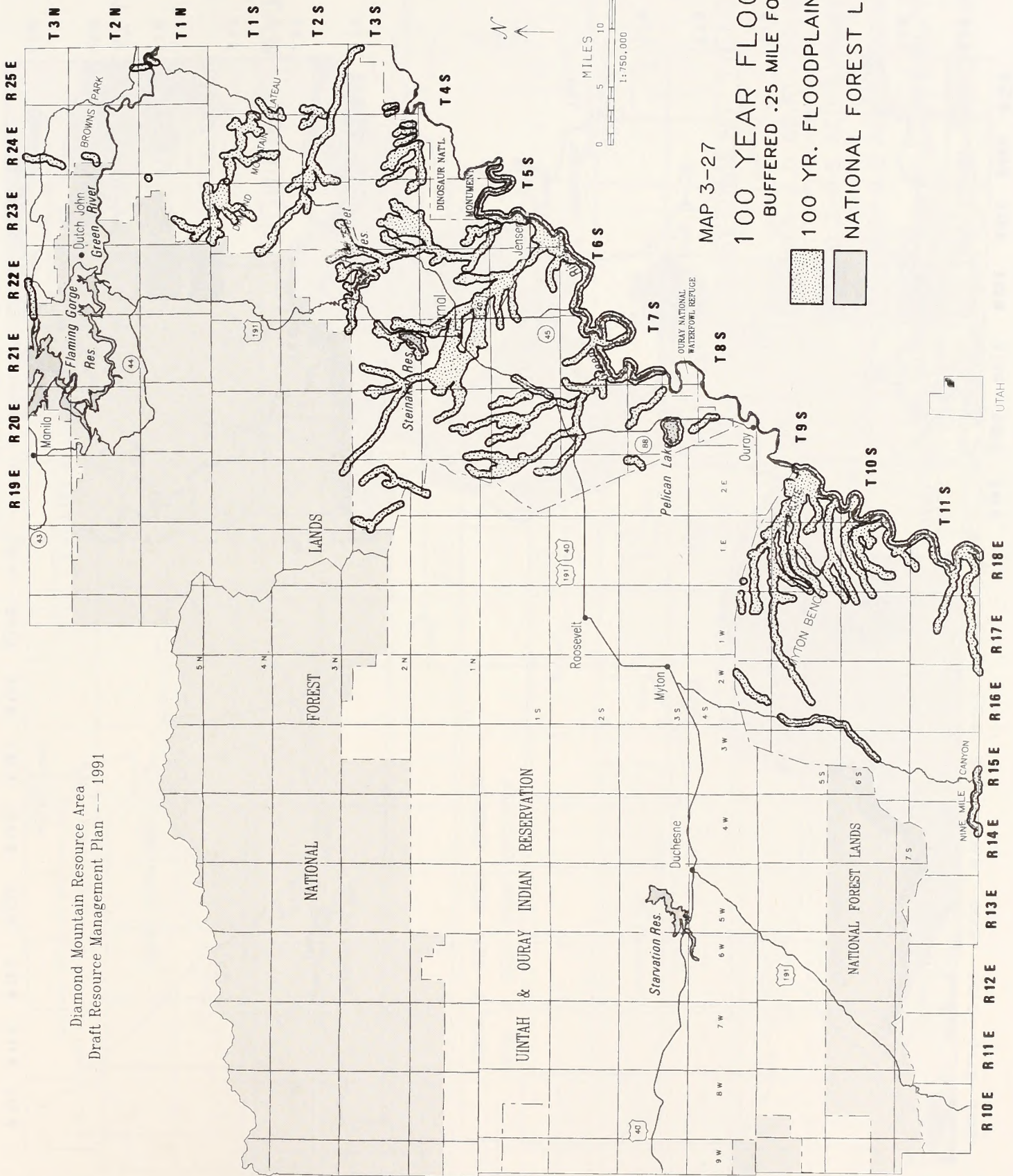
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6	5	4	3	2	1
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13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36

SECTIONED TOWNSHIP

MAP 3-27

100 YEAR FLOODPLAINS  
BUFFERED .25 MILE FOR EMPHASIS

-  100 YR. FLOODPLAINS
-  NATIONAL FOREST LANDS

R 10 E R 11 E R 12 E R 13 E R 14 E R 15 E R 16 E R 17 E R 18 E

R 19 E R 20 E R 21 E R 22 E R 23 E R 24 E R 25 E

T 3 N

T 2 N

T 1 N

T 1 S

T 2 S

T 3 S

T 4 S

T 5 S

T 6 S

T 7 S

T 8 S

T 9 S

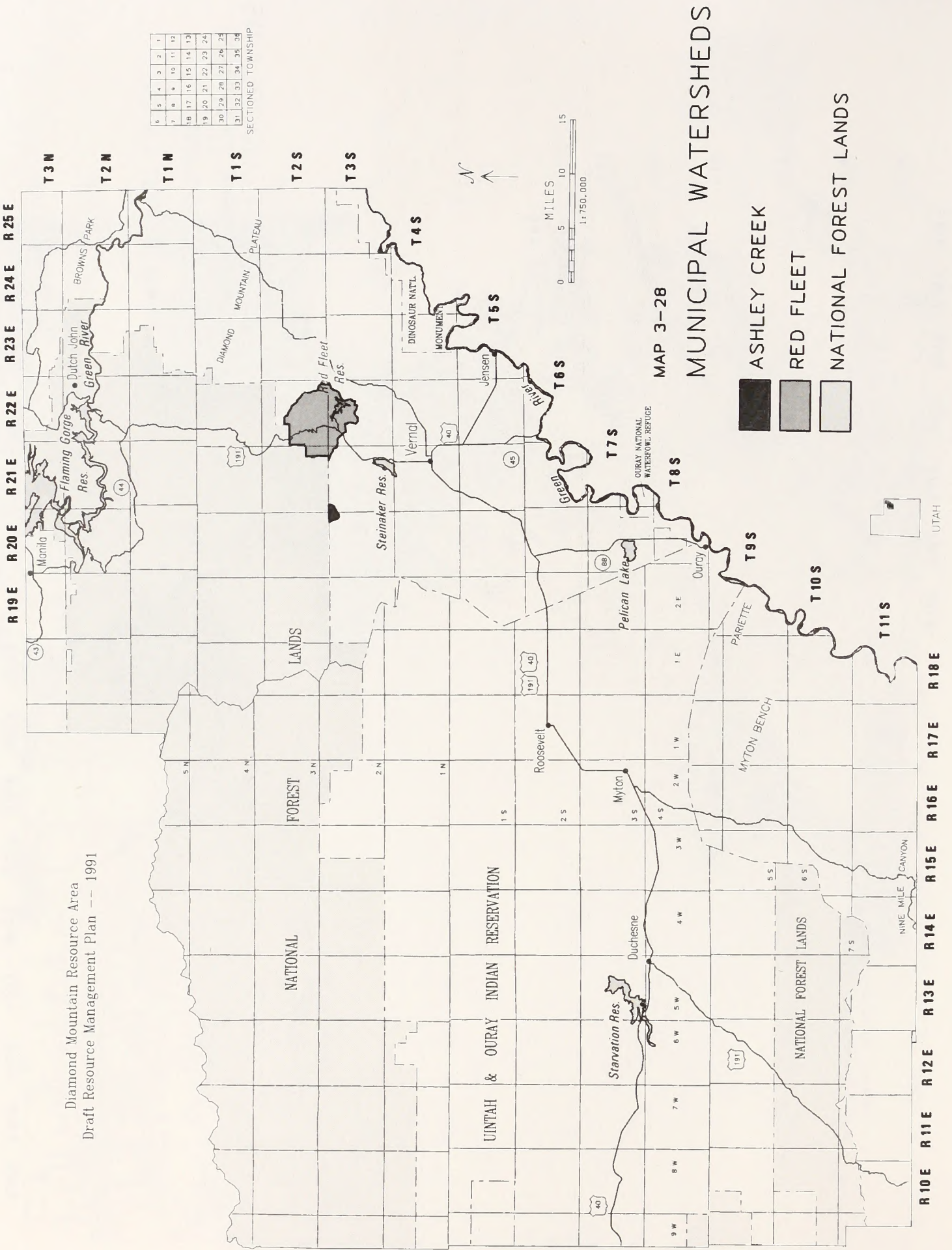
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6	5	4	3	2	1
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36

SECTIONED TOWNSHIP

MAP 3-28

MUNICIPAL WATERSHEDS

- ASHLEY CREEK
- RED FLEET
- NATIONAL FOREST LANDS

R 10 E R 11 E R 12 E R 13 E R 14 E R 15 E R 16 E R 17 E R 18 E

R 19 E R 20 E R 21 E R 22 E R 23 E R 24 E R 25 E

T 3 N

T 2 N

T 1 N

T 1 S

T 2 S

T 3 S

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T 6 S

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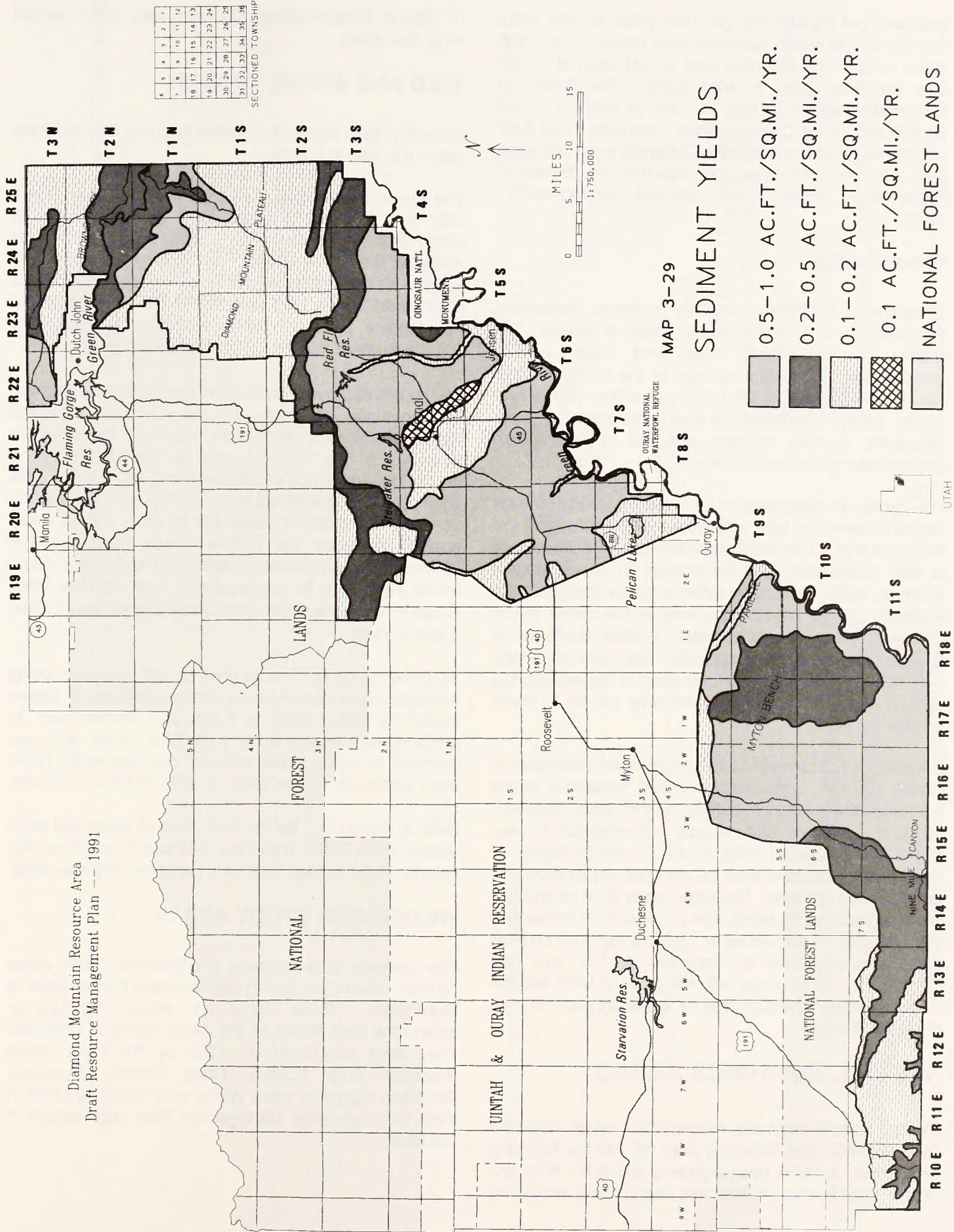
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Diamond Mountain Resource Area  
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6	5	4	3	2	1
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36

SECTIONED TOWNSHIP

MAP 3-29

SEDIMENT YIELDS

- 0.5-1.0 AC.FT./SQ.MI./YR.
- 0.2-0.5 AC.FT./SQ.MI./YR.
- 0.1-0.2 AC.FT./SQ.MI./YR.
- 0.1 AC.FT./SQ.MI./YR.
- NATIONAL FOREST LANDS

R 10E R 11E R 12E R 13E R 14E R 15E R 16E R 17E R 18E  
R 19E R 20E R 21E R 22E R 23E R 24E R 25E

T 3N  
T 2N  
T 1N  
T 1S  
T 2S  
T 3S

T 4S  
T 5S  
T 6S  
T 7S  
T 8S  
T 9S  
T 10S  
T 11S

0 5 10 15  
MILES  
1:750,000

UTAH



sediment per square mile per year (refer to Map 3-29). Salinity contributed by sediment from moderate and high saline soils in the resource area is estimated at 54,200 tons per year (refer to Map 3-25). The Bureau of Reclamation estimates that the cost of one ton of salt contributed to the Colorado River upstream, costs \$157 of reclamation at Imperial Dam, California, or an estimated \$8.5 million from this area alone (Reed Murray, Bureau of Reclamation, Provo, Utah, personal communication, 1990).

## Groundwater

Groundwater in DMRA is used for municipal, agriculture, industrial (mining), and livestock-wildlife purposes. The quality of recoverable fresh and slightly saline groundwater in transient storage in the northern Uinta Basin is estimated at 28 million acre-feet (Hood and Fields, 1978). Estimates are that unconsolidated rocks (alluvium), contain 190,000 acre-feet of recoverable groundwater (Price and Miller, 1975).

The quality of groundwater from the consolidated rock aquifers decreases with an increase in distance from the recharge area. This basinward decrease in water quality is also associated with the change in chemical type (Holmes, 1985). A zone of saline water extends from the Wasatch County line (on the west of the basin) to the Colorado line and approximately 9 miles northeast of Bluebell, Utah (west of Roosevelt). The saline zone may be shallower than 1,000 feet; however in the east-central portion of this zone, saline water may extend to much greater depths.

Sources of contamination to groundwater resources in DMRA include: agricultural sources, hazardous waste sources, mining activity sources, oil and gas exploration-production sources, and naturally occurring substances. In the Uinta Basin in 1989, about 7.3 million barrels of water were produced from oil and gas exploration and development activities. Produced water from oil and gas wells is disposed by reinjection or removal to nonfederal disposal pits. Produced water disposal methods on BLM lands are described in Appendix 4, "Oil and Gas Operations". BLM works with the State of Utah and the Environmental Protection Agency to identify such sources of contamination.

## SPECIAL EMPHASIS AREAS

Existing special emphasis management areas within the Diamond Mountain Resource Area fall into the following categories: suitable river segments within the Wild and Scenic River System; Wilderness Study Areas; and Areas

of Critical Environmental Concern and other special emphasis areas.

## WILD AND SCENIC RIVERS

Currently, there are no designated Wild and Scenic Rivers within the resource area.

The upper Green River flows between Flaming Gorge Dam and the Utah-Colorado state line, a distance of approximately 30 miles. In 1980, an interagency team analyzed the upper Green River and recommended it suitable for designation as a scenic river under the criteria established by the Wild and Scenic River Act (National Park Service, 1980). No further action has been taken by the Secretary of Interior on this recommendation.

The middle and lower Green River segments flow between the southern boundary of the Dinosaur National Monument near Jensen, Utah, down to the southern boundary of the resource area at the Uintah-Carbon county line, a distance of approximately 102 miles. These segments are determined to be eligible for further study under Wild and Scenic River Act criteria. A preliminary analysis suggests the middle Green River segment between Dinosaur National Monument and Ouray, Utah, meets the criteria for a recreational river, and the lower Green River segment between Ouray and the county line, a scenic river.

All three of these river segments are currently being managed under interim management standards for waters eligible for further study as a Wild and Scenic River. In addition, two segments of Nine Mile Creek and one segment of Argyle Creek possess qualities which make them eligible for further study as Wild and Scenic Rivers.

Refer to Appendix 7 for the evaluation of these and other waters within DMRA under the Wild and Scenic River Act criteria. Refer to Map 3-30 for a depiction of these areas.

## WILDERNESS STUDY AREAS

The resource area contains 2 Wilderness Study Areas (WSAs): West Cold Spring and Diamond Breaks (refer to Map 3-30). These areas are natural topographic extensions from WSAs of the same name in Colorado. They were inventoried in 1980 by the Little Snake Resource Area (LSRA), Craig District, Colorado. Decisions regarding these WSAs were made by LSRA in their 1989 Resource Management Plan and Record of Decision:

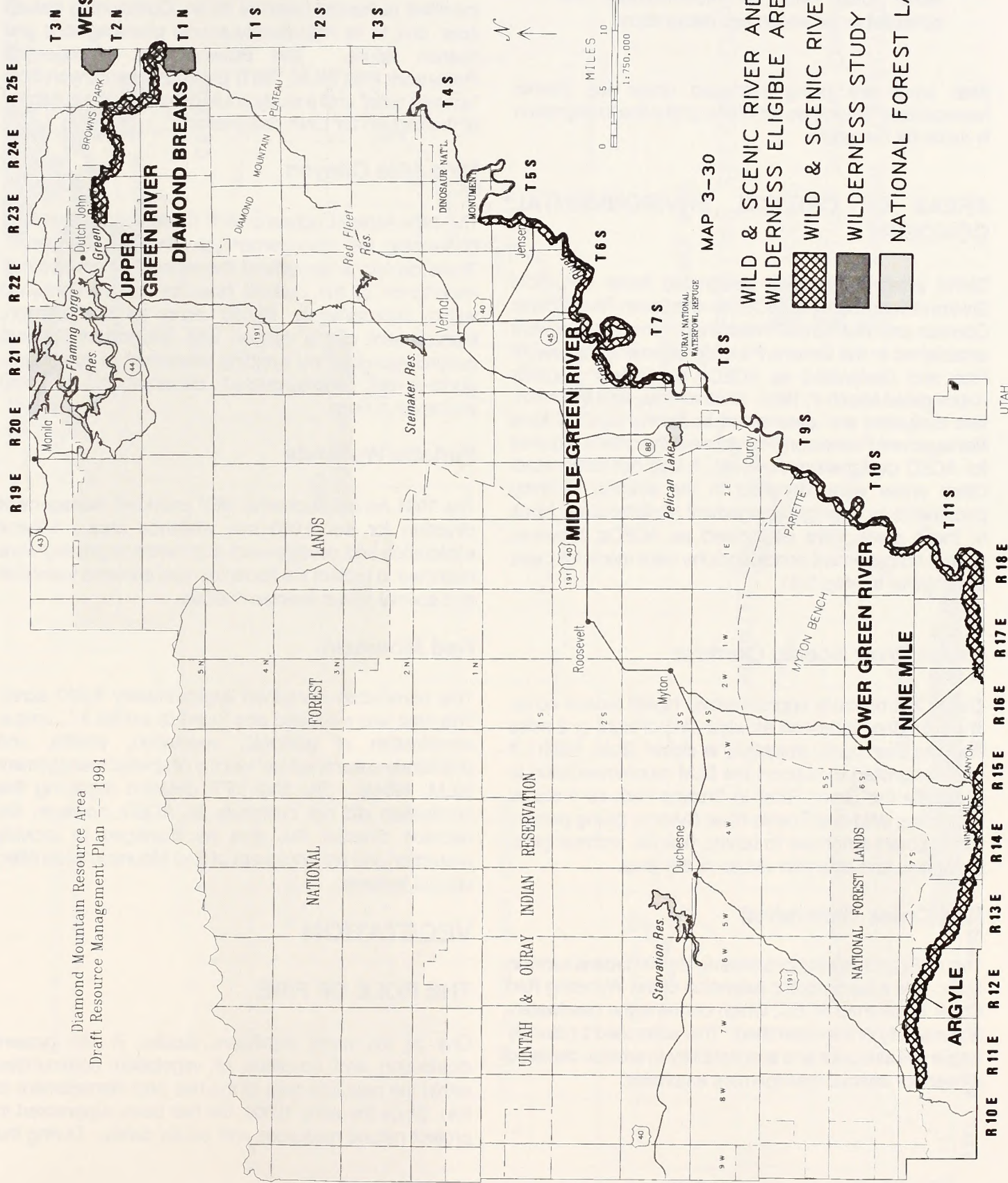


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WEST COLD SPRINGS

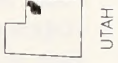
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25	26	27	28	29	30
31	32	33	34	35	36

SECTIONED TOWNSHIP



MAP 3-30

-  WILD & SCENIC RIVER AND WILDERNESS ELIGIBLE AREAS
-  WILDERNESS STUDY AREAS
-  NATIONAL FOREST LANDS



UTAH



Diamond Breaks WSA (3,940 federal acres within Utah) will be recommended as suitable for wilderness designation.

West Cold Spring WSA (3,300 federal acres within Utah) will be recommended as nonsuitable for wilderness designation.

Both areas are being managed under the Interim Management Guidelines for WSAs until a final designation is made by Congress.

## **AREAS OF CRITICAL ENVIRONMENTAL CONCERN**

DMRA presently has two designated Areas of Critical Environmental Concern (ACECs)--the Green River Scenic Corridor and Red Creek Watershed. These areas were established in the Browns Park Management Framework Plan and designated as ACECs by *Federal Register* notice dated March 7, 1984. Another area, Red Mountain, was evaluated and determined in the Ashley-Duchesne Management Framework Plan to meet the criteria required for ACEC designation; however, it was not designated. Other areas were identified in the existing planning documents for special management consideration. None of these areas were designated as ACECs; however, special management considerations were made for these areas (refer to Map 3-31).

### **Green River Scenic Corridor**

This ACEC contains approximately 19,400 federal acres. The boundary is defined as within line-of-sight or 2 miles from the river bank, whichever is closer (BLM, 1984). It was designated to support the BLM recommendation to designate the Green River in Browns Park as a scenic river in the Wild and Scenic River System, giving primary management emphasis to scenic, historic, archeological, biological, and scientific values of the area.

### **Red Creek Watershed**

This ACEC contains approximately 24,400 federal acres in Utah. It is a topographic extension of the Wyoming Red Creek Watershed ACEC, which contains the headwaters and majority of the watershed. This watershed's naturally fragile soil structure and susceptibility to erosion declared a need for special management emphasis.

## **OTHER SPECIAL EMPHASIS AREAS**

### **Crouse Canyon**

This 600-acre canyon on Diamond Mountain was identified as having potential as an "Outstanding Natural Area" due to its high quality scenic characteristics and riparian values. The Browns Park Management Framework Plan (BLM, 1981) protected the canyon from "adverse uses" until a study could determine the suitability of the canyon for ONA designation.

### **Nine Mile Canyon**

The 1984 Ashley-Duchesne MFP made several decisions concerning the management of Nine Mile Canyon. These decisions recognized the regional, if not national, importance of the cultural resource values contained within approximately 48,000 acres of the canyon. Management of the canyon was designed to protect cultural resources by avoiding placement of new roads, rights-of-way, energy-related development, or land exchange actions.

### **Pariette Wetlands**

The 1984 Ashley-Duchesne MFP provided management direction for the 9,000-acre wetlands area. Mineral exploration and development and livestock grazing were restricted to protect the floodplain and enhance waterfowl and special status species habitats.

### **Red Mountain**

This nomination contained approximately 8,500 acres. This area was evaluated and found to exhibit a "...unique combination of geologic, vegetation, wildlife, and prehistoric cultural values" worthy of special management (BLM, 1984a). The final MFP decision regarding this nomination did not designate an ACEC; however, the decision directed the area be managed to provide protection and enhancement of Red Mountain's identified special features.

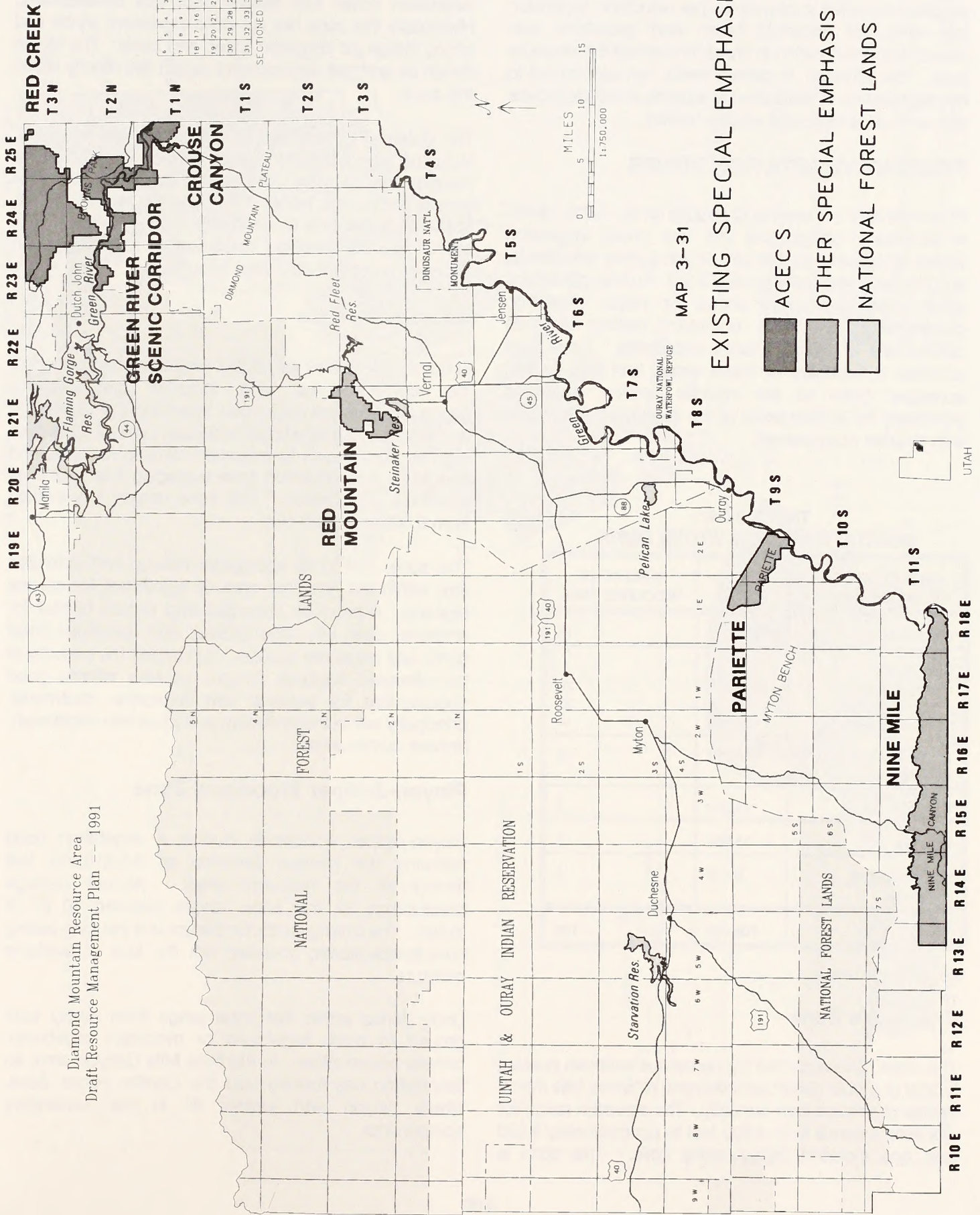
## **VEGETATION**

### **THE ROLE OF FIRE**

One of the most significant factors in the present distribution and condition of vegetation communities within the resource area is the use and management of fire. Since the early 1900s, fire has been suppressed to protect natural resources and public safety. During the



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6	5	4	3	2	1
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25	26	27	28	29	30
31	32	33	34	35	36

SECTIONED TOWNSHIP

MAP 3-31

EXISTING SPECIAL EMPHASIS AREAS

- ACECS
- OTHER SPECIAL EMPHASIS AREAS
- NATIONAL FOREST LANDS

UTAH



period 1980-1990, the resource area annually averaged 13 wildfires with an average size of 76 acres, due primarily to aggressive suppression strategies. Full suppression practices have led to pinyon-juniper woodland expansion into areas of historical brush and grassland, and sagebrush deterioration in areas throughout the resource area. This situation, in certain areas, has contributed to the degradation of watershed resources and lessened the size and value of crucial wildlife habitat.

## PRESENT VEGETATION ZONES

Patterned after the work of Cronquist (et al., 1972), DMRA is floristically categorized into four broad vegetation zones: shadscale, sagebrush, pinyon-juniper woodlands, and conifer forest (refer to Map 3-32). Further gradations within these ecological zones, or major vegetation communities, are quite common, making absolute delineations of specific zones impossible. Table 3-24 provides a summary of these zones and their federal acreages (refer to the riparian section discussed previously for a discussion of the vegetation associated with riparian ecosystems).

**TABLE 3-24:  
VEGETATION ZONES WITHIN DMRA**

VEGETATION ZONE: MAJOR COMMUNITY	FEDERAL ACRES	PERCENT OF RESOURCE AREA
Shadscale	130,000	18
Sagebrush:		
Black Sage	144,200	20
Wyoming Sage	160,750	23
Mountain Sage	103,500	14
Pinyon-Juniper Woodlands	110,500	16
Conifer Forest	25,300	4
Riparian	15,650	2
Badlands/Rock Outcrop	9,100	3
Total	709,000	100

Source: DMRA files

### Shadscale Zone

This zone, characterized by numerous saltbush species typical of a cold desert environment, receives less than 8 inches of precipitation annually. The elevation range for this zone extends from 4,800 feet to approximately 6,000 feet, and includes highly saline soils. This zone is

significant as it provides important winter and early spring habitat for antelope. It demands management of watershed and water quality values due to the lack of vegetation cover and overall poor soil development. Historically this zone has provided significant winter and spring forage for domestic sheep and cattle. The Myton Bench oil and gas development region lies mostly within this zone.

The potential for success of any vegetation treatment, including revegetation following surface disturbance, is marginal for this zone. The limiting factors are poor soil development and a harsh, desert climatic regime. Small, scattered inclusions of deep and well developed soils afford a site-specific opportunity for vegetation improvement or rehabilitation success.

### Sagebrush Zone

This zone comprises the largest vegetation component of the resource area, and includes the following communities: black sagebrush, Wyoming big sagebrush, and mountain big sagebrush-mountain browse. This zone extends from desert to mountain climatic regimes, and falls within a precipitation zone averaging 8 to 20 inches of annual precipitation. This zone ranges in elevation from 5,000 to 10,000 feet.

This zone, due to its ecological makeup and extensive size within the resource area, is significant for several reasons. It provides important and crucial habitat for antelope, deer, elk, sage grouse, and numerous small game and nongame species. It provides the majority of the allocated livestock forage. It also affords good opportunities for success with vegetation treatments, principally within the Wyoming and mountain sagebrush-browse communities.

### Pinyon-Juniper Woodland Zone

Pinyon-juniper woodlands outline a vegetation band following the general elevation of 6,000-8,000 feet throughout the resource area. Annual average precipitation for this zone ranges between 10 to 14 inches. The limiting factor for this zone is the long-lasting cold temperatures; however, not the lack of available moisture.

Understories within this zone range from nearly bare ground to black sagebrush or mountain sagebrush-browse communities. In the Nine Mile Canyon area, an association has formed with the Conifer Forest Zone, where pinyon and juniper fill in the understory components.



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6	5	4	3	2	1
7	6	5	4	3	2
8	7	6	5	4	3
9	8	7	6	5	4
10	9	8	7	6	5
11	10	9	8	7	6
12	11	10	9	8	7
13	12	11	10	9	8
14	13	12	11	10	9
15	14	13	12	11	10
16	15	14	13	12	11
17	16	15	14	13	12
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33	32	31	30	29	28
34	33	32	31	30	29
35	34	33	32	31	30
36	35	34	33	32	31

SECTIONED TOWNSHIP

MAP 3-32

VEGETATION ZONES

- SHADSCALE ZONE
- SAGEBRUSH ZONE
- CONIFER FOREST ZONE
- PINYON-JUNIPER WOODLAND ZONE
- NATIONAL FOREST LANDS

R 10E R 11E R 12E R 13E R 14E R 15E R 16E R 17E R 18E

T 10S T 11S T 12S T 13S

T 11N T 12N T 13N

T 4S T 5S T 6S T 7S T 8S T 9S T 10S T 11S

R 19E R 20E R 21E R 22E R 23E R 24E R 25E

Starvation Res. Duchesne Roosevelt Mylon Pelican Lake Ouray

OURAY NATIONAL WATERFOWL REFUGE

DINOSAUR NATTL. MONUMENT

Flaming Gorge Res. Dutch John River Green River

Monito

UTAH

191 40

5 N 4 N 3 N 2 N 1 N

1 S 2 S 3 S 4 S 5 S 6 S 7 S

8 W 7 W 6 W 5 W 4 W 3 W 2 W 1 W

1 E 2 E

NATIONAL FOREST LANDS

NATIONAL FOREST LANDS

NATIONAL FOREST LANDS

NATIONAL FOREST LANDS

NATIONAL FOREST LANDS

NATIONAL FOREST LANDS

NATIONAL FOREST LANDS



This zone provides a broad range of important resource management challenges. On woodland sites lacking an adequate understory, potential soil erosion hazards are a major concern. Sites having a more open vegetation pattern, allowing for sagebrush openings and other understory development, provide important habitat for big game species and livestock. Archeological artifacts occur more frequently in or at the edges of this zone than any other (West, 1989). This zone also provides a historic source of firewood and fence post materials for the residents of the area.

The potential for vegetation treatment success within this zone, depends primarily on the microenvironment associated with a specific project area. Irregular-sized prescribed burns, averaging approximately 150 acres per year per project, have increased vegetation diversity and productivity and improved overall community vigor.

### **Conifer Forest Zone**

This zone includes the vegetation communities occurring at 7,500 -10,500 feet, the highest elevations within the resource area. It is restricted to generally steep slopes, cooler temperatures and the moister microclimates. The zone is scattered on favorable sites within the Three Corners Mountains, Diamond Mountain, and West Tavaputs Plateau in the Nine Mile Canyon area.

Aspen, ponderosa (western yellow) pine, Douglas fir-subalpine fir and fir-spruce communities are included in this zone. Generally these communities do not occur in sufficient abundance to be commercially valuable. They do provide a vital watershed service by functioning as natural snow fences and slowing spring snowmelt to an even, less damaging flow (West, 1989).

Elk and deer use these communities for shade and cover during the summer. The more open ponderosa "parks" contain an understory providing a variety of forage and cover for these big game species, as well as a variety of small game and nongame species. Domestic cattle also use these communities for summer shade and grazing. However, the steep slopes, associated especially with the mixed conifer community in the Nine Mile Canyon area, restrict cattle movement to the narrow drainage floors. The small, scattered locations of this zone, coupled with poor soil development, are the main constraints to any vegetation treatment.

### **Badlands**

Filling in the gaps in this vegetation picture are scattered inclusions known as "badlands" and outcrops of bedrock. these areas are not completely devoid of vegetation;

however, they are mostly considered unproductive. Typical areas include the very steep slopes of the Badland Cliffs between Gate Canyon and the Green River. These areas are not considered suitable for vegetation treatment.

## **SPECIAL VEGETATION PROGRAMS**

### **Undesired Plant Species**

Within these broad vegetation zones, specific microclimate circumstances create conditions favorable for either undesired plant species or special status plant species.

Usually, areas dominated by undesired plant species are directly associated with surface-disturbing activities, where vegetation has been totally or significantly removed, or areas where the seed source is so prevalent as to out-compete the existing vegetation. An example of this latter situation is the pervasive presence of whitetop along the Green River. In certain areas, this situation has prevented the riparian species vegetation community from reaching its desired native composition . The resource area has identified approximately 850 public acres needing treatment (BLM, 1988a). Table 3-25 provides a list of undesired plant species within the resource area.

Native poisonous plants are common throughout the rangelands of the resource area generally in insufficient concentrations to pose a significant threat to humans or livestock. An exception is halogeton, a poisonous introduced species generally not treated due to the nearly unlimited seed source.

### **Special Status Plant Species**

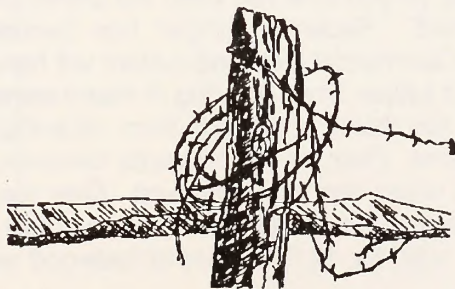
As of July 1990, DMRA has 20 federal special status plant species. There are no plant species listed by the State of Utah as threatened, endangered, or sensitive within the resource area. These species can be considered rare from a population perspective (low total numbers) and/or habitat perspective (extremely restricted habitat). Table 3-26 provides a summary of these species and their current status.



**TABLE 3-25:  
UNDESIRABLE PLANT SPECIES  
OCCURRING WITHIN DMRA**

COMMON NAME	SCIENTIFIC NAME	COMMENTS
Tall or giant whitetop	<i>Lepidium latifolium</i>	State noxious
Whitetop	<i>Cardaria draba</i>	State noxious
Black henbane	<i>Hyoscyamus niger</i>	State noxious
Silverleaf nightshade	<i>Solanum elaeagnifolium</i>	State noxious
Quackgrass	<i>Agropyron repens</i>	State noxious
Field bindweed or morning glory	<i>Convolvulus arvenses</i>	State noxious
Leafy spurge	<i>Euphorbia esula</i>	State noxious
Russian knapweed	<i>Centaurea repens</i>	State noxious
Spotted knapweed	<i>C. maculosa</i>	State noxious
Squarrose knapweed	<i>C. squarrosa</i>	State noxious
Diffuse knapweed	<i>C. diffusa</i>	State noxious
Yellow star thistle	<i>Centaurea solstitialis</i>	State noxious
Musk thistle	<i>Carduus nutans</i>	State noxious
Scotch thistle	<i>Onopordium acanthium</i>	State noxious
Bullthistle	<i>Cirsium vulgare</i>	Non-palatable
Toadflax	<i>Linaria spp.</i>	Non-palatable
Buffalo-burr	<i>Solanum rostratum</i>	Non-palatable
Common cocklebur	<i>Xanthium strumarium</i>	Non-palatable
Common crupina	<i>Crupina vulgaris</i>	Non-palatable
Poverty weed	<i>Iva axillaris</i>	Non-palatable
Whorled or poison milkweed	<i>Asclepias subverticillata</i>	Poisonous
Low larkspur	<i>Delphinium nuttallianum</i>	Poisonous

Source: BLM, 1988a



**TABLE 3-26:  
SPECIAL STATUS PLANT SPECIES OCCURRING  
OR HAVING POTENTIAL WITHIN DMRA**

COMMON NAME	SCIENTIFIC NAME	STATUS	ACRE-AGE
Park Rock Cress	<i>Arabis vivariensis</i>	3C	Unk.
Horseshoe Bend milkvetch	<i>Astragalus equisolensis</i>	1C	13
Hamilton milkvetch	<i>A. hamiltonii</i>	1C	200
Owenby's thistle	<i>Cirsium owenbyi</i>	2C	90
Unterman's fleabane	<i>Erigeron untermanni</i>	2C	20
Toadflax cress	<i>Glaucoarpum suffrutescens</i>	E <sup>1</sup>	1,120
Orchard snakeweed	<i>Gutierrezia pomariensis</i>	3C	Unk.
Barneby's pepper cress or ridge cress	<i>Lepidium barnebyanum</i>	E <sup>4</sup>	Unk.
Acute-leaf evening primrose	<i>Oenothera acutissima</i>	3C	630
Low beardtongue	<i>Penstemon acaulis v. acaulis</i>	3C	Unk.
Yampa beardtongue	<i>P. acaulis v. yampaensis</i>	3C	Unk.
Flowers penstemon	<i>P. flowersii</i>	2C	Unk.
Gibbens beardtongue	<i>P. gibbensii</i>	2C	Unk.
Goodrich's beardtongue	<i>P. goodrichii</i>	2C	Unk.
Graham's beardtongue	<i>P. grahamii</i>	1C	Unk.
Plateau penstemon	<i>P. scarlosus v. garetii</i>	3C	Unk.
Clay reed-mustard	<i>Schoenocrombe argillacea</i>	PE <sup>5</sup>	Unk.
Uinta Basin hookless cactus	<i>Sclerocactus glaucus</i>	T <sup>3</sup>	45,950
Ute ladies' tresses	<i>Spiranthes diluvialis</i>	PT <sup>2</sup>	20

E=Endangered; T=Threatened; PE=Proposed for listing as endangered; PT=Proposed for listing as threatened; 1C, 2C, 3C=Special status category. See glossary for definition of these terms and their significance.

1/ 52 FR 37420; dated October 6, 1987  
 2/ 55 FR 47347; dated November 13, 1990  
 3/ 44 FR 58870; dated October 11, 1979  
 4/ 55 FR 39860; dated September 28, 1990  
 5/ 56 FR 14910; dated April 12, 1991

Source: USF&WS, 1979, 1985, 1990

## ECOLOGICAL CONDITION

Ecological conditions for the vegetation resource have been categorized into four broad ecological stages (seral stages), relating current vegetation compositions to a standardized ecological site description of the climax community's composition. For example, if less than 25 percent of the theorized climax community was present, then an ecological rating of "early seral" was assigned; if between 26-50 percent, then a "mid-seral" stage was assigned, etc. Public lands (e.g., badlands) not falling into one of these ecological stages, or where inventory data is lacking, were included in the "undetermined" category. Table 3-27 provides a summary of the present ecological condition for the vegetation resource on public lands within the resource area. (Refer to Appendix 8 for



a breakdown of ecological condition by grazing allotment.)

**TABLE 3-27:  
ESTIMATED ECOLOGICAL CONDITION BY  
VEGETATION ZONE AND COMMUNITY**

ZONE/ COMMUNITY	SERAL STAGE (% FEDERAL SURFACE ACRES)				UNDETER- MINED
	EARLY	MID	LATE	CLIMAX	
Shadscale Zone	7	71	20	0	2
Sagebrush Zone:					
Black Sagebrush	4	67	28	0	1
W. Big sagebrush	5	69	23	1	2
M. Big sagebrush	3	49	43	2	3
Pinyon-Juniper Zone	6	68	20	1	0
Montane Zone:					
Aspen	0	65	35	0	0
Mlxed Conifer	1	56	37	4	0
Wetlands/Riparian	25	54	21	0	0
Badlands	1	18	2	0	79

Source: DMRA files

## VISUAL RESOURCE MANAGEMENT

Classifying visual resources requires three determinations: scenic quality, visual sensitivity, and distance from an identified observation point. VRM classes are the result of combining these identified values into four visual categories usable as the basis for visual input into management decisions. Table 3-28 and Map 3-33 summarize and depict VRM information for the resource area.

**TABLE 3-28:  
VISUAL RESOURCE  
MANAGEMENT CLASSES**

CLASS	ACRES	% OF RESOURCE AREA
Class I	0	9
Class II	60,000	9
Class III	137,000	19
Class IV	512,000	72
Total	709,000	100

Source: DMRA files

Class I areas are the most sensitive to change (i.e., wilderness areas, natural areas); areas where

management activities need the most restrictions. There are not Class I areas within the resource area.

Class II areas include areas where change in form, line, color or texture may be allowed but should not attract the viewer's attention. The Green River Scenic Corridor, areas near Red Mountain and Dry Fork, Jones Hole, and Nine Mile Canyon are Class II areas. Management activities would be allowed, but designed to minimize visual intrusion.

## WOODLANDS

Forest products within DMRA consist primarily of pinyon and juniper woodland species. Some areas on Diamond Mountain and in the drainages into Argyle and Nine Mile Canyons support other forest species such as Douglas fir, ponderosa (western yellow) pine, and aspen (refer to Map 3-34). Cottonwood is relegated to the area's perennial streams and the Green River.

Pinyon and juniper species cover approximately 183,000 public acres (this figure differs from that presented in Table 3-24 because of the large amount of scattered pinyon and juniper trees which are harvestable, but are not included in the pinyon-juniper vegetation zone). They exist in sufficient concentrations (>350 cubic feet per acre) to be of significance to the woodland program. Of this total, 78,000 acres are of commercial value (>700 cu. ft./ac.) and capable of being managed on a sustained yield basis. This amounts to an average annual production of 8,500 cords of wood each year. However, the average allowable firewood cut would be substantially less than this amount because of restrictions placed on woodland sales by other resources. The remaining 105,000 acres are harvestable for woodland products such as fuelwood and fence posts. They are not productive enough to manage for sustained yield. Harvesting could prevent their return to a woodland site. Other forest species cover 84,000 acres. None are of commercial value and should only be managed to protect the health and vigor of the species.

## FUELWOOD

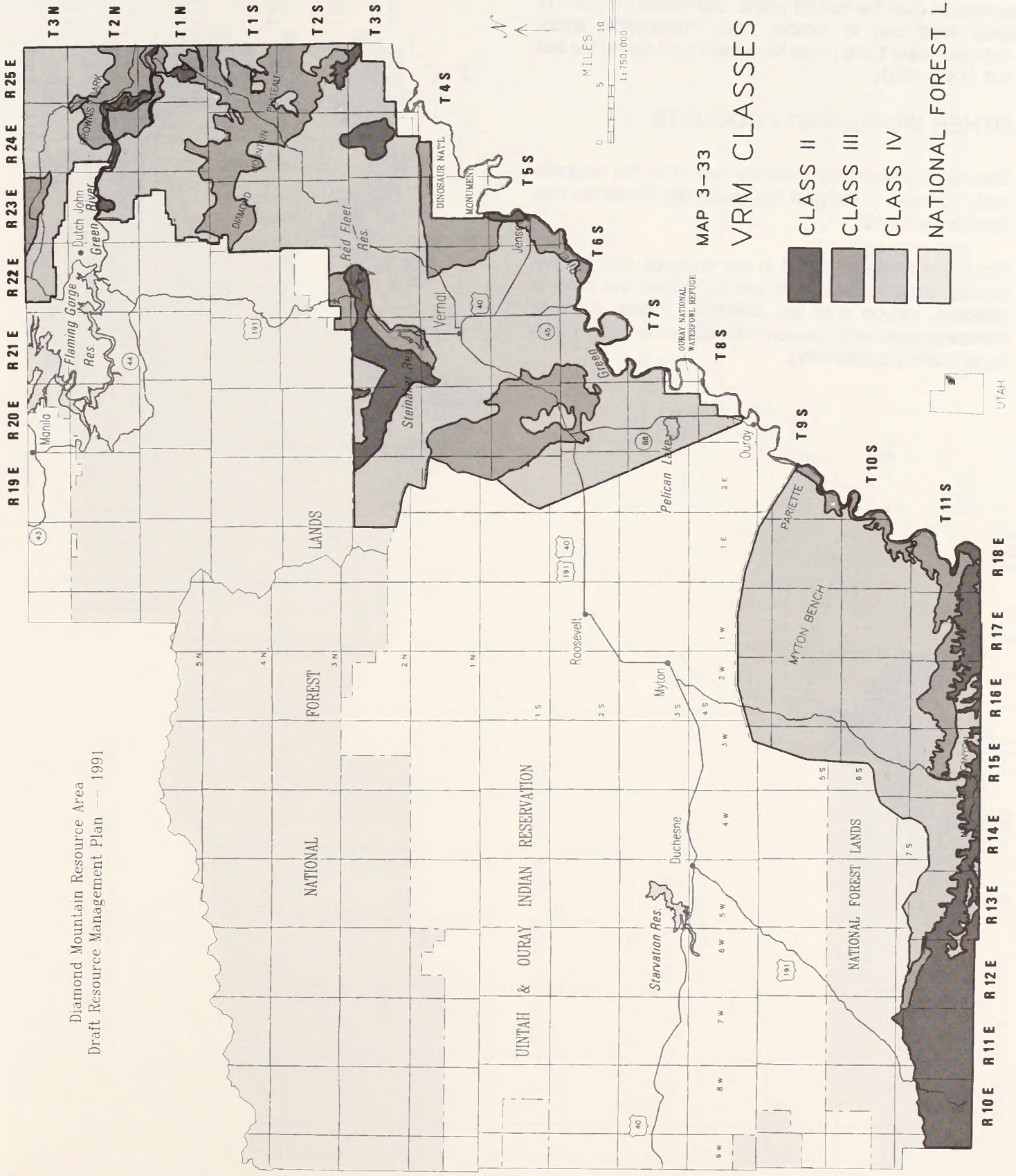
Historically, pinyon pine has been the preferred species for fuelwood. Recently, juniper has become more popular. Commercial fuelwood cutters will harvest both pinyon and juniper when growing in mixed stands. Most fuelwood has been harvested from chainings in the resource area. Over the last 25 years; however, most of the usable wood has been removed. Over the last five years, greenwood cutting has become popular. During the period 1985-89, 12,750 cords of fuelwood were sold.



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6	5	4	3	2	1
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36

SECTIONED TOWNSHIP





## **FENCE POSTS**

Trees suitable as fence posts are found on the more productive pinyon-juniper sites where soils are deep and well-drained. Locating them is difficult because of extraction over the last 60 years. Significant numbers of posts exist only in remote, often inaccessible areas. Approximately 1,300 posts have been sold during the last half of the 1980s.

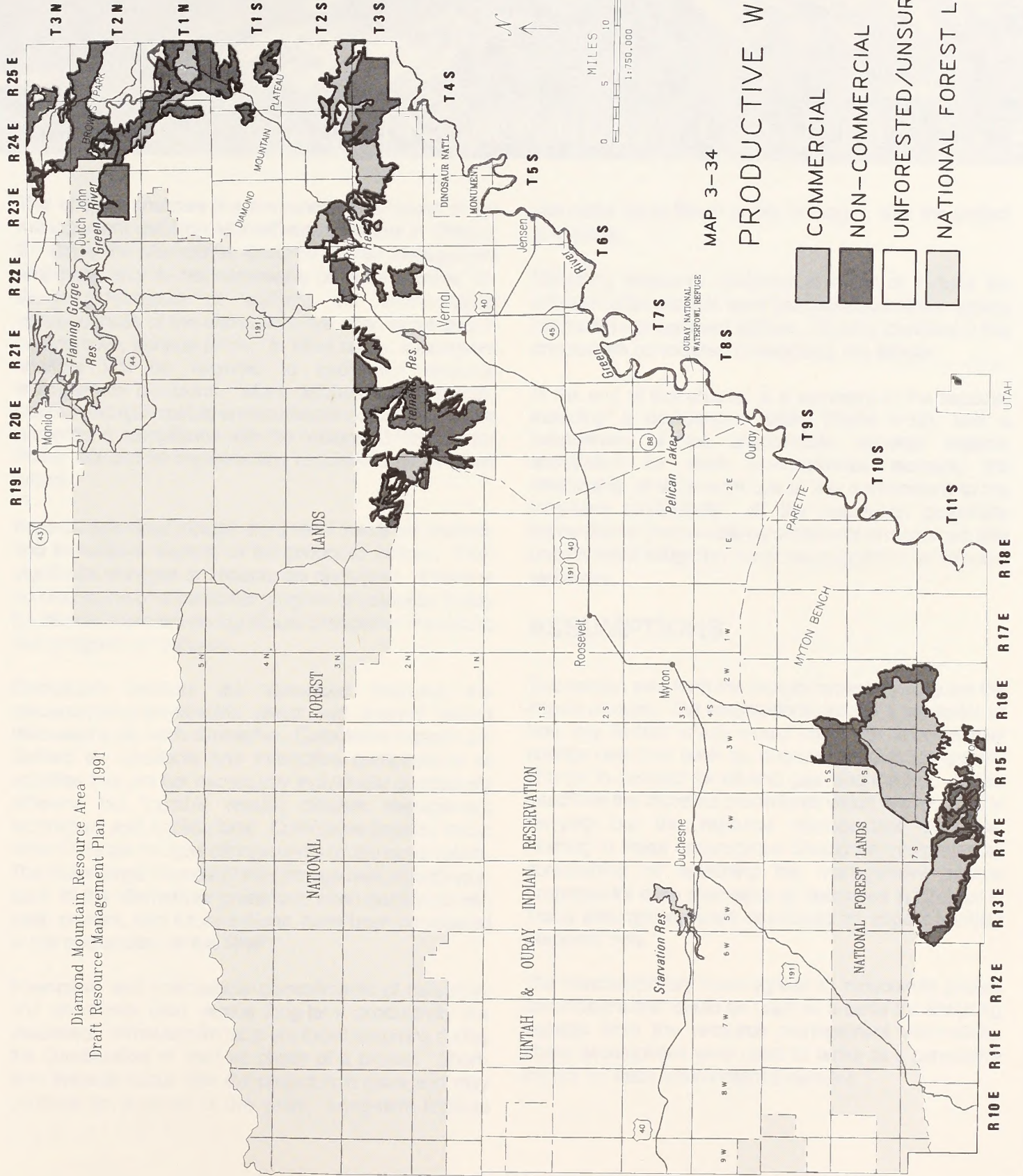
## **OTHER WOODLAND PRODUCTS**

Good quality Christmas trees are rare within the resource area; however, in the past five years, 560 Christmas tree permits were sold.

There is a limited demand in the resource area for live cactus, shrubs, trees, and seeds. When the crop is sufficient, pinyon nuts are collected. Some grass or browse species seed are commercially harvested if a crop is particularly outstanding.



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6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

MAP 3-34

PRODUCTIVE WOODLANDS

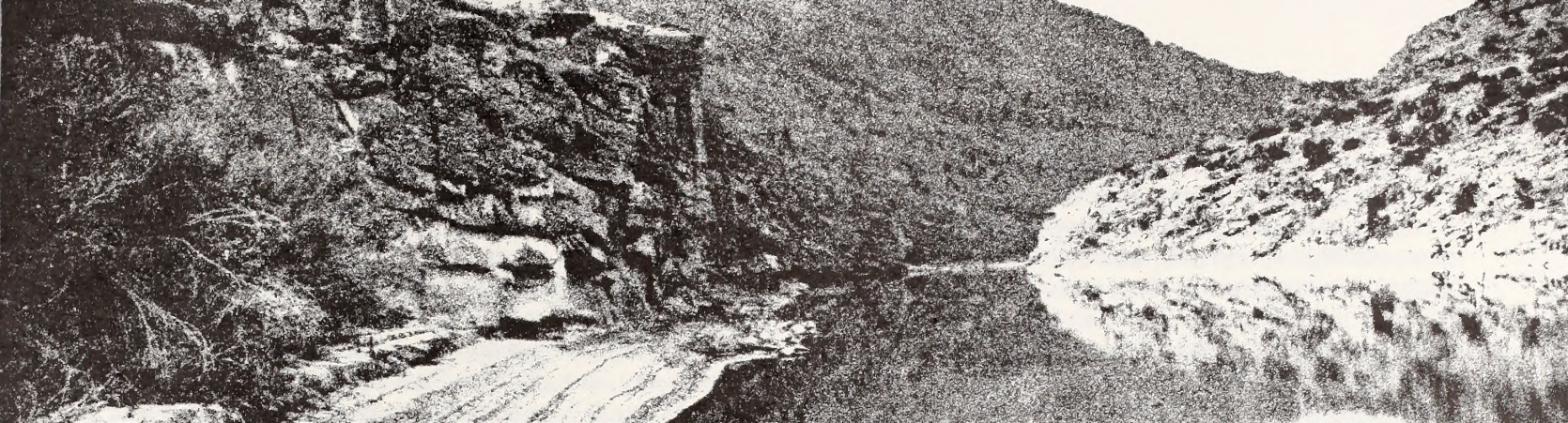
- COMMERCIAL
- NON-COMMERCIAL
- UNFORESTED/UNSURVEYED AREAS
- NATIONAL FOREST LANDS

UTAH









## ENVIRONMENTAL CONSEQUENCES 4

This chapter analyzes the environmental impacts of the management decision alternatives presented in Chapter 2. Since the alternatives describe overall management emphasis, and do not necessarily propose specific, on-the-ground-projects or actions, the environmental consequences of the alternatives are often expressed in comparative, general terms. In most cases, subsequent analysis will be required to implement resource management decisions. More detailed or site-specific studies and appropriate environmental documents will be prepared in compliance with the National Environmental Policy Act and its implementing regulations as the need arises.

Impacts described include analysis of the direct, indirect, and cumulative impacts of the proposed actions. Only significant changes or impacts are discussed. If there is no discussion on a particular program or resource, it may be inferred there are no significant changes or impacts to that program or resource.

Cumulative impacts are described following the resource/program-specific direct and indirect impact discussions for each alternative. Cumulative impacts are defined as additional and interactive combinations of activities that are not necessarily individually qualitatively different, but together require different management techniques and applications. Cumulative impacts occur when there are multiple infringements on the same values. The incremental impacts of the management objectives in each of the alternatives presented, when combined with past, present, and future actions, have been considered in the preparation of this RMP.

Irreversible and irretrievable commitments of resources and short-term uses versus long-term productivity are described. Immediate impacts are those occurring during the construction or start-up phase of a project. Short-term impacts occur after the project is in place and may continue for a period of five years. Long-term impacts

can occur up to fifteen years, or longer, after the project is in place.

Mitigating measures designed to avoid or reduce the environmental impacts were incorporated into the various alternative management actions. Impacts identified in this chapter are considered unavoidable net effects.

At the end of this chapter is a summary of the impacts, including a comparative table (Table 4-18), and a restatement of the unavoidable, adverse impacts anticipated for each environmental element, the relationship of short-term use of the environment to the long-term productivity of the resources, potentially irreversible or irretrievable commitments of resources, and uncommitted mitigation measures suggested for affected resources.

### ASSUMPTIONS

This section sets forth the factors necessary to guide the impact analysis. The assumptions provide a prediction of how key factors which would effect the impacts may change over time such as, projected population growth, change in demand for oil and gas, and the like. It also describes the standard procedures which are required in carrying out the resource management decisions. Nothing in these assumptions should be interpreted as constraining or redefining the management actions proposed for each alternative as described in Chapter 2. These assumptions were developed for impact analysis purposes only.

The interdisciplinary team agreed to reasonable project assumptions that could be used as a basis for analyzing impacts from the resource management alternatives. These assumptions were used to arrive at a cumulative impact for each environmental element.



Committed mitigation measures are all those stipulations, restrictions, and requirements imposed on activities on the public lands to protect environmental, socioeconomic, or other resource values. They are the mitigation measures BLM is committed to enforce in managing the public lands and are therefore assumed for purposes of the RMP. All applicable laws and their implementing regulations are assumed as committed mitigation. The committed mitigation measures are identified under "Management Guidance Common to All Alternatives" at the beginning of Chapter 2. Where these measures differ between alternatives, as management practices to be implemented for a particular alternative, they are identified in the alternative narratives in Chapter 2.

In addition to these assumed committed mitigation measures, residual impacts could be mitigated by other methods BLM is not committed to or are outside the Bureau's authority to enforce. These measures are called uncommitted mitigation.

## **AIR QUALITY**

Air quality has the potential to be affected by dust or smoke from surface-disturbing activities associated with mineral exploration and development, lands and realty actions, livestock management activities, OHV uses, recreation, wildlife habitat development, and fire control efforts under each alternative. However, any of these activities would occur within the acceptable air quality ranges as defined by current laws.

Implementation of BLM activities and BLM permitted activities is controlled through stipulations and monitoring so they comply with applicable federal and state standards for air quality. Although violations through accidental occurrences or noncompliance with BLM stipulations may occur, it is assumed the probability of their occurrence and magnitude is low enough that they are projected to be well within acceptable limits.

## **CULTURAL AND PALEONTOLOGICAL RESOURCES**

Management actions involving surface disturbance would be controlled through stipulations and monitoring designed to protect cultural and paleontological properties. They may include mitigation, avoidance, excavation, and study.

It is assumed public use of cultural and paleontological resources will continue and in certain areas increase. This will take the form of increased tourism, approved research field studies, and recreational interpretation.

Such use is an integral part of the local governments' and the State of Utah's tourism plan.

Public interest in these resources also can take on a negative aspect, i.e., vandalism and illegal collection. Vandalism is estimated to have adversely affected 95 percent of the sites in DMRA. Evidence of illegal excavation and collection has been found in the Red Mountain-Dry Fork, Browns Park and Nine Mile Canyon areas. Although it is impossible to quantify, it is assumed such illegal activities will continue apace with the positive aspects of the public's attention to these resource values.

## **FISH AND WILDLIFE HABITAT**

Management actions that enhance or protect wildlife habitat (e.g. water facilities, vegetation treatments, habitat enhancements) will be designed with measures preserving significant resource values in the area.

The management of special status animal species and the restrictions imposed to protect their habitats can affect other resources. Special status animal species in turn can be affected, either adversely or beneficially, by other resource programs.

Demand for wildlife habitat (consumptive and non-consumptive) will increase on public lands as private lands are developed and associated wildlife habitat altered.

Additional wildlife forage will be created from vegetation manipulation, improved riparian management, and grazing prescriptions.

Forage assignments would involve approximately 50-60 percent of the current year's vegetation production. The forage not assigned to big game would be sufficient to meet the forage and cover requirements of nonbig game species.

The quality and quantity of crucial winter ranges are generally considered to be the limiting factors on big game populations in the resource area. The ability of these crucial areas to support wintering populations is a major factor in determining year-long population levels. As public demand increases in the future to utilize big game, the relative importance of big game crucial winter ranges in maintaining populations at objective levels will increase.

The capability of existing lakes, ponds, rivers, and reservoirs on BLM-managed public land in the resource area to produce fish, is generally not affected by grazing and grazing management. The watershed condition of



large tracts of land of mixed ownership upstream, the effects of a highly variable and harsh climate, and other factors will tend to limit the productivity of these types of waters.

The trend in recent years has been toward the conversion of livestock permits from sheep to cattle in grazing allotments. This trend is expected to continue. Such conversions can have a negative effect on streambank and channel characteristics, thus effecting trout stream habitat, due to uncontrolled cattle congregating at accessible water and shade sources. Sheep can be herded away from water, and their movements much more controlled, so streambank damage can be minimized.

Transplants and reintroductions of species presently not in the resource area would be completed in cooperation with UDWR and USF&WS species management plans. Final management guidelines prepared by either UDWR or USF&WS would be followed to the extent they are compatible with the RMP.

A detailed evaluation would be completed on prairie dog colonies initially identified as potential reintroduction sites for the federally-listed black-footed ferret. These evaluations would determine suitability for reintroductions and establish a priority of any future releases.

## HAZARDOUS MATERIALS

No hazardous material disposal sites would be permitted on public lands in the resource area. Any unauthorized disposal sites would be cleaned up and hazardous materials removed to an approved disposal area. All BLM activities and BLM-permitted activities would be controlled through stipulations and monitoring to insure the BLM hazardous material management policy was implemented.

## LANDS AND REALTY

### Land Ownership and Disposition

Currently lands actions are generally initiated by the public on an infrequent basis involving small, isolated parcels of land. Future proposals would be considered for public land administration, private land needs, and industrial development under existing authorities. Realistically, exchanges would be the preferred avenue for transferring lands out of federal ownership. Based on such transactions in the past and the upcoming BLM emphasis on the land exchange program, future exchanges would be expected to average 640 acres per year. Since exchange would be the preferred method of disposal, the amount land for direct sale would be small.

Other disposals including, but not limited to, Recreation and Public Purposes Act transfers and state selections, would be infrequent. Together, direct sales and other disposals would average no more than 40 acres per year. If public demand for land sales and other disposals were fully met, the public land base in the resource area could be reduced by 600 acres during the life of this plan (or reduced by less than 1 percent).

The following criteria for future land sales or transfers would include:

- Public lands within a radius of approximately 5 miles of human communities could be made available to local governments for use or development showing demonstrated need. These may include lands designated for agricultural, commercial, or industrial development as the highest value or otherwise the most appropriate use.
- Exchanges would be considered on a case-by-case basis throughout the resource area where the exchange criteria defined in this plan were met. If the exchange is determined to be beneficial to BLM and the land encumbered by a withdrawal, a recommendation to terminate the withdrawal on the involved lands would be pursued. Exchanges involving lands within ACEC consideration would be available only in the event there was a clear and overriding benefit to the public outweighing the identified land values supporting the ACEC.
- Subsequent analysis of sales or other disposal tracts would be evaluated as to whether or not lands would be available for transfer. Lands encumbered by withdrawals would be analyzed to determine whether terminating the withdrawal is in the best public interest.

### Acquisition

Acquired lands generally would be assigned the management level of the surrounding public lands. If an acquisition were made for a specific resource value (i.e., riparian, wildlife habitat, etc.), the management objectives and the management priority level for that resource would be assigned.



Management emphasis would be on acquiring significant lands for enhancement of riparian and wildlife habitats, expansion of recreation opportunities, and reduction of flood potential and sediment loading of the Green River. Exchanges resulting in a repositioning of the public lands generally would be considered to be in the public interest if no significant loss of, or impact to, important or unique values resulted, or if significant beneficial impacts would offset such adverse impacts.

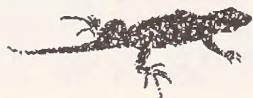
### Major Rights-of-way

Applications for use authorizations would continue to be processed on a case-by-case basis. Use authorizations cover roads, pipelines, powerlines, communication sites, and utility placements on public lands. The majority of use authorizations in DMRA have been in support of mineral exploration and development. This situation is expected to continue. As the demand for oil and gas is expected to increase over the life of this plan it is reasonable to expect the number of use authorization applications to also increase.

It is unknown what number of use authorizations could be expected annually; however, the following figures could provide an analysis figure of acreage involved in such authorizations. Based on the assumptions outlined in the minerals section of this chapter, it is reasonable to assume annual use authorization in support of oil and gas activities would involve approximately 125 acres, including 12.5 miles of access and pipeline rights-of-way. Approximately 1.3 miles of access road has been identified with possible phosphate development. Approximately 4 acres per mile of "Gilsonite" vein would be involved in use authorizations in support of possible "Gilsonite" development.

Pipelines associated with these use authorizations may be laid above or below ground. Environmental protection and human safety would be emphasized in the preferred placement of these pipelines, using the best available technology.

Future demands for electricity to supply populations on the Wasatch Front and Southern California and how to meet this demand is being appraised by industry (Richins, Environmental Coordinator, Deseret Generation and Transmission Cooperative, 1991). Transmission line routes would cross DMRA following an existing transmission rights-of-way; an industry preferred route would cross Nine Mile Canyon.



## LIVESTOCK

Grazing would continue to be permitted in the resource area based on demand and identified resource values in the vicinity. The demand for livestock forage on public lands in the Diamond Mountain Resource Area is directly related to forage availability, fluctuations in the livestock market, and capabilities of feeding livestock during the year when not on public lands.

The more recent demand for leaner red meat may affect the use of feedlots, increasing the demand for rangeland forage by yearling cattle operations. The long-range demand for sheep rangeland forage is expected to remain fairly static (Drabenstott and Duncan, 1982; National Cattleman's Association, 1982). Recently, per capita consumption of sheep-related products has been decreasing and the sheep market has been depressed. It is reasonable to assume a tendency for livestock operators to convert from sheep to cattle operations if the sheep market continues to decline. Both the sheep and cattle industries appear to have reached maturity in the west. There is little indication of prospects for significant expansion (Field, 1991).

During the last six years in DMRA, total average actual use has been approximately 74 percent of active preference or authorized use. This partially reflects temporary reductions in use due to drought in 1988, 1989, and 1990. Future grazing adjustments would be made if a need was revealed by monitoring which is a continuous process. BLM would coordinate and consult with livestock operators and, where necessary, with other interested groups before making any adjustments.

The principal environmental components directly affected by livestock grazing are vegetation and soils. Any change in vegetation and soils would affect livestock grazing as well as other resources.

## LEASABLE MINERALS

### Oil and Gas

Oil and gas development will be authorized within the resource area based on demand and restricted by measures designed to protect identified resource values in the vicinity.

### General Assumptions

The general assumptions as listed below were derived through an analysis of over 750 oil and gas exploration or development wells in DMRA. The detailed analysis and the development of a reasonable foreseeable



development for oil and gas exploration and development over the next 15 years is discussed thoroughly in Appendix 4.

Based on the detailed analysis as outlined in Appendix 4, the following general assumptions may be made for oil and gas exploration and development over the life of this RMP.

- The exploration for and development of oil and gas resources will continue to occur in an orderly manner on BLM lands.
- Well spacing programs for oil or gas exploration or development wells in DMRA may be either: one which conforms with a spacing order or field rule issued by the Utah State Board of Oil, Gas and Mining (Department of Natural Resources) and accepted by BLM; or one which is located on a lease committed to a communitized or unitized tract at a location approved by BLM. In the absence of special orders established drilling units, well spacing is set at 40 acres per well. Although the federal government is not bound by these spacing orders, they are generally recognized. Spacing within each of the regions varies and is discussed in Appendix 4, "Reasonable Foreseeable Development".
- Surface disturbance associated with the drilling and development of oil and gas wells would occur with the construction of the following: access roads, drilling pad, oil and gas production facilities, and pipelines. The surface disturbance associated with the construction of the drilling pads and circulation pits for each location is estimated to be 2 acres. Access roads constructed to the drilling pad would vary in length, but would be 30 feet wide. Road disturbance would vary in disturbance from 2-4 acres for each location. Oil and gas facilities are usually located on the well site (drilling pad) and do not require additional surface disturbance. However, off site oil and gas facilities, such as tank batteries, could disturb 2-6 acres. Pipelines may occur above ground or below ground and may involve 1-2 acres of disturbance if placed outside the access road. The placement of these pipelines would emphasize human safety and environmental protection.
- The average life expectancy of an average oil well is between 5 and 20 years for primary recovery. Should secondary recovery methods be employed, additional wells may be required for the injection of water or carbon dioxide. Such secondary recovery methods may extend the life of the well an additional 5-20 years. Because the recovery for a typical gas well in the resource area is 80-95 percent, secondary methods are generally not employed.
- In general, oil exploration and development would continue to occur predominantly in the Myton Bench-Nine Mile region (refer to Map 3-13).
- In general, gas exploration and development would occur predominantly in the Horseshoe Bend-Ashley Valley region, however, gas exploration may increase in the Myton-Nine Mile region.
- It is assumed that at least one period of intense exploration and drilling development could occur in the Diamond Mountain Resource Area over the next 15 years.
- In general, geophysical exploration would occur primarily in the Myton-Nine Mile Canyon region and the Clay Basin-Manila region. Geophysical exploration would continue apace with the oil and gas development scenarios. In sensitive resource areas (i.e., cultural areas, special status raptor habitat, VRM Class II), nonsurface-disturbing exploration methods such as magnetic or gravity technologies may be used.
- It was assumed that the demand for domestic oil and gas would increase over the next 15 years. Also, it was assumed that the price of oil and gas would increase and that federal tax incentives initiated to stimulate oil and gas exploration and development in the United States. It was assumed that new incentives would be initiated by the federal government for more unconventional oil and gas resources (such as coal bed methane gas and tight gas sandstones). The amount of exploration and development for both conventional and unconventional oil and gas resources would vary over the next 15 years with any change in the price of oil and gas, as well as, any change in the type and amount of incentives initiated by the federal government.
- It is assumed for the life of the plan that the price of oil will equal \$20 per barrel and the price of gas will equal \$1.50 per thousand cubic feet (MCFG).



- Based on a historical analysis, it is assumed that an average of 82 leases (approximately 106,000 acres) shall be issued each year over the next 15 years.

### Regional Assumptions

As previously mentioned, the Diamond Mountain Resource Area has been divided into five oil and gas exploration and development regions for analysis (refer to Map 3-13). The following assumptions were for oil and gas exploration and development in each region. These assumptions were in addition to the general assumptions.

**Myton Bench-Nine Mile Canyon Region.** The predominant exploration and development in the Myton Bench-Nine Mile Canyon region would be for oil occurring from the Green River Formation.

An average successful well drilled into the Green River Formation would be drilled to a depth of 6,000 feet and have an initial production of 106 barrels of oil per day (BOPD), 66 MCFPD (thousand cubic feet per day) of gas, and 26 barrels of water per day (BWPD). Based upon past spacing, wells would be drilled on 40-acre spacing units. The past success ratio (producing oil or gas wells/total number of wells drilled) in this region is 79 percent.

The primary exploration or development drilling would most likely take place adjacent to or within producing fields, such as Pleasant Valley, Castle Peak, Pariette Bench, Monument Butte, Eight Mile Flat-North, East Pleasant Valley, and Treaty Boundary. Also, exploration and development drilling would most likely take place in the Island and River Bend Units. Based upon past development, it was estimated that 15 oil exploration and development wells per year would be drilled in the region during the life of this RMP, for a total of 225 wells. Of the 225 wells, approximately 178 would be producing wells. Based upon past development, it was estimated that 11 gas exploration and development wells would be drilled during the life of the RMP. Of the 11, approximately 9 would be producing gas wells.

Exploration and development of unconventional resources, such as coal bed methane production from the Mesaverde Group or tight gas sandstone production from the Wasatch and Mesaverde Group could occur in this region. It is estimated that 20 wells would be drilled over the next 15 years with spacing set by Utah's Board of Oil, Gas, and Mining and the Bureau of Land Management.

The cumulative production per average well over the next 15 years is assumed to be:

OIL: 150,000 barrels of oil (BO)  
GAS: 650,000 MCFG

**Horseshoe Bend-Ashley Valley Region.** The predominant exploration and development in the Horseshoe Bend-Ashley Valley region will be for oil from the Green River and Weber Formations and gas from the Uinta Formation. A successful oil well drilled into the Green River Formation will be drilled to an average depth of 7,400 feet and have an initial production of 180 (BOPD), 56 MCFPD, and 25 BWPD. Based upon past spacing, wells would be drilled on either 320-acre spacing units (Lower Green River/Wasatch Formations) or 80-acre spacing units (Green River and transition zone between Green River and Wasatch Formations).

A successful gas well drilled into the Uinta Formation would be drilled to an average depth of 4,130 feet and have an initial production of 1,800 MCFPD of gas. Based upon past spacing, it would be drilled on 160 acre spacing units. The past success ratio (producing oil or gas wells/total number of wells drilled) in this region is 53 percent.

The primary oil exploration or development drilling would most likely take place within adjacent producing fields (such as Horseshoe Bend, Brennan Bottoms, and Gusher). Based upon past development drilling, it is estimated that ten wells per year would be drilled in the region over a 15-year period, for a total of 150 wells, 80 of which would be producing wells.

The primary gas exploration or development drilling would most likely take place adjacent to producing fields (such as Horseshoe Bend, Gusher, and Twelve Mile Wash fields). Based upon past development, it is estimated that approximately two wells per year would be drilled in the region over a 15-year period, for a total of 30 wells, 16 of which would be producing wells.

The cumulative production per average well over the next 15 years is assumed to be:

OIL: 500,000 BO  
GAS: 250,000 MCFG

**Diamond Mountain Plateau Region.** The Diamond Mountain Plateau region is the least explored region and presently has no oil or gas production. It was assumed that oil exploration wells drilled in this region would be drilled for oil believed to occur in the Park City, Weber, or older formations. It is estimated that ten exploration wells per year would be drilled to an average depth of 3,100 feet over the next 15 years.



The minimum amount of onsite surface disturbance for all forecast wells (10 wells) in this region would be 60 acres.

**Clay Basin-Manila Region.** The primary exploration and development drilling in the Clay Basin-Manila region would be for gas from the Frontier or Dakota Formations over the next 15 years.

A successful gas well drilled into the Frontier Formation would be drilled to an average depth of 5,780 feet and would have an initial production of 2,750 MCFPD of gas. Based upon past spacing, wells would be drilled on 40 acre spacing units.

A successful well drilled into the Dakota Formation would be drilled to an average depth of 6,310 feet and would have an initial production of 12,500 MCFPD of gas. Based upon past spacing, it would be drilled on 40-acre spacing units.

The past success ratio (producing oil or gas wells/total number of wells drilled) in this region is 51 percent.

The primary gas exploration or development drilling would take place adjacent to the Clay Basin gas field or along the thrust margin of the northern Uinta Mountains. Based upon past development, it is estimated that approximately one well per year would be drilled in the region over a 15 year period, for a total of 15 wells, 8 of which would be producing wells.

The cumulative production per average well over the next 15 years is assumed to be:

OIL: 30,000 BO  
GAS: 6,000,000 MCFG

**Indian Reservation Region.** The predominant exploration and development in the Ute Indian Reservation region over the next 15 years would be for oil from the Lower Green River and Wasatch Formations. Exploration and development covered by this plan would be on split estate parcels only.

A successful oil well drilled on split estate parcels into the Lower Green River-Wasatch Formations would be drilled to an average depth of 15,000 feet and have an initial production of 800 BOPD, 640 MCFPD of gas, and 40 BWPD. Based upon past spacing, wells would be drilled on 640 acre spacing units. Based upon present spacing orders in each split estate parcel, a maximum of 83 wells could be drilled in this region, taking all parcels into consideration. However, it is estimated that 20 wells would be drilled in this region on these split estate parcels over the next 15 years.

## "Gilsonite"

"Gilsonite" development would be authorized based on demand and limited by measures designed to protect significant resource values identified in the vicinity.

The potential for "Gilsonite" development in the western basin would increase as supplies diminish in the eastern basin. In the short-term, demand for "Gilsonite" would remain at current levels but may actually increase over the life of the plan. From this it was assumed an eventual increase in "Gilsonite" prices. However, over the first five years of the plan, development on federal lands would remain confined to the eastern basin.

Exploration and development would initially occur on non-federal lands. However, with the passage of time and recovery of "Gilsonite" off non-federal lands, greater interest in federal lands would develop. Ultimately, exploration of federal lands would lead to the development of "Gilsonite" on some tracts within the resource area.

Activity on federal lands would be most intense in areas immediately surrounding known veins or vein systems. Exploration would be required to determine the true extent of "Gilsonite" deposits. These activities would concentrate most heavily in lands which extend outward from known veins. This is particularly true for lands along the trend line of veins. In general, the areas with the highest potential for "Gilsonite" occurrence may be found between the Green River, just south of Ouray, and the Pariette "Gilsonite" Mine, 25 miles to the northwest of Ouray.

Exploration would consist of truck or track-mounted rigs, drilling on a fairly tight hole spacing (as much as one hole per acre), particularly where known deposits of "Gilsonite" have been identified. Total disturbance would amount to less than 40 acres each for most foreseeable projects. In most cases the need to develop roadways would be minimal. Exploration activities would be limited to one warm season with complete reclamation and revegetation actions completed at the close of the season for each exploration action.

Over the life of this plan, exploration activities in the resource area would increase with as many as 30 prospecting permit applications could be filed.

It is generally known that the quality of "Gilsonite" deposits decrease significantly between the eastern and western basin. Veins tend to be smaller and the host rock surrounding them is less suitable for mining. However,



improvements in technology and increased prices may allow developers to overcome these problems.

It is reasonable to expect that a handful of small mines would be developed over the life of the plan. Each could remain active for 10 to 20 years. For each major vein, mine facilities would be located along the length of the vein, each separated by a distance of about 900 feet. In most instances, each site would consist of a head frame and related buildings, storage bins, hoists, and vehicles. A narrow roadway would connect each site.

The size of area disturbed in at each site would vary with time. Some sites would remain idle for long periods of time while others were active. Overall total disturbance, accounting for each site and connecting roadway, would amount to about 3.6 acres per mile of vein.

Surface impacts, resulting from mining itself, would be minimal. Mine design does not allow development of veins at the surface. Subsidence of the vein at the surface would not occur.

## Oil Shale

Although deposits of relatively high grade oil shale do occur in the resource area, it is assumed that even with substantial increases in oil prices, these deposits would not be developed over the life of this plan. This is because richer and more thoroughly studied deposits occur in the Book Cliffs Resource Area, and in Piceance Creek Basin of Western Colorado. These would be more than sufficient to meet expected demand over the life of the plan.

## Phosphate

Phosphate development would be authorized based on demand and limited by measures designed to protect significant resource values identified in the vicinity.

It is reasonable to expect that phosphate deposits in the Vernal Field will become more important within the life of the plan. It was assumed that eventually the value of phosphate would rise sufficiently to allow development on existing leases northeast of Vernal.

The development area would consist of three lease tracts covering just over 7,650 acres. These lands include about 1,200 acres on the west side of Little Brush Creek, just below the mouth of Little Brush Creek Gorge; and the remaining tracts extend eastward from Little Brush Creek to points just beyond the rim of Diamond Plateau above. Mining activities would be confined to the lands east of Brush Creek with supporting milling activities on private

lands west of Brush Creek. Because of excessive overburden, leases would be developed by conventional underground room and pillar mining methods. Subsidence from mining is not anticipated.

The portal location for the mine would be located in Section 24, T.2 S., R.22 E. A mill would be located about 3/4 of a mile to the southwest in section 26.

Milling would utilize standard flotation techniques and the final product would be shipped from Vernal either by truck or possibly as a slurry in the existing Chevron slurry line to Rock Springs, Wyoming. Mill facilities would likely be in the SW 1/4 of Section 26, T.2 S., R.22 E. These would include: offices, warehouse, maintenance shops, compressor house, transformer station, parking. It is estimated that these would cover an area of about 3.5 acres.

An explosives magazine would be located in the stream valley located immediately north of the portal. Location and design of the magazine would include consideration for safety and security.

Initially about 750,000 tons of raw ore would be processed each year. After a few years, production would double to about 1.5 million tons. About 60 percent of production would become tailings after processing. These would be deposited within tailings ponds or be pumped back into the mine itself as back fill.

Three primary tailings pond sites have been identified. All three would be located in Sections 25 and 26, T.2 S., R. 22 E. Total area of the ponds would be about 130 acres. It is thought these three sites would provide enough storage to hold tailings for between 30 and 60 years, depending upon production rate. Sequential filling and reclamation would limit the area of disturbance to a single pond in active use at any given time.

Water requirements would include: an estimated 600 to 800 gallons per minute (gpm) for mining and another 300 to 600 gpm for milling. Additional water rights would be necessary to meet this requirement. Water consumption resulting from milling would result mostly from evaporative losses. Seepage from tailings ponds would be minimal. As much as is possible, all water used in milling would be recycled between the tailings ponds and the mill.

The generation of gaseous, liquid, and solid wastes would be minimal and would conform to state and federal requirements.

Access to the site would be provided by designated roadways generally along County Road 301, commonly



referred to as the "Red Fleet Road". However, this county road would require some upgrading, primarily widening, improvement of the gravel surface, culverts, and drainage ditches. In addition, about 1.3 miles of haul road would be required to connect the mine portal and the mill site. Another two miles of roadway would be required to connect the mill with the adjacent tailings ponds.

Existing electrical power and gas lines would be tapped to support the site. Lines from the main line would enter the site from the west and would be roughly four miles in length.

It is estimated that once the mine reaches full production with the onset of Phase II activities, between 250 to 350 workers would be employed by the mine.

## Tar Sands

Tar sands would be authorized based on demand and limited by measures assigned to protect significant resource values identified in the vicinity.

Large-scale development of tar sands, as major sources of refinery feedstock, will not be planned for in this document. The tar sand deposits in Utah, considered the most favorable for this sort of development, already have been considered in BLM's 1984 Combined Hydrocarbon Leasing EIS.

Although some relatively rich deposits do occur in the resource area, most notably the deposit along Asphalt Ridge, other larger and more easily developed tracts occur outside the resource area. Therefore, it is likely large scale tar sands development would occur outside of the resource area over the life of the plan, so there is no need to augment existing planning here.

Yet this does not rule out the potential for development of somewhat smaller tracts in the resource area designed for the extraction of bitumen as refinery feedstock. Accordingly, it was assumed that over the life of the plan, one such site would be developed along Asphalt Ridge. On federal lands, development would occur on existing valid mining claims, or on Combined Hydrocarbon leases or a combination of the two.

Development of such a site would occur over a period of 10 to 15 years. Mining would consist of stripping deposits of high grade tar sands at or near the surface. Because of this, mining would be most likely to occur on the east-facing toe slopes of Asphalt Ridge, between the Bonanza Highway and the north end of Asphalt Ridge, immediately south of the LaPoint Highway.

At any given time during development, about 40 acres would be disturbed by processing facilities, vehicle storage, stock piles, and pit area. Reclamation of exhausted areas would take place as mining progressed into new areas. Total disturbance over the life of a site could be as much as 320 acres.

It was also assumed similar, although smaller, tracts would be developed in the Argyle Canyon, Pariette and Asphalt Ridge Special Tar Sand Areas (STSAs) for asphaltic paving materials. The manner of their development should be quite similar to the development of the Uintah County pit now on non-federal lands on Asphalt Ridge.

Over the life of the plan such site each in the Argyle Canyon, Pariette, and Asphalt Ridge STSAs could be expected. Development would occur on Combined Hydrocarbon Lease tracts or existing valid placer claims.

Potential development would include federal mineral lands all along the length of Asphalt Ridge. Near surface deposits on the southern end of the ridge would be the most attractive. At any given time, development could consist of an area of about 10 acres stripped back to accommodate mining. This area could remain open continuously but would periodically move laterally to allow development of new deposits. Reclamation would be concurrent with any such move. An additional area of about 10 to 20 acres could be utilized for stockpiles, topsoil stock piles, roads, offices, fuel, and vehicle storage.

Development of such sites would occur over a period lasting 15 years. As mentioned, reclamation would be conducted on an on-going basis. At the close of mining, the entire site would be reclaimed to federal standards.

Similar development may occur at some locations along toe of the east-facing slope of Asphalt Ridge north of U.S. Highway 40. North of here the best deposits become difficult due to topography and the position of the main oil bearing beds. So development north of Highway 40 would be unlikely over the life of this plan.

Development of asphalt pit sites in the Pariette area may be more likely. Duchesne County has expressed a keen interest in sites west of the Pariette Wetlands. Development scenarios of potential sites in the Pariette area could be essentially the same the development on Asphalt Ridge described above.

Development of deposits in the Argyle Canyon STSA would eventually occur as increased traffic through Nine Mile Canyon and Argyle Canyon require improvement of roadways there. Again, development of a potential pit site would be the same as described for Asphalt Ridge above.



It was reasonable to assume exploration drilling would occur within the Argyle Canyon, Pariette, and the Asphalt Ridge STSAs. Exploration drilling will occur as a prelude to development of potential asphalt pits. Drill hole spacing could be about 500 feet, during initial phases of drilling, and cover 10- to 40-acre tracts. Where drilling showed substantial values, drill hole spacing could tighten up to allow better delineation of deposits.

Additional disturbance could result from vehicle access to the drill holes. Drilling programs could be initiated and completed within the warm season. Reclamation could be completed at the end of a drilling season. It would include restoration of the land to its original contours and revegetation of disturbed lands.

### **Locatable Minerals**

Locatable minerals occurrence in the resource area is not significant. This plan assumes no new discoveries will change this view over the life of the plan. Locatable minerals would be developed in the resource area subject to demand and controlled by measures designed to protect significant resource values identified in the vicinity.

Relatively small occurrences of locatable minerals do occur in the resource area and these would continue to attract small-scale prospecting and development. Three areas would continue to attract public interest. These are the Precambrian rocks north of Browns Park, the alluvial deposits along the Green River, and the Paleozoic limestone outcrops on the southern half of Diamond Mountain Plateau.

Activities in the mountains north of Browns Park would be modest in both size and duration. For five notices of intent, for operations disturbing five acres or less may be submitted over the life of the plan this area. Typically these would be for small exploration or prospecting operations. Disturbances of one acre or less would be expected for each notice. Mineral values removed would not be significant.

A similar outlook may be expected for sites on the Paleozoic limestones on Diamond Mountain Plateau. However, most activity on these rocks would occur much further to the west, outside of the resource area.

New techniques and processes now being developed would allow enhanced recovery of fine gold from alluvial placer deposits at Horseshoe Bend on the Green River. This, coupled with potentially high gold prices, would amplify the relatively high interest in sites along the Green

River. This is particularly true of sites in and around Horseshoe Bend.

Federal lands in the Horseshoe Bend area would attract a number of operations if this were not precluded by the effect of the oil shale withdrawal now in place. Development would clearly follow a lifting of the withdrawal. Subsequently, it is likely that up to two or three Mining Plans of Operation could be submitted per year.

Typically, operations conducted under these plans would cover relatively large areas between 10 and 30 acres at a time. At any given time, an area of one to two acres would be stripped of overburden to provide raw materials for processing. An additional two to three acres would provide space for processing equipment, access ways and stockpiles. Settling ponds could cover as much as another one to two acres. It is anticipated that no operation would require more than 50 gallons of water per minute. If water were necessary to a given operation, water rights would be acquired. Where possible, abandoned areas would be reclaimed as operations progressed but some areas would remain disturbed for the life of the operation. An operation on 40 acres may remain active for as much as five years.

### **Mineral Materials**

Mineral materials development would be authorized based on demand and restricted by measures developed to protect significant resource values identified in the vicinity.

It was assumed federal, state, county governments and other non-profit organizations would continue to depend upon free-use access to mineral materials in order to provide essential services to the community at the lowest possible cost. This would be especially true of the county governments, who would continue to depend upon the BLM for free use materials for road maintenance in remote areas.

Over the life of the plan numerous free-use sites would be developed to meet these continuing demands. In addition, there would be occasional demand for negotiated sales and competitive sales for mineral materials. Generally this would most likely include sites in the Vernal area; summarized in Table 4-1.

Typical development sites would cover about five to ten acres and remain open from five to ten years. At any given time, about one acre of each site would be stripped of existing vegetation and topsoil to provide access to materials. Another acre would remain disturbed as the result of access roads, stockpiles and processing



equipment. To the degree possible, sites would be reclaimed on an on-going basis with restoration of exhausted areas as pits move.

**TABLE 4-1:  
POTENTIAL MINERAL MATERIAL SITES WITHIN  
THE DIAMOND MOUNTAIN RESOURCE AREA**

AREA	NO. OF SITES	POTENTIAL ACRES DISTURBED	COMMENTS
Clay Basin	2	10	North Flank of Goslin Mountain. Potential source of rip-rap. Alluvial deposits in eastern Clay Basin include well sorted gravels suitable for road base.
Browns Park	3	15	Potential deposits occur in a number of locations. These include gravel deposits in the modern flood plain of the green river, elevated terraces, and on benches along the outer edges of the valley floor.
Diamond Mountain	4	20	Nearly all of the exposures of Bishop Conglomerate on the plateau and outcrops of limestone along the north rim of Diamond Gulch are suitable sources of low grade quarry stone.
Donkey Flat	2	10	Deposits on Donkey Flat, around the toe slopes of the Buckskin Hills, and south to Sunshine Bench offer highly desirable deposits of gravels.
Ashley Valley	2	10	Deposits as described above also occur throughout Ashley Valley.
LaPoint	2	10	Outward across the badlands between Little Mountain and LaPoint. West-facing slopes of Asphalt Ridge to Little Mountain. Among others, development would include the reopening of previously developed sites. Located between Vernal and LaPoint in Sec. 33, T.4 S., R.20 E. A second potential site is located west of the Green River, just west of Horseshoe Bend. Sec. 30, T.6 S., R.21 E.
Pariette	3	60	
Ouray	2	40	
Nine Mile Draw	1 3	10 60	Gravel deposits tend to be found only in the bottom of Wells Draw existing drainages. These tend to occur as discontinuous and relatively rare deposits adjacent to the existing flood plain.
TOTALS	24	235	

On occasion, sites would require a limited amount of exploration prior to development. This would allow potential permittees the opportunity to assess the viability of a potential deposit. Disturbance resulting from these activities would be minimal and short term. In most cases exploration would consist of the excavation of test holes by backhoe. This would not require the construction of

roads and would not involve support facilities. Typically, total disturbance would amount to less than one acre.

Demand for building stone throughout the area would increase while available supplies of stone in the Wrinkles Road Building Stone Area continue to decrease. Additional access to new areas within the building stone area would provide additional sources of materials. This



would result in about 10 miles of new road in the area, causing 35 to 40 acres of additional disturbance. Disturbance resulting from the collection of stone would remain minimal. The new roads would extend southward from the Wrinkles Road. These would open new areas extending southward over the rim of Nine Mile Canyon. Short spurs from these roads would extend to the rim to allow access to flag stone there. In some cases these roads would lead downward to lower benches allowing collection on the south-facing slopes between these benches and Cowboy Bench above.

Public demand for blow sand in the Vernal area would continue. Without access to a convenient and economical supply trespass removal of blow sand in the Spring Creek area would continue. A single 20-acre community pit, open at any given time, would meet public need for this type of material. Areas with the best potential would be located north of Vernal near Taylor Mountain Road, adjacent to outcrops of the Navajo Sandstone. These areas are listed in Table 4-2:

**TABLE 4-2:  
POTENTIAL COMMON USE/COMMUNITY  
PIT AREAS FOR BLOW SAND, NORTH OF  
VERNAL IN SPRING CREEK AREA**

NE 1/4 NE 1/4 SE 1/4	Sec. 18 T. 3 S. R. 21 E. Sec. 18 T. 3 S. R. 21 E.
SE 1/4 NE 1/4 NE 1/4 SE 1/4 SE 1/4 SE 1/4	Sec. 20 T. 3 S. R. 21 E. Sec. 20 T. 3 S. R. 21 E. Sec. 20 T. 3 S. R. 21 E.
SW 1/4 SW 1/4 NW 1/4 SW 1/4 SE 1/4 SW 1/4	Sec. 29 T. 3 S. R. 21 E. Sec. 29 T. 3 S. R. 21 E. Sec. 29 T. 3 S. R. 21 E.
SW 1/4 SW 1/4	Sec. 28 T. 3 S. R. 21 E.
NE 1/4 NE 1/4 NW 1/4 NW 1/4	Sec. 14 T. 3 S. R. 21 E. Sec. 14 T. 3 S. R. 21 E.

Public access to the area would be controlled in order to limit the extent of surface disturbance to about two to three acres at any given time. Periodically, the BLM would reclaim exhausted areas of a site and alter access to the area to encourage development in new areas. This area would remain open for the life of the plan.

## RECREATION

Recreational use, including OHV use, would be allowed based on demand and limited by measures developed to protect significant resource values identified in the area.

Recreation use in Browns Park SRMA would continue to increase between 10 and 15 percent each year for the foreseeable future. Throughout the remainder of the resource area it would increase between three and five percent annually.

There would be more demand for primitive forms of recreation such as hiking, backpacking, bicycling, and driving for pleasure. Bureau funding would be available to upgrade or begin new construction on no more than one developed campground every five years. Projected increases in wildlife populations could provide up to 5,000 additional visitor days.

Increasing recreation use of the river corridor between Little Hole and the Utah-Colorado state line would require limiting some activities to meet human health and safety standards. Camping along the river could be limited to designated camp sites on a reservation basis. The use of fire pans and containers for human waste would be required, if necessary, to protect the natural resources present.

As many as ten additional back-country byways and bicycle trails could be identified by the public and designated by BLM over the next 15 years.

Developed recreation sites would be protected by closing these areas to grazing and surface-disturbing activities (except those associated with recreational development). Semi-primitive, nonmotorized areas would be protected by closing the areas to off-road use and surface-disturbing activities (except non-motorized management actions designed to enhance vegetation, wildlife habitat, riparian, soil, or water resources).

If cave resources are identified on public lands, appropriate action would be taken to inventory the resource and protect it from damage.

## SOCIOECONOMICS

A number of social categories or groups of people living near the public lands could be affected by different management philosophies expressed by the alternatives. The following categories were designed for purposes of analysis only. No one person clearly "fits" completely into



one of these categories; however, these categories make for ease of analysis.

- The *young newcomer* relates strongly to and benefits from those alternatives which limit the activities related to public land uses. They typically support recreational values and maintain a natural setting where they have a vested interest. This population segment is likely to grow, regardless of the management philosophy selected, because of the attractive features of the area. Alternatives which limit resource activities would speed the growth and those which promote heavy resource use would tend to slow the immigration of this segment of the public.
- The *workers* are deeply interested in use of the public land resources necessary to maintain the industry in which they are employed and approach resources from more of a consumptive approach. However, though some of their efforts tend to affect the environment, they are still concerned with maintaining the quality of the public land. Many are also interested in use of the public lands—fish and wildlife, gathering forest products, and recreation. This category of people would be primarily interested in the freedom to pursue their profession, and yet they are concerned about opportunities for recreational pursuits. Those alternatives placing little emphasis on developmental uses would likely cause this population segment to remain stable or possibly decline.
- The *rancher/farmer* desires to maintain traditional lifestyles. Yet high taxes and overhead costs and low or unstable prices for livestock and crops create hardships. The temptation to sell or subdivide is ever present.

Because of pressure to sell, several nontraditional or absentee owners have bought ranch properties in the basin. Reasons for buying are numerous but most prevalent uses are tax shelters and recreation. Most of these new owners do not depend on the land for a livelihood. These individuals may have a completely different orientation to life than the traditional rancher. Nontraditional ranchers tend to be more closely aligned with the young newcomer.

- *Business people* recognize that population increases and resulting increases in business depend largely on increasing development production in the area. Therefore, those

alternatives which promote production and use of forage, minerals, wildlife, and recreational opportunities that would bring in people, would be most beneficial to the business community. This diverse group is differentially affected, depending on the member's dependence on amenity or commodity outputs from the public lands. Some business people benefit from recreational alternatives, while others benefit from development alternatives.

- *Retirees* prefer alternatives which stress maintaining the public lands in a natural setting. Alternatives which fully promote commodity production to the detriment of amenity values would cause a shift in the retiree population. Many would see the area as a less desirable place to live.





It was reasonable to assume national and/or global political and economic conditions could combine to result in another energy boom on the scale of the 1981-85 boom sometime during the life of this plan (refer to Appendix 4, "Reasonable and Foreseeable Oil and Gas Development"). In addition, improving the transportation

situation in and out of the Uinta Basin would help to support the growing tourism industry of the area. Based on the objectives and management strategies of each alternative, Table 4-1 shows job projections if any alternative was chosen and implemented (Robinson, 1991).

**TABLE 4-3:  
JOB PROJECTIONS BY ALTERNATIVE**

COMMODITY	PROJECTIONS FOR ALTERNATIVE A	PROJECTIONS FOR ALTERNATIVE B	PROJECTIONS FOR ALTERNATIVE C	PROJECTIONS FOR ALTERNATIVE D	PROJECTIONS FOR ALTERNATIVE E
Agriculture	0	-4	0	0	-11
Mining (Excluding Oil and Gas)	0	0	0	0	0
Oil and Gas	0	-3,100	335	335	-200
Construction	0	0	0	0	1
Manufacturing	0	-3	16	16	19
Transportation, Communications, and Utilities	0	-1	1	0	3
Trade	0	-5	0	0	11
Finance, Insurance, and Real Estate	0	-1	1	1	3
Services	0	-9	-4	-4	20
Government	0	0	0	0	2
Totals:	0	-3,123	349	350	- 152

Source: Robinson, 1991

## SOILS AND WATER

Management actions that enhance or protect soil and water resources would be designed with measures that would preserve significant resource values in the area.

The mixing of topsoil and sterile subsurface soil material in poorly developed soils can effectively reduce the soil's capabilities to successfully revegetate following disturbance. It was assumed extra rehabilitation efforts (e.g. mulching, chemical additives, drip irrigation) would be necessary on these soils, especially in the Myton Bench-Nine Mile area.

It was assumed that soil resources could be adversely affected two to three years following vegetation treatment activities (i.e., prescribed burns) until vegetation had recovered sufficiently to hold the soil in place. Until sufficient vegetation recovered on the treated site, topsoil

could be transported off-site as suspended sediments and/or wind blown dust particles. This was seen as acceptable as the expected long-term benefits of improved watershed condition outweigh the short-term possible loss of the soil resource.

Future demand for the next 15 years should be met for planned industrial, municipal, and irrigation waters except during drought years. All surface water available for industry and irrigation have been appropriated. Should unforeseen major projects require more than .02 cfs, the demand could not be met. It was assumed the Castle Peak Salinity Reduction Demonstration Area implementation plan would continue apace as more emphasis on reducing sediment and salinity to the Colorado River system would be required. With adequate funding and personnel, this could be accomplished.



## VEGETATION

Rangeland improvement actions maintain or improve desired vegetation and riparian resources and would be designed with measures that preserve significant resource values in the vicinity. Short-term reductions in vegetation quality and quantity occur from vegetation manipulation actions, however long-term benefits outweigh the short-term impacts.

There is a historical demand placed on vegetation to provide forage for livestock, habitat for wildlife, cover for soil, filtration for water, and human-needed products such as firewood and fence posts. These historical demands are presently being met in the resource area.

Forage assignments would involve approximately 50-60 percent of the current year's vegetation production. The forage not assigned to big game would be sufficient to maintain the vegetation communities' productivity, meet the forage and cover requirements of nonbig game species, and maintain watershed protection.

Ecological condition would be managed to meet desired plant community objectives designated by allotment at the activity plan level.

Existing wetland and riparian communities attract wild and domestic animal use and human recreation activities. The demand for improvement and use of these areas will continue to increase. Riparian areas in the resource area often coincide with access routes through mountainous terrain (i.e., Diamond Mountain and Three Corners areas). Due to the concentrated, often intense, use along certain portions of some riparian areas, their quality is degraded and quantity reduced.

By law, there is no "consumptive" demand for listed T&E plant species; however, the threat of cactus thievery exists. There is also a growing nonconsumptive demand by the scientific community regarding the inherent value of special status species.

Wildlife demands on vegetation are projected to increase. In certain areas of the resource area, i.e., Browns Park, it is likely the present vegetation resource could not support the desired wildlife numbers (refer to the Wildlife section).

The resource area has the capability and resources to provide for more than sufficient habitat for the presently known special status species, if other resource uses, particularly those involving surface-disturbing activities, are managed to safeguard these populations and habitats.

Existing capabilities to conduct vegetation treatments with an objective to lessen erosion and increase forage production for wildlife and livestock are such that approximately 1,200 acres per year could be accomplished. Most of the treatment in the last 10 years has been prescribed burning of pinyon-juniper stands.

Total vegetation treatment opportunities could be realized on approximately 18,000 acres (or 25 percent of the BLM-administered lands) over the life of this plan. Based on an average of the total acres treated in the resource area during the past decade, it is reasonable to assume that approximately 400 acres could be successfully treated per year. Such an assumption is based on a continuation of present funding and staffing levels.

Riparian habitat would be protected by limiting grazing, surface-disturbing activities, and off-road use. Pipelines, utility structures and transportation facilities would be confined to established corridors and crossings. Special status plant habitat would be protected by limiting surface disturbance and off-road use.

## VISUAL RESOURCES

Upon completion of the RMP, the existing VRM Class designations, delineated on Map 3-33, would be modified to reflect the decisions made in the plan. These adjusted visual resource values would be protected by managing activities and construction with mitigation that would protect the VRM classes.

## WOODLANDS

Woodland product harvest would be authorized based on demand and limited by measures developed to protect significant resource values identified in the vicinity.

Demand for wood products would continue at about the current level or increase slightly.

Greenwood harvest would not be allowed to increase beyond 3,000 cords of wood annually from productive woodland areas.

Sale of juniper posts and Christmas trees would be made only to meet local demand.

Sale of other conifer species would only be made where it can be demonstrated to benefit either the forest or wildlife resource.



## **DIRECT AND INDIRECT IMPACTS OF IMPLEMENTING ALTERNATIVE A**

### **IMPACTS TO CULTURAL AND PALEONTOLOGICAL RESOURCES**

#### **From Management Actions for Fish and Wildlife Habitat Resources**

Accidental disturbance of both cultural and paleontology resources would continue to occur as surface-disturbing actions such as land treatments and water developments are completed to benefit wildlife.

#### **From Management Actions for Livestock Programs**

Accidental disturbance of both cultural and paleontology resources would continue to occur as developments such as land treatments and water developments are completed for livestock.

#### **From Management Actions for Minerals Programs**

Vandalism and accidental disturbance of both cultural and paleontology resources by activities associated with mineral exploration and development would continue to occur at approximately its current rate.

#### **From Management Actions for Recreation Programs**

Continued active management of the John Jarvie National Historic District in Browns Park would allow the public to gain a better understanding of the history of this fascinating area. By preserving, displaying, and interpreting the many structures and items at the site, the public gains a better appreciation of the need to protect and preserve cultural resources.

Protecting the Desolation Canyon National Natural Landmark on the lower Green River below the Sand Wash Recreation Site would increase public awareness of the importance of John Wesley Powell's historic trip down the Green River in 1869.

Vandalism and accidental disturbance of resources would continue to occur at the present rate or increase slightly as OHV and other recreation use of public lands increase.

#### **From Management Actions for Riparian Habitat Resources**

Fencing riparian areas having high density cultural site occurrence would restrict uncontrolled uses thereby helping to preserve both riparian and cultural resources.

#### **From Management Actions for Special Emphasis Areas**

Not designating Nine Mile Canyon, Red Mountain-Dry Fork or Browns Park Complexes as ACECs would make it more difficult to stabilize and protect the important cultural resources within these areas because they would not receive the management priority consideration afforded an ACEC. As a result site deterioration would continue and eventually some resources would be lost.

### **IMPACTS TO FISH AND WILDLIFE HABITAT RESOURCES**

#### **From Management Actions for Fish and Wildlife Habitat Resources**

Prairie dog colonies would be maintained in identified black-footed ferret habitat (19,000 acres). This could support up to 101 ferrets, assuming 1 ferret per 124 acres (Forrest, et al., 1985), and no more than 2 reintroduction areas used.

Allowing permanent surface disturbance and routine human activity near active ferruginous hawk and golden eagle nest sites, even after the young have left the nest, could result in significant negative impacts to these special status animal species because the animals are forced to continually seek new, possibly less quality, nesting habitat.

Additional forage and increased numbers of watchable and hunting wildlife could generate an additional \$63,400 per year to the local economy in expenditures for lodging, food, transportation, and equipment (Bangerter, 1989). This is seen as a beneficial impact.

Implementing seasonal restrictions precluding surface-disturbing activities on 90,032 acres of sage grouse nesting habitat would be a positive and long-term impact for this species.



## **From Management Actions for Lands Programs**

Acquiring additional public vehicle access could open 70,700 public acres of presently inaccessible public land, resulting in an avoidance response by big game and predator species who would move into lower quality habitat.

A protective withdrawal for 19,400 acres of riparian habitat on the Green River Scenic Corridor would have significant positive impacts for 14 of the 21 known special status wildlife species and fisheries habitat in DMRA by maintaining their high quality habitat.

## **From Management Actions for Livestock Programs**

Continuation of existing management actions will exacerbate the decline in high priority sage grouse habitat as 56 percent of the known habitat has already been lost (see Chapter 3).

Negotiating with livestock permittees to eliminate domestic sheep use within a 10-mile buffer of identified bighorn sheep reintroduction areas has the potential to reduce the likelihood of disease transmission from domestic livestock to bighorn sheep. This would significantly increase survival rates for bighorn sheep.

## **From Management Actions for Minerals Programs**

Development of high potential oil and gas regions would, over time, degrade or compromise existing habitats for various species by removing forage and cover and disturbing through noise or human presence, resulting in animal displacement from preferred habitats.

## **From Management Actions for Riparian Habitat Resources**

Management actions for riparian habitat within the resource area would provide direct long-term benefits to 14 of the 21 special status species in DMRA. These actions are seen to be significant to wildlife habitat management success for the resource area and the region. However, unfenced riparian areas could allow uncontrolled human and livestock use, resulting in continued deterioration of certain riparian areas in the resource area. This would adversely affect water quality and thus fisheries habitat.

## **IMPACTS TO LAND MANAGEMENT PROGRAMS**

Forty-one (41) percent of the area involved in the corridor through Jesse Ewing Canyon in the Browns Park area contains slopes greater than 30 percent. Slopes greater than 30 percent pose increased human safety risks when involving heavy equipment. Such slopes within the corridor will cause the width of the corridor to be reduced from 1/4 mile to approximately 1/8 mile. The corridor is presently near capacity, based on industry's prescribed distance requirements between certain types of rights-of-way (i.e., distance between pipelines and transmission lines or between two pipelines) and the 30 percent slopes limiting construction options. Therefore, even though the corridor is established, it is available for a maximum of 3 new facilities. When this capacity is reached, a north-south passage from Wyoming through northeastern Utah would be essentially closed.



## **IMPACTS TO LIVESTOCK MANAGEMENT PROGRAMS**

### **From Management Actions for Livestock Programs**

Improved grazing systems would result in an increase of 500 AUMs annually, thereby positively affecting livestock permittees' incomes.

### **From Management Actions for Vegetation Resources**

The vegetation composition treatments outlined in this alternative to meet livestock use objectives would maintain existing livestock grazing preference, while maintaining or enhancing the viability of the vegetation communities involved. Decadent old-age stands of pinyon-juniper woodlands and big sagebrush-mountain browse vegetation types would be managed in a mid seral ecological stage to provide the most forage for livestock.



A maximum of 35,000 AUMs would be assigned to wildlife, 7,430 AUMs over current wildlife use. This additional use could accommodate a 10 percent increase in big game. This has the potential to be a significant negative impact as any increases in big game use would intensify wildlife/private landowner conflicts.

**From Management Actions for Woodlands Programs**

Firewood harvests in areas presently little-used by livestock would benefit livestock by providing approximately 225 AUMs over the life of this plan.

**IMPACTS TO LEASABLE MINERALS PROGRAMS - OIL AND GAS**

**From Management Actions for Fish and Wildlife Habitat Resources**

Management habitat protection actions involving seasonal restrictions and no-surface-occupancy stipulations will have a significant negative, direct, and long-term impact on 40,800 acres (17 percent) of the high potential oil and gas lands of the resource area.

The following are specific discussions of these impacts.

Management actions involving no surface occupancy and seasonal restrictions for sage grouse would severely limit exploration and development of oil and gas resources. Seven (7) sage grouse strutting grounds occur in the Myton-Nine Mile Canyon and Horseshoe Bend-Ashley Valley oil and gas regions (see Appendix 4: Reasonable Foreseeable Development) which have high oil and gas development potential.

Raptor protection zones would have a minor negative impact to the exploration and development for oil and gas resources during the reproductive season.

Impacts due to restrictions applied in potential black-footed ferret reintroduction areas prior to and following reintroduction were analyzed for all potential black-footed ferret reintroduction areas, although it is assumed only 2 reintroduction sites will be chosen. (Refer to Appendix 2 for the assumptions for black-footed ferrets reintroductions in DMRA). Table 4-4 outlines general information concerning the potential black-footed ferret habitat reintroduction areas as it relates to oil and gas activities.

**TABLE 4-4:  
POTENTIAL BLACK-FOOTED FERRET REINTRODUCTION AREAS  
UNDER ALTERNATIVE A**

	SUNSHINE BENCH	SHINER	ANTELOPE FLAT	TWELVE MILE	BUCKSKIN HILLS
Priority of Reintroduction Areas	1	2	3	4	5
Oil/Gas Potential	Moderate	Moderate	Moderate	High	Moderate
Identified Habitat (in acres)	4,800	7,800	2,600	1,700	2,400
Percent of Area Leased*	38	0	0	98	0
Current Number of Producing Wells*	5	0	0	4	0
Projected Number of New Wells	5	0	15	20	0
Oil/Gas Spacing	160	40	40	160	40

\* Source: BLM Automated Lands and Minerals Record System and Automated Inspection Records System, 1991



The restrictions on surface-disturbing activities prior to ferret release would increase operational costs up to 25 percent per well by rerouting or moving surface-disturbing activities (such as access roads, pipelines, drill pads, geophysical surveys). This would be a negative economic impact to the energy companies operating in the resource area.

Seasonal restrictions to be implemented after reintroduction would have a negative impact on new exploration and production activities. The amount of acreage affected by the 1/4-mile protection buffer in each potential black-footed ferret habitat area is listed below.

	OIL AND GAS POTENTIAL	1/4 MILE BUFFER IN ACRES
Sunshine Bench	Moderate	8,000
Shiner	Moderate	10,200
Antelope Flat	Moderate	8,000
Twelve Mile	High	3,400
Buckskin Hills	Moderate	3,400

Proposed expansions of prairie dog colonies in the Sunshine Bench and Twelve Mile areas may have a minor negative impact to oil and gas activities by rerouting or moving such surface-disturbing activities associated with oil and gas activities (such as access roads, pipelines, drill pads, geophysical surveys). This may increase operational costs up to 25 percent per well. There would be no impact to the maintenance and operation of existing production facilities in the Twelve Mile area.

**From Management Actions for Riparian Habitat Resources**

Management actions for the protection of riparian areas under this alternative would continue to have a minor negative impact to oil and gas activities, including geophysical exploration.

**IMPACTS TO LEASABLE MINERALS PROGRAMS - PHOSPHATE**

Lands now under preference right lease for phosphate (7,650 acres) would be open to development and/or occupancy under this alternative with specific restrictions

to minimize adverse impacts to crucial deer winter habitat. This development could allow for the employment of up to 350 workers, adding \$4 million annually to the local economy.

**IMPACTS TO RECREATION MANAGEMENT PROGRAMS**

**From Management Actions for Fish and Wildlife Habitat Resources**

Travel restrictions limiting OHV use on 8,200 acres at Pariette waterfowl area to protect important waterfowl habitat could impact recreational hunting by restricting vehicular access; however since foot access is available, this would not be significant for the majority of the public land users. These restrictions would also benefit the recreation program by protecting wildlife during their critical reproduction season, thus enhancing watchable wildlife opportunities.

Travel restrictions limiting OHV use to designated roads on 19,400 acres identified for possible reintroduction of black-footed ferrets would impact driving for pleasure and hunting. After a reintroduction of ferrets is made, restrictions prohibiting early morning and evening hours would essentially eliminate hunting opportunities on those areas.

**From Management Action for Lands Programs**

Acquiring public vehicle access will provide hunters and recreationists with additional opportunities on approximately 70,700 public lands presently surrounded by private land and thus unreachable. Increasing access to public lands along the Green River will provide additional fishing and recreational opportunities.

Recommending protective withdrawals on identified developed recreation sites and along the Green River Scenic Corridor ACEC would protect scenic, historic, aesthetic and recreational values from future agricultural or mineral development.

**From Management Actions for Minerals Programs**

Development of identified high potential oil and gas areas would result in 155,600 acres currently identified as possessing semi-primitive, motorized values, thereby dropping one class to roaded natural in the Recreation Opportunity Spectrum inventory. This would change the type of recreation opportunities available in these areas



from a somewhat primitive to a more urban nature experience.

### **From Management Actions for Recreation Programs**

Semi-primitive, nonmotorized values on 6,900 acres would be protected for the enjoyment of primitive forms of recreation. This is 11 percent of the semi-primitive, nonmotorized lands in the resource area, and would significantly and positively impact recreation.

Managing for both primitive and developed forms of recreation would provide opportunities for people preferring primitive types of experiences (such as hiking, backpacking, horseback riding, and bicycling), as well as those preferring more developed and concentrated forms of recreation. Both types of use on public lands would benefit, and as a result increase.

### **From Management Actions for Soil and Water Resources**

Management actions to protect highly erodible and saline soils, and municipal watersheds by limiting OHV use on 104,200 acres to designated roads with seasonal restrictions could adversely affect driving for pleasure and, in the fall of the year, close access by hunters to some hunting areas.

### **From Management Action for Special Emphasis Areas**

Outstandingly remarkable wild and scenic river values would continue to be protected along the Green River segments identified as being eligible for further study and possible inclusion in the Wild and Scenic River System. This status would attract recreationists who enjoy various water-based recreation activities such as canoeing, rafting, fishing, hiking, and camping.

Not identifying two segments in Nine Mile Canyon and one in Argyle Canyon for protection and further study would leave these stream corridors open to uses that could damage identified outstandingly remarkable cultural and/or scenic values along the corridors. It is anticipated these impacts would be minor because both cultural resources and scenic values would continue to receive protection.

### **From Management Actions for Visual Resources**

Travel restrictions limiting OHV use to designated roads on 10,600 acres in Browns Park to protect scenic values along the Green River, could restrict access to the Green River by fishermen, but would improve scenic quality on Class II VRM lands in the river corridor and maintain existing wild and scenic river values and enhance the primitive recreationists' experience.

### **From Management Actions for Woodlands Programs**

Firewood gathering would continue to provide family-centered recreation opportunities on 202,700 acres.

## **IMPACTS TO RIPARIAN HABITAT RESOURCES**

Improving approximately 7,200 acres, or 98 miles, of inventoried riparian areas from an early and mid to a late or climax ecological stage would increase vegetation and wildlife species diversity and create wildlife, recreation, and watershed benefits. Criteria for maintaining a minimum of three (3) inches of herbaceous growth after livestock grazing in riparian areas would enhance riparian vegetation productivity, resulting in streambank and water quality improvements.

## **IMPACTS TO SOIL AND WATER RESOURCES**

### **From Management Actions for Minerals Programs**

In critical watersheds in the Myton Bench-Nine Mile Canyon and the Horseshoe Bend-Ashley Valley oil and gas producing regions, approximately 4,050 acres could be disturbed, causing disruption of the water cycle by exposing bare soil to wind and water, thereby accelerating erosion. This area is difficult to revegetate due to low rainfall (less than 8 inches a year) and poor soil development. Because of difficulty in revegetating these sites, accelerated erosion could increase if an active drilling program continues. This disturbance from oil and gas operations could cause an increase of soil erosion loss from two to five tons per acre per year. With five tons per acre per year increase in erosion from this activity, an additional 20,250 tons of soil per year could be lost.



Oil spills or pit failures would have the potential to cause soil contamination and loss of fertility around drill sites. If the spill were significant, either in extent into sensitive areas or amount of oil spilled, contamination could enter the area's surface water system. This could result in significant negative impacts to the area's riparian ecosystem.

Phosphate leases could occur on 7,650 acres. Actual surface-disturbing activities would involve a total of approximately 474 acres. It is unlikely that this total would be without any revegetation actions at any one time over the life of this plan. Thus, disturbance would have a short-term impact causing accelerated erosion only to the immediate area disturbed; however, long-term improved erosion conditions would occur due to successful reclamation as the mining activities progressed.

### **From Management Actions for Recreation Programs**

Restricting OHV use to designated roads with seasonal restrictions on 104,200 acres to minimize adverse surface runoff during periods of saturated soils and to protect critical (highly erodible or saline soils) and municipal watersheds which would significantly benefit these valuable resources.

### **From Management Actions for Riparian Habitat Resources**

Approximately 7,200 acres, or 98 miles, of riparian habitat would be improved, resulting in on-site and downstream benefits to the riparian ecosystem, affecting the vegetation, watershed and water quality values of the area. Downstream benefits to human health and safety due to reductions in flood hazards also would be gained.

### **From Management Actions for Vegetation Resources**

Achieving the ecological condition management goals outlined in this alternative would provide for a healthy watershed.

Treating 22,400 acres of closed, unproductive stands of predominantly pinyon-juniper and sagebrush vegetation types would improve long-term watershed conditions by increasing ground cover from herbaceous vegetation re-establishment following treatment. Estimating a long-term reduction in erosion by 50 percent, 336,000 tons of sediment would remain onsite over the life of this plan.

(See Appendix 8 for possible treatment opportunities by type and acres for each grazing allotment.)

## **IMPACTS TO VEGETATION RESOURCES**

### **From Management Actions for Livestock Programs**

Treating 22,400 acres of closed stands of pinyon-juniper and sagebrush community types would result in increased vegetation diversity and overall community health, while providing forage production for livestock and wildlife. A benefit derived from pinyon and juniper burning is increasing diversity of herbaceous vegetation (Severson and Rinne, 1988).

### **From Management Actions for Minerals Programs**

Oil and gas activities in the desert Myton Bench-Nine Mile Canyon and the Horseshoe Bend-Ashley Valley oil and gas regions could disturb approximately 4,050 acres. Low precipitation (less than 8 inches annually) and poor soil development in these areas, creates difficulty in vegetation reclamation. Surface-disturbed sites in these areas may remain devoid of desired vegetation for years, allowing opportunities for undesired plant species such as halogeton to invade. Wells may produce for five to twenty years before any rehabilitation efforts take place.

## **IMPACTS TO VISUAL RESOURCES**

Development of high potential oil and gas resources in the Nine Mile area could negatively impact as much as 3,200 acres of Class II VRM, therefore VRM Class II could not be maintained.

## **IMPACTS TO WOODLAND MANAGEMENT PROGRAMS**

The prohibition on cottonwood harvesting to enhance bald eagle habitat and wild and scenic river values on 17,500 acres along the Green River corridor would negatively affect those people who prefer to cut and burn cottonwood. This demand could not be met.

Pinyon and juniper firewood could continue to be harvested to meet demand on a sustained-yield basis on 202,700 acres. Juniper fenceposts and Christmas trees would continue to be harvested on these same acres to meet the local demand.



# CUMULATIVE IMPACTS OF IMPLEMENTING ALTERNATIVE A

## AREAWIDE CUMULATIVE IMPACTS

Continued, permanent surface-disturbing activities will have long-term, cumulative impacts on habitat loss for special status raptor species (i.e., continued disruption of nesting sites). Recent development of gas wells in the Duchesne field in and around one ferruginous hawk territory has apparently caused the birds to abandon their former nesting territory.

In addition, the removal of 24,000 acres (56 percent) of sagebrush and conversion to grass within two (2) miles of known sage grouse strutting grounds on Diamond Mountain in the last ten (10) has had a negative, long-term, cumulative impact on nesting and winter habitat. Therefore, the restrictions in this alternative to protect sage grouse would be a long-term positive benefit in maintaining a viable population.

Approximately 19,000 acres of identified black-footed ferret habitat in the resource area will be managed for the recovery of the species.

Forage allocated for wildlife would increase from the current use of 27,600 AUMs to 35,000 AUMs, a 21 percent increase, which will cumulatively mitigate the following past and present conditions: loss of habitat from mineral/energy development, urban expansion, increased recreational activities, livestock forage conflicts, and wildlife depredation on private land. This increase for wildlife habitat use could include potential cumulative livestock reductions in crucial habitat areas having forage depletions.

Increasing vehicle access into traditionally isolated, low human use areas would negatively impact wildlife and, in particular, black bear and mountain lion habitat.

The cumulative impacts to oil and gas activities under Alternative A are summarized below in Table 4-5 by 1) oil and gas producing regions, 2) oil and gas potential, and 3) level of protection (level 2-no surface occupancy).

**TABLE 4-5:  
SUMMARY OF CUMULATIVE IMPACTS TO OIL AND GAS ACTIVITIES  
UNDER ALTERNATIVE A**

OIL AND GAS PRODUCING REGIONS	HIGH POTENTIAL				MODERATE POTENTIAL			
	MANAGEMENT LEVEL 1		MANAGEMENT LEVEL 2		MANAGEMENT LEVEL 1		MANAGEMENT LEVEL 2	
	Acres*	%**	Acres*	%**	Acres*	%**	Acres*	%**
Myton Bench-Nine Mile Canyon	0	0	5,100	3	0	0	9,200	5
Horseshoe Bend-Ashley Valley	0	0	1,900	3	0	0	7,200	5
Clay Basin-Manila	0	0	7,100	47	0	0	8,900	21

\* Acres of public land mineral estate  
 \*\* Percentage of total high or moderate potential oil and gas mineral estate for the indicated region



Based on the success ratio of each producing region, 12 precluded wells would be successful. Assuming an oil price of \$20 per barrel, a gas price of \$1.50 per thousand cubic feet (MCFG), and cumulative production for average oil and gas wells in each region, approximately \$82,437,500 of oil and gas earnings before royalty and tax payments would not occur in the reasonable foreseeable future. From these earnings a total of \$10,304,700 (12.5 percent of total oil and gas earnings) in royalty payments would not be realized by state and federal governments. The state and federal governments would both lose royalty payments of \$5,152,300. The counties would lose royalty payments from the state of up to \$1,288,100. Counties would also lose revenues from property taxes and associated sales tax.



Under Alternative A, the number of wells and the amount of daily production that are precluded by no surface occupancy stipulations (level 2) are shown in Table 4-6.

**TABLE 4-6:  
OIL AND GAS DEVELOPMENT PRECLUDED UNDER ALTERNATIVE A**

OIL AND GAS PRODUCING REGION	HIGH POTENTIAL OIL/GAS MINERAL ESTATE							
	MANAGEMENT LEVEL 1				MANAGEMENT LEVEL 2			
	# Wells	BOPD <sup>1</sup>	MCFGPD <sup>2</sup>	BWPD <sup>3</sup>	# Wells	BOPD <sup>1</sup>	MCFGPD <sup>2</sup>	BWPD <sup>3</sup>
Myton Bench-Nine Mile Canyon	0	0	0	0	7	740	460	180
Horseshoe Bend-Ashley Valley	0	0	0	0	5	900	280	120
Clay Basin-Manila	0		0		7		62,300	

1 Barrels of oil per day  
2 Thousand cubic feet of gas per day  
3 Barrels of water per day

NOTE: The oil, gas and water production figures represent the cumulative initial production (IP) from the number of wells indicated.

OHV management actions allowing open use of 623,400 acres and use of designated or existing roads and trails on 85,600 acres could cumulatively impact watersheds resources, soils, scenic values, wildlife habitat and nesting sites, and threatened and endangered species.

Traffic counter and visitor register information in Browns Park indicate that visitor-use on the Upper Green River Corridor will continue to increase between ten (10) and fifteen (15) percent annually. This increase may have impacts on human health and safety, water quality, and aesthetic values within the river corridor.

Improving 7,200 acres (or 98 miles) of riparian areas in requiring a minimum of three (3) inches of herbaceous growth after grazing use would ensure maintenance of plant vigor, increase species diversity, aid deposition of sediments to rebuild degraded streambanks thereby providing protection, and increase wildlife habitat, recreation, and watershed benefits.

The livestock grazing industry in the Uinta Basin has insignificant economic impacts nationally, however, locally there are significant, socioeconomic impacts. Assuming that \$9.19 is the value of forage consumed per AUM,



50,299 AUMs brings in \$462,200 to the local economy annually.

Referencing recreation management, on a regional basis the recreation visitor-use day total for the Uinta Basin has insignificant economic impacts, however, locally there are significant, socioeconomic impacts. Assuming \$25 is the visitor-user day value, then 190,000 recreation visitor days will equate to \$4,750,000 into the local economy annually.

Ranchers and business people would probably be opposed to any lands actions that would apply to special management designation or restrictions on commodities. Recreation, cultural, and visual resource management (VRM) resource programs draw tourism which is seen as beneficial, but if commodity development is restrained by restrictions and special management designations, support for these resources may decline.

Oil and gas development in the desert Myton Bench-Nine Mile Canyon and the Horseshoe Bend-Ashley Valley Regions could potentially increase annually 20,250 tons of soil erosion. However, seasonally restricting OHV use to designated roads (approximately 104,200 acres consisting of highly erodible soils, saline soils, and municipal watersheds), along with rangeland improvements (saving 22,400 tons annually) will mitigate negative, cumulative erosion impacts within DMRA.

## **SPECIAL EMPHASIS AREA CUMULATIVE IMPACTS**

In Alternative A, the Crouse Canyon area, Green River Scenic Corridor ACEC, and the Red Creek Watershed ACEC, when analyzed together, encompass economic, ecological, and social values affecting public lands within Daggett County. The incremental impacts of the management prescriptions designed for these ACECs were analyzed for possible cumulative impacts to the resource area and outlined below. Since the Nine Mile Canyon, Pariette Wetlands, and Red Mountain areas are somewhat isolated pockets throughout the resource area they do not cumulatively, significantly impact the resource area and are not discussed in this section.

Suppression of wildfire to protect riparian zones in the Crouse Canyon and Green River Scenic Corridor ACEC will have long-term positive impacts to human safety, recreation, water quality, and aquatic-dependent wildlife in the Browns Park and northeast portion of the resource area.

Establishing a corridor for a common river crossing in level 2 lands in the Green River Scenic Corridor ACEC, and avoidance areas in level 2 lands in the Red Creek

Watershed ACEC will mitigate negative, cumulative visual and watershed impacts.

The closure to livestock grazing within the Crouse Canyon and Green River Scenic Corridor ACEC level 2 lands will have both short- and long-term positive impacts on bighorn sheep reintroduction strategies and recreation activities for these areas. Reducing or eliminating the potential disease risks between livestock and bighorn sheep will directly, indirectly, and cumulatively impact the reintroduced populations as a whole.

Level 3 lands in the Green River Corridor ACEC and Red Creek Watershed ACEC will be open to mineral leasing with special conditions. This may have negative impacts to recreation, wildlife, visual, and vegetation resources, however, leasing minerals, geophysical activities, mineral material disposition, and localities in these ACECs may enhance cumulative economic impacts to the northeast portion of the resource area.

There will be potential impacts to a portion of the designated and/or nominated ACECs in the resource area from increased visitor-use days, development of facilities in level 2 areas, and OHV use in the Green River Scenic Corridor ACEC. Negative impacts would include riparian habitat damage, increased human health and safety risks, increased hunting pressures, and an overall lessening of recreational experience.

There are some socioeconomic cumulative impacts in the Green River Scenic Corridor ACEC, Red Creek Watershed ACEC, Red Mountain, Nine Mile, Pariette Wetlands, and the wild and scenic river values of the three segments of the Green River. The social perception in the community is divided. The workers, although sympathetic to conservation/preservation of these areas, would want to protect industry. Social perceptions in the communities are divided over wildlife management, visual resources, and scenic resources. Ranchers and business people oppose restrictions placed on commodities, workers want to protect industry, and conservation groups want to protect ecosystems.

As a result of vegetation management objectives to attain the ecological stage most benefitting wildlife in crucial habitat and manipulate 800 acres of pinyon-juniper habitats in level 3 areas of the Green River Scenic Corridor ACEC, there will be long-term, positive impacts to multiple high-value resources encompassing wildlife, recreation, special status plant and animal species, vegetation, and water quality.



## **DIRECT AND INDIRECT IMPACTS OF IMPLEMENTING ALTERNATIVE B**

### **IMPACTS TO CULTURAL AND PALEONTOLOGICAL RESOURCES**

#### **From Management Actions for Fish and Wildlife Habitat Resources**

Accidental disturbance of both cultural and paleontology resources would be less than in any other alternative because fewer land treatments and water developments would be completed to benefit wildlife.

#### **From Management Actions for Livestock Programs**

Accidental disturbance of both cultural and paleontology resources would be less than any other alternative because fewer developments such as land treatments and water developments would be completed for livestock.

#### **From Management Actions for Minerals Programs**

Vandalism and accidental disturbance of both cultural and paleontology resources by activities associated with mineral exploration and development would be less than with any other alternative because mineral development would be restricted the most under this alternative.

#### **From Management Actions for Recreation Programs**

Continued active management of the John Jarvie National Historic District and Historic Site, involving interpretation of the Old Rock Saloon, and a self-guided historic tour in Browns Park would allow the public to gain a better understanding of the history of this fascinating area. By preserving, displaying, and interpreting the many structures and items at the site, the public would gain a better appreciation of the need to protect and preserve cultural resources.

Protecting the Desolation Canyon National Natural Landmark on the lower Green River below the Sand Wash Recreation Site would increase public awareness of the importance of John Wesley Powell's historic trip down the Green River in 1869. Establishment of the 50,784-acre Nine Mile Canyon ACEC would provide an opportunity to develop and interpret the many cultural resources in the area for public enjoyment.

Vandalism and accidental disturbance of resources would occur less frequently than in any other alternative, because fewer developed recreation facilities and more extensive OHV restrictions would result in less intensive recreation use than any other alternative.

#### **From Management Actions for Riparian Habitat Resources**

Fencing of riparian areas in high-density cultural site occurrence areas would restrict uncontrolled uses within these areas, thereby preserving these resources.

#### **From Management Actions for Special Emphasis Areas**

Designating Nine Mile Canyon, Lower Green River, Red Mountain-Dry Fork and the Browns Park Complexes as ACECs would increase management priority consideration for the areas. As a result site deterioration would lessen and very few resources would be lost.

### **IMPACTS TO FISH AND WILDLIFE HABITAT RESOURCES**

#### **From Management Actions for Fish and Wildlife Habitat Resources**

Sage grouse habitat would be significantly improved by seasonally protecting 173,000 acres of known nesting habitat from surface disturbance.

Prairie dog colonies would be maintained in 33,500 acres of identified black-footed ferret habitat and emphasis placed on vegetation management that enhances prairie dog population stability. This would support 196 ferrets in DMRA, assuming 1 ferret per 124 acres and a maximum of 2 reintroduction areas used.

Management actions to protect raptor habitats involving oil and gas activities would result in significant positive long-term impacts. Impacts include the year-long protection of special status raptor species nest sites and the maintenance of suitable raptor habitat, possibly increasing the suitable nesting habitat and thus increase the populations of these species.

#### **From Management Actions for Livestock Programs**

Overall, proposed management actions for livestock programs under this alternative would have long-term direct beneficial impacts on wildlife habitat resources.



Livestock would be excluded from 173,000 acres of sage grouse nesting habitat seasonally and excluded from 9,700 acres of known strutting grounds year-round. These restrictions along with preventing or restricting OHV use or surface-disturbing activities within six miles of known strutting grounds would protect 97 percent of all sage grouse nests. Sage grouse brooding habitat in these areas would improve with increased presence of forbs and grasses necessary for chick survival in riparian areas. Insect densities should increase with increased vegetation density and diversity also enhancing sage grouse chick survival. This alternative offers the greatest protection to sage grouse.

Crucial deer and elk winter range (194,000 acres) would be enhanced by managing it for forage production for wildlife, if necessary with the necessary reductions in or closures to livestock use.

The removal of livestock from within 10 miles of potential bighorn reintroduction areas (affecting 123,800 acres) would reduce the likelihood of disease transmission from livestock to bighorn sheep, thereby resulting in positive significant long-term impacts.

### **From Management Actions for Riparian Habitat Resources**

Management actions designed to protect and enhance riparian habitat would provide direct long-term benefits to fisheries habitat and 14 of the 21 special status species in DMRA. Thus these actions are significant to wildlife habitat management success for the resource area and the region.

### **From Management Actions for Vegetation Resources**

Alternative B allows wildlife forage demand to increase from current levels of 27,600 AUMs to 46,000 AUMs, a 66 percent increase. The additional 18,400 AUMs would come primarily from vegetation treatments and possible reductions in livestock preference levels. Increased numbers of both watchable and hunted wildlife could generate an additional \$126,100 per year to the local economy in expenditures for lodging, food, transportation, and equipment (Bangertner, 1989).

## **IMPACTS TO LANDS MANAGEMENT PROGRAMS**

Forty-one (41) percent of the area involved in the corridor through Jesse Ewing Canyon in the Browns Park area

contains slopes greater than 30 percent. Slopes greater than 30 percent pose increased human safety risks when involving heavy equipment. Such slopes within the corridor will cause the width of the corridor to be reduced from 1/4 mile to approximately 1/8 mile. The corridor is presently near capacity, based on industry's prescribed distance requirements between certain types of rights-of-way (i.e., distance between pipelines and transmission lines or between two pipelines) and the 30 percent slopes limiting construction options. Therefore, even though the corridor is established, it is available for a maximum of 3 new facilities. When this capacity is reached, a north-south passage from Wyoming through northeastern Utah would be essentially closed.

## **IMPACTS TO LIVESTOCK MANAGEMENT PROGRAMS**

### **From Management Actions for Fish and Wildlife Habitat Resources**

Grazing restrictions and closures involving sage grouse strutting grounds and nesting habitat would adversely affect livestock grazing on 27 allotments totaling approximately 182,700 acres. Keeping livestock 1/2 mile from strutting grounds would entail continual herding during the grazing period on 13 allotments. The six-mile seasonal restriction from March 1 to June 30, would reduce livestock AUMs approximately 12 percent on 27 allotments affecting 28 livestock grazing permittees, or change season of use to outside the March 1 to June 30 period, putting grazing pressure on private lands during active cropland growing periods.

### **From Management Actions for Riparian Habitat Resources**

Excluding livestock from a 700-foot buffer involving riparian areas in early and mid ecological stages to protect riparian habitat would provide a significant hardship to livestock permittees as it would exclude approximately 20,000 acres from grazing, thereby reducing current livestock use by approximately 4,000 AUMs, affecting 22 allotments. This would mean a loss of approximately \$36,760 annually to the local livestock industry. Eight of the affected allotments would require replacement watering sources for livestock.



**From Management Actions for Soil and Water Resources**

The grazing closure on 6,000 acres of municipal watersheds would reduce livestock use by approximately 600 AUMs and significantly affect two grazing allotments.

**From Management Actions for Vegetation Resources**

The grazing closure on 48,000 acres of special status plant species habitat would reduce livestock use by 3,100 AUMs affecting six grazing allotments, resulting in a significant, long-term negative impact to livestock programs.

Under this alternative, a maximum of 46,000 AUMs would be maintained for wildlife, allowing big game use to increase from the present use of 27,600 AUMS. To stay within estimated total forage limits, livestock preference could be reduced up to 11,467 AUMs. These reductions equate to a maximum of \$105,427 annual loss to the local livestock industry and comprise up to 23 percent of current total grazing preference. Preliminary forage estimates indicate the following livestock AUMs would be reduced:

<u>Planning Area</u>	<u>Estimated AUM Reduction</u>
Ashley/Duchesne	1,480
Diamond Mountain	3,071
Three Corners	6,916

The livestock grazing closure on the ten-mile protection zone in potential bighorn sheep habitat would involve approximately 184,000 acres, thereby reducing livestock preference an additional 8,500 AUMs. Such a reduction would impact 20 allotments and 20 grazing permittees. Additional forage attained through vegetation manipulation and management would be allotted to either wildlife consumptive use or for watershed maintenance. Additional forage over preference would not be allotted to livestock consumption regardless of whether wildlife needed the forage. This action would eliminate additional forage above livestock preference on a temporary, nonrenewable basis. The maximum AUMs gained from vegetation treatments and livestock management strategies is approximately 5,000 AUMs.

**IMPACTS TO LEASABLE MINERALS PROGRAMS - OIL AND GAS**

**From Management Actions for Cultural and Paleontological Resources**

Management actions for high density cultural areas would have significant negative, direct, and long-term impacts on oil and gas activities under this alternative. Approximately 56,000 acres of high potential mineral estate would be affected in the Myton Bench-Nine Mile Canyon and the Clay Basin oil and gas producing regions.

**From Management Actions for Fish and Wildlife Habitat Resources**

Management actions for protection of deer and elk crucial winter habitat would have a significant negative impacts on 13,000 acres of high potential mineral estate in the Myton Bench-Nine Mile Canyon and the Clay Basin oil producing regions, resulting in significant, negative impacts. The following are specific discussions of these impacts.

Management actions to protect sage grouse involve a no surface occupancy condition on sage grouse strutting grounds and a seasonal restriction on a six-mile nesting habitat area would have significant negative impacts on 76,400 acres of high potential mineral estate in the Myton Bench-Nine Mile Canyon, Horseshoe Bend-Ashley Valley, and Clay Basin oil and gas producing regions.

Raptor protection zones established around all active eagle, Swainson's hawk, ferruginous hawk, and peregrine falcon nest sites would significantly impact 1,930 acres of high potential mineral estate in the Myton Bench-Nine Mile Canyon region, Horseshoe Bend-Ashley Valley, and Clay Basin oil and gas producing regions.

Impacts due to restrictions applied in potential black-footed ferret reintroduction areas prior to and following reintroduction are analyzed for all potential black-footed ferret reintroduction areas, although only 2 reintroduction sites are assumed to be chosen. Table 4-7 outlines general information concerning the potential black-footed ferret habitat reintroduction areas as it relates to oil and gas activity.



**TABLE 4-7:  
POTENTIAL BLACK-FOOTED FERRET REINTRODUCTION AREAS  
UNDER ALTERNATIVE B**

	SUNSHINE BENCH	SHINER	ANTELOPE FLAT	TWELVE MILE	EIGHT-MILE FLAT
Priority for Reintroduction Areas	0	2	0	0	5
Oil/Gas Potential	Moderate	Moderate	Moderate	High	High
Identified Habitat (in acres)	4,800	7,800	2,600	1,700	16,600
Percent of Area Leased*	38	5	9	8	98
Current Number of Producing Wells*	0	5	0	0	98
Projected Number of New Wells	5	5	15	20	100
Oil/Gas Spacing	160	40	40	160	40

\* Source: BLM Automated Lands and Minerals Record System and Automated Inspection Records System, 8/91

Table 4-8 outlines the anticipated adverse impacts to oil and gas activities in the five potential release sites.

Three oil wells would be precluded from development on both the Twelve Mile area and the Eight-Mile Flat area.

**TABLE 4-8:  
COMPARISON OF ALLOWABLE SURFACE DISTURBANCE VERSUS  
PROJECTED OIL AND GAS SURFACE USE NEEDS**

	10% OF TOTAL FERRET AREA	PROJECTED WELLS (in acres)	PRODUCING WELLS	MAXIMUM SURFACE DISTURBANCE*	TOTAL (in Acres)
Sunshine Bench	480	5	0	14	70
Shiner	780	5	0	14	70
Antelope Flat	260	15	0	14	210
Twelve Mile	170	20	4	14	308
Eight-Mile Flat	1,660	100	55	14	1,785

\* 7-acre maximum surface disturbance is assume for currently producing wells

After ferrets are released, no new surface-disturbing activities relating to oil and gas will be allowed between March 1 through August 31 within 1/4 mile of habitat occupied by black-footed ferrets to protect reproductive and active litter periods. These restrictions will not apply to maintenance and operation of existing production facilities. The amount of acreage affected by the 1/4-mile buffer in each potential black-footed ferret habitat area is listed below.

	OIL AND GAS POTENTIAL	1/4 MILE BUFFER IN ACRES
Sunshine Bench	Moderate	8,000
Shiner	Moderate	10,200
Antelope Flat	Moderate	4,300
Twelve Mile	High	3,400
Eight-Mile Flat	High	20,600



Prairie dog colonies would be allowed to expand under this alternative by 50 percent of their current size in the Sunshine Bench, Twelve Mile, and Antelope Flat areas. This may increase operational costs up to 25 percent per well by rerouting or moving such surface-disturbing activities associated with oil and gas activities (such as access roads, pipelines, drill pads, geophysical surveys). These restrictions will not apply to the maintenance and operation of existing production facilities in the Twelve Mile or Eight Mile Flat area.

### **From Management Actions for Recreation Programs**

Management actions involving semi-primitive, nonmotorized areas would have significant negative impacts on 2,000 acres of high potential mineral estate in the Myton-Nine Mile Canyon and the Clay Basin oil and gas producing regions.

### **From Management Actions for Soil and Water Resources**

Management actions for critical soils (highly saline and erodible) in the Diamond Mountain Plateau, the Nine Mile Canyon, and the Clay Basin oil and gas producing regions would affect 28,000 acres of federal mineral estate and would have a significant, negative, direct, and long-term impact on oil and gas activities.

### **From Management Actions for Vegetation Resources**

Management actions protecting special status plant habitat would have a significant negative, direct and long-term impact on 27,300 acres of high oil and gas potential area in the Myton Bench-Nine Mile Canyon region.

## **IMPACTS TO LEASABLE MINERALS - PHOSPHATE**

Lands now under preference right lease for phosphate would be closed to development and/or occupancy under this alternative. Although current development plans call for underground development upon these leases, some surface disturbance would be required. As it stands, this alternative would preclude such development, resulting in a lost opportunity to employ approximately 300 miners and to develop some of the most valuable phosphate resources in the region.

## **IMPACTS TO LEASABLE MINERALS - TAR SANDS**

Development of asphaltic materials in the Pariette STSA would be precluded under this alternative. Lands most suited for the development of tar sands as a source of asphalt would be designated as level 2 under this alternative. This could limit surfacing of roads in the Pariette area.

## **IMPACTS TO MINERAL MATERIALS PROGRAMS**

Management actions to protect or enhance other resource values would close nearly half the available high and/or moderate potential lands to mineral materials development under this alternative. The greatest impacts occur in Browns Park, Ashley Valley, Pariette, Wells Draw, and Cowboy Bench. This would be a significant long-term negative impact to the entities dependent on mineral materials due to additional costs associated with increased haul distances.

## **IMPACTS TO RECREATION MANAGEMENT PROGRAMS**

### **From Management Actions for Cultural and Paleontological Resources**

OHV restrictions and closures to protect cultural sites eligible or listed on the National Register of Historic Places would impact hunting and driving for pleasure.

### **From Management Actions for Fish and Wildlife Habitat Resources**

OHV restrictions to designated roads with seasonal restriction to protect sage grouse on 172,900 acres would limit driving for pleasure over much of Diamond Mountain, Browns Park and Clay Basin in the spring each year.

OHV restrictions to designated roads on 33,600 acres identified for possible reintroduction of black-footed ferrets would impact the recreation uses of driving for pleasure and hunting. After a reintroduction of ferrets is made, recreation use prohibitions during early morning and evening hours would essentially would eliminate hunting opportunities on these areas.

OHV closures on 22,600 acres of special status raptor nesting habitat would affect driving for pleasure throughout the resource area.



### **From Management Actions for Lands Management Programs**

Acquiring public foot access will provide hunters and recreationists who hike with additional opportunities on 48,400 acres of public land presently surrounded by private land and thus unreachable. Increasing access to public lands along the Green River will provide additional fishing and recreational opportunities.

Recommending protective withdrawals on 85,000 acres in high value recreation areas would maximize the protection of scenic, historic, aesthetic and recreation values from future development.

### **From Management Actions for Recreation Programs**

Semi-primitive, nonmotorized values on 60,800 acres would be protected for the enjoyment of primitive forms of recreation. This is 100 percent of the semi-primitive, nonmotorized lands in the resource area.

Not providing additional developed facilities such as campgrounds and picnic areas would limit opportunities for people preferring more developed and concentrated forms of recreation. Many of these individuals would not spend time on public lands. However, the benefit to those people preferring less developed and more extensive forms of recreation would offset this negative impact. It is estimated that overall use would increase approximately 2 to 4 percent a year.

### **From Management Actions for Riparian Habitat Resources**

OHV travel would not be allowed on 20,000 acres of riparian habitat. This would preclude public vehicular access from those areas most often visited for fishing, hunting and sightseeing pursuits and is seen as a negative impact to recreation programs.

### **From Management Actions for Soil and Water Resources**

OHV closures on 22,300 acres to protect highly erodible soils and municipal watersheds, and the OHV restriction limiting use to designated roads with seasonal restrictions on 62,700 acres of highly saline soils could affect driving for pleasure all year and in the fall of the year vehicular access by hunters to some hunting areas would not be possible in a vehicle.

### **From Management Actions for Special Emphasis Areas**

Outstandingly remarkable wild and scenic river values would continue to be protected along all six river segments identified as being eligible for further study and possible inclusion in the Wild and Scenic River System. This status would attract recreationists who enjoy various water based recreation activities as well as those interested in scenic and cultural based forms of recreation.

### **From Management Actions for Vegetation Resources**

OHV closures on 51,000 acres of relict vegetation communities and special status plant habitat would eliminate driving for pleasure and limit hunting use to access by foot or horseback.

### **From Management Actions for Visual Resources**

OHV closures (7,430 acres) and restrictions to designated roads and trails (11,970 acres) in the Green River Corridor would eliminate vehicle access to the Green River and improve its scenic qualities in this heavily used recreation area.

OHV restrictions to Nine Mile Canyon, middle Green River, lower Green River, and Argyle Canyon would restrict access along these river courses and thus scenic values would be enhanced and protected.

### **From Management Actions from Woodlands Programs**

Firewood gathering would provide family-centered recreation opportunities on 51,300 acres. This would result in a reduction in the area available to pursue this popular activity and opportunities could become hard to find. Fewer people could pursue this activity on public lands.

## **IMPACTS TO RIPARIAN HABITAT RESOURCES**

### **From Management Actions for Livestock Programs**

Livestock grazing closures in riparian areas presently in early and mid condition would improve riparian habitat, thereby providing physical filtering of water, bank stability,



water storage, assist in the recharge of underground aquifers while improving wildlife habitat which is a product of these functions. However, not using livestock grazing to control noxious weeds on 18 percent of the early and mid ecological stage riparian areas, would result in weed expansion in riparian areas. These weed expansions could move ecological condition toward an earlier ecological stage.

Allowing wildlife forage to increase for wildlife use up to 67 percent from present forage use levels could cause unacceptable use on riparian areas, especially during drought years when wildlife would concentrate in wet areas. Livestock use could be controlled during these periods while wildlife are not easily controlled. Benefits to the riparian resource from reduced livestock grazing could be offset by increased wildlife use.

### **From Management Actions for Vegetation Resources**

Improving 7,200 acres, or 98 miles, of riparian habitat from early and mid to late or climax ecological stage would increase species diversity and result in wildlife, recreation, and watershed benefits. Maintaining a minimum of three inches herbaceous growth after grazing use in riparian areas would insure maintenance of plant vigor, provide streambank protection, and aid deposition of sediments to rebuild degraded streambanks.

## **IMPACTS TO SOIL AND WATER RESOURCES**

### **From Management Actions for Minerals Programs**

Phosphate leases could occur on 7,650 acres; however, actual surface-disturbing activities would involve only 474 acres. It is unlikely the total surface-disturbed area would be without any revegetation actions at any one time over the life of this plan. Thus, disturbance would have a short-term impact causing accelerated erosion only to the immediate area disturbed; however, long-term improved erosion conditions would occur due to successful reclamation as the mining activities progressed.

A no-surface-occupancy restriction on 28,000 acres of critical soils (high saline and erodible) would protect these areas from oil and gas exploration disturbance and resulting accelerated erosion.

Oil and gas development in the desert areas of Myton Bench-Nine Mile Canyon and Horseshoe Bend-Ashley Valley oil and gas regions could cause 4,050 acres of

disturbance over 15 years. This disturbance would cause a long-term increase of an additional 20,250 tons per year due to an increase of 5 tons per acre per year caused by disturbance and the lack of success of revegetation in this area.

### **From Management Actions for Recreation Programs**

OHV use closures and restrictions on 104,200 acres of highly erodible and saline soils and municipal watersheds would protect these areas from accelerated erosion.

### **From Management Actions for Riparian Habitat Resources**

Improvement of 7,200 acres of riparian habitat would result in on-site and downstream watershed benefits improving water quality, raising water tables, increasing streambank stability, and reducing downstream flood damage.

### **From Management Actions for Vegetation Resources**

Alternative B proposes 9,000 acres of vegetation treatments. Most of the vegetation treatments proposed would consist of juniper-pinyon woodlands and decadent sagebrush prescribed burns and pinyon-juniper firewood harvesting. These improvements would provide long-term watershed benefits by increasing ground cover through natural establishment and seedings of herbaceous vegetation. One benefit derived from juniper and pinyon burning is increasing diversity of herbaceous vegetation species such as western wheatgrass (Severson and Rinne, 1988). An ancillary benefit derived from this would be greater ground cover to lessen soil movement.

Any additional forage would be allocated to wildlife or watershed. If allocated to wildlife, 50 percent would go to consumptive use for wildlife and 50 percent would go toward watershed maintenance. If allocated to watershed only, 100 percent of the additional forage would go towards nonconsumptive watershed maintenance which would provide the most protection from erosion and benefit watershed principally. Even with 100 percent allocation to watershed, this alternative would benefit watershed the least due to the low number of acres identified for vegetation treatment and the least amount of pinyon-juniper woodlands and sagebrush in mid ecological condition.



## **IMPACTS TO VEGETATION RESOURCES**

### **From Management Actions for Minerals Programs**

Oil and gas activity in the desert Myton Bench-Nine Mile Canyon and the Horseshoe Bend-Ashley Valley oil and gas regions could disturb approximately 4,050 acres that would be cleared over a 15-year period for well pad, facilities, access roads, and pipeline development. Because of low precipitation (8 inches annually) in the area and difficulty of vegetation reclamation, these areas may remain in an early ecological seral stage for the long-term after vegetation is cleared. Wells may produce for five to twenty years before rehabilitation takes place.

### **From Management Actions for Vegetation Resources**

Treating 9,000 acres would result in high vegetation diversity and forage production because most of this acreage is pinyon-juniper and sagebrush vegetation types in closed stands. A benefit derived from pinyon and juniper burning is increased diversity of herbaceous vegetation (Severson and Rinne, 1988).

Allowing grazing use after April 1 on winter grazing permits only when spring grazing can be rotated, deferred, or rested would insure desert vegetation vigor during the critical spring growing season.

## **IMPACTS TO VISUAL RESOURCES**

The identified utility corridors pass through areas identified as being VRM Class II in Jesse Ewing Canyon, the Green River Scenic Corridor in Browns Park, and along the Taylor Mountain Road north of Vernal. It is doubtful that adequate mitigation could be accomplished to maintain the Class II standard if transmission lines are constructed nearby.

## **IMPACTS TO WOODLAND MANAGEMENT PROGRAMS**

Closures to woodland harvesting to protect semi-primitive, nonmotorized areas, riparian habitat, and special emphasis areas would combine to result in the inability of DMRA to meet local demand. Closures to cottonwood harvesting to protect wild and scenic river values along the Green River (17,500 acres) would effectively eliminate the harvest of cottonwood by people who prefer it. This need could not be accommodated by DMRA.

Community demand for pinyon and juniper firewood, juniper fenceposts and Christmas trees would continue to be met on 51,300 acres. Commercial-quality woodlands open for cutting could support an annual harvest of 1,100 cords over an extended period of time on a sustained-yield basis. However, this would not meet current demand for firewood; sale of wood products to commercial cutters would be reduced by approximately 50 percent.

## **CUMULATIVE IMPACTS OF IMPLEMENTING ALTERNATIVE B**

### **AREAWIDE CUMULATIVE IMPACTS**

Special status raptor species habitat receives the maximum protection year-round from permanent surface-disturbing activities (i.e., continued disruption of nesting sites). This is a positive, long-term, cumulative impact for the species. In addition, 95 percent of crucial sage grouse nesting habitat (173,000 acres) would be protected seasonally by restricting surface-disturbing activities within 6 miles of known strutting grounds. Studies show that 95 percent of all sage grouse nests are located within 6.0 miles of strutting grounds. This alternative protects the maximum acres of sage grouse habitat.

Approximately 123,800 acres (17 percent) of BLM lands in the resource area would be managed for bighorn sheep habitat. Also, approximately 41,000 acres of identified black-footed ferret habitat in the resource area will be managed for the recovery of the species.

Vehicle access would not be acquired in traditionally isolated, low human use areas that are heavily used by wildlife. This is a positive, long-term, cumulative impact for wildlife, and in particular sensitive species, such as black bear and mountain lion, because they will not be displaced from preferred habitat. Increased metabolic rates, lowered body weights, reduced fetus weights, and increased mortality associated with increased human activity and harassment will not occur.

Forage allocated to wildlife would increase from the current use of 27,600 AUMs to 46,000 AUMs, a 40 percent increase, which will cumulatively mitigate the following past and present conditions: loss of habitat from mineral/energy development, urban expansion, increased recreational activities, livestock-wildlife forage conflicts, and wildlife depredation on private lands.

Seasonal restriction management decisions on 8.5 miles of the corridor route (71 percent) within the Browns Park Complex will negatively impact right-of-way construction.



This will affect the region twofold: negatively by economic, cumulative impacts on a local scale, but positively by mitigating impacts to deer winter range, raptor habitat, cultural properties, semi-primitive, nonmotorized areas, and areas of highly erodible soils.

Excluding livestock from approximately 7,200 acres of early and mid ecological condition riparian areas would result in an annual loss of \$36,800 to the local economy. Excluding livestock from municipal watersheds would result in an additional, local loss of \$5,500 per year. Increased wildlife use from 27,600 AUMs to a maximum of 46,000 AUMs could result in livestock reductions of up

to 11,467 AUMs, causing an annual loss of up to \$105,400 to the local livestock industry. Excluding livestock grazing around sage grouse strutting grounds for six (6) miles from March 1 to June 30, and 1/2 mile year round could result in a yearly loss of \$11,500. No livestock grazing in potential bighorn sheep habitat would result in an added \$78,100 loss yearly to the local livestock industry. These restrictions could therefore result in a sum total loss of up to \$237,300 yearly to the livestock industry and could force one-third of the livestock operators out of business.

The cumulative impacts to oil and gas activities under Alternative B are summarized below in Table 4-9 by 1) oil and gas producing regions, 2) oil and gas potential, and 3) level of protection (level 1 and level 2 no surface occupancy).

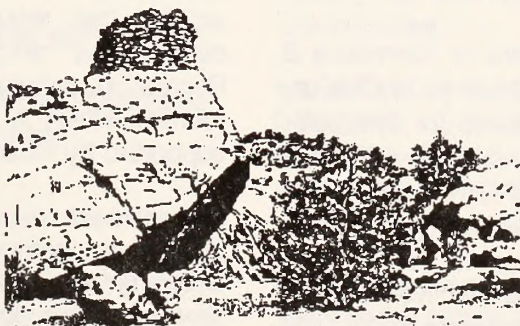
**TABLE 4-9:  
SUMMARY OF CUMULATIVE IMPACTS TO OIL AND GAS ACTIVITIES  
UNDER ALTERNATIVE B**

OIL AND GAS PRODUCING REGIONS	HIGH POTENTIAL				MODERATE POTENTIAL			
	MANAGEMENT LEVEL 1		MANAGEMENT LEVEL 2		MANAGEMENT LEVEL 1		MANAGEMENT LEVEL 2	
	Acres*	%**	Acres*	%**	Acres*	%**	Acres*	%**
Myton Bench-Nine Mile Canyon	28,900	19	53,300	34	33,500	18	65,000	34
Horseshoe Bend-Ashley Valley	1,400	2	10,300	15	5,400	4	95,800	65
Clay Basin-Manila	2,200	15	7,600	50	4,900	12	18,900	45

\* Acres of public mineral estate. \*\*Percentage of total high or moderate potential oil/gas mineral estate for the region.

Under Alternative B, the number of wells and the amount of daily production that would be precluded by no surface occupancy stipulations (levels 1 and 2) are shown in

Table 4-10. This analysis is based upon the reasonable foreseeable development of oil and gas producing regions (see Appendix 4: Reasonable Foreseeable Development).





**TABLE 4-10:  
OIL AND GAS DEVELOPMENT PRECLUDED UNDER ALTERNATIVE B**

OIL AND GAS PRODUCING REGION	HIGH POTENTIAL OIL/GAS MINERAL ESTATE							
	MANAGEMENT LEVEL 1				MANAGEMENT LEVEL 2			
	# Wells	BOPD <sup>1</sup>	MCFGPD <sup>2</sup>	BWPD <sup>3</sup>	# Wells	BOPD <sup>1</sup>	MCFGPD <sup>2</sup>	BWPD <sup>3</sup>
Myton Bench-Nine Mile Canyon	42	4,500	2,800	1,100	76	8,100	5,000	2,000
Horseshoe Bend-Ashley Valley	0.6	110	40	15	4.5	800	250	100
Clay Basin-Manila	2		20,000		7.5		67,000	

1 Barrels of oil per day. 2 Thousand cubic feet of gas per day. 3 Barrels of water per day.

NOTE: The oil, gas and water production figures represent the cumulative initial production (IP) from the number of wells indicated.

Based on the success ratio of each producing region, 100.7 precluded wells would be successful. Assuming an oil price of \$20 per barrel of oil, a gas price of \$1.50 per thousand cubic feet of gas (TCFG), and an average cumulative production of oil and gas wells in the region, approximately \$444,673,100 of oil and gas earnings before royalty and tax payments would not be realized. From these earnings, a total of \$55,584,100 (12.5 percent of total oil and gas earnings) in royalty payments would not be realized by the state and federal governments. The state and federal governments would both lose royalty payments of \$27,792,100. The counties would lose royalty payments from the state of up to \$6,948,000. Counties would also lose revenues from property taxes and associated sales tax. The cumulative, significant, negative impacts under Alternative B would restrict oil and gas exploration and development as well as subsequent economic benefits. The cumulative impacts are therefore significant and negative in nature (see Tables 4-5 and 4-6) since 1) the amount of restricted lands closed to leasing or no surface occupancy is high, 2) the number of seasonal restrictions is high, therefore affecting the potential mineral estates, and 3) there are numerous areas having multiple overlapping seasonal restrictions.

Referencing recreational management in Alternative B, approximately 294,400 acres would be open to OHV use and 258,400 acres would be restricted to designated roads. This could cumulatively impact watershed resources, soils, scenic values, wildlife habitat and nesting sites, and special status species.

Traffic counter and visitor register information in Browns Park indicate that visitor-use on the upper Green River corridor will continue to increase between ten (10) and fifteen (15) percent annually. This increase may have

impacts on human health and safety, water quality, and aesthetic values within the river corridor.

Management decisions in Alternative B to improve 7,200 acres (98 miles) of riparian areas, by requiring a minimum of three (3) inches of herbaceous growth after grazing use, will insure maintenance of plant vigor, increase plant and animal species diversity, provide streambank protection and aid deposition of sediments to rebuild degraded streambanks, and augment wildlife, recreation, and watershed benefits. The aforementioned \$237,260 loss from restricted livestock grazing would significantly impact individual operators, local businesses, and local counties. Along with this reduction, the oil and gas management objectives in this alternative would show a decrease in 3,500 potential jobs in the local region.

Pertaining to recreation, on a regional basis the recreation visitor day total in the Uintah Basin have insignificant economic impacts, however, locally there are significant, socioeconomic benefits. Assuming \$25 is the visitor-use day value, then 164,000 recreation-visitor days would bring in \$4,100,000 to the local economy. Ranchers and business people would probably be opposed to any lands actions that would apply for special management designations and/or restrictions on commodities. Recreation, cultural, and VRM resource programs draw tourism, which is beneficial, but may not be strongly supported by these groups.

Management decisions for oil and gas no-surface-occupancy restrictions on 28,000 acres for municipal watershed and erodible soils; and, oil and gas and OHV seasonal restrictions to designated roads on 104,200 acres of floodplain and highly saline soils will be used in this alternative to mitigate accelerated erosion. In addition, rangeland improvements on 9,000 acres would



reduce erosion by 9,000 tons annually, and simultaneously increase vegetation diversity and forage production for livestock and wildlife. On the other hand, oil and gas development in the Myton Bench-Nine Mile Canyon and the Horseshoe Bend-Ashley Valley regions could, over time and space, cumulatively disturb approximately 270 acres of highly erodible soils per year, which may reduce vegetation ecological condition to an early stage, thereby restraining and/or limiting reclamation success in the long-term.

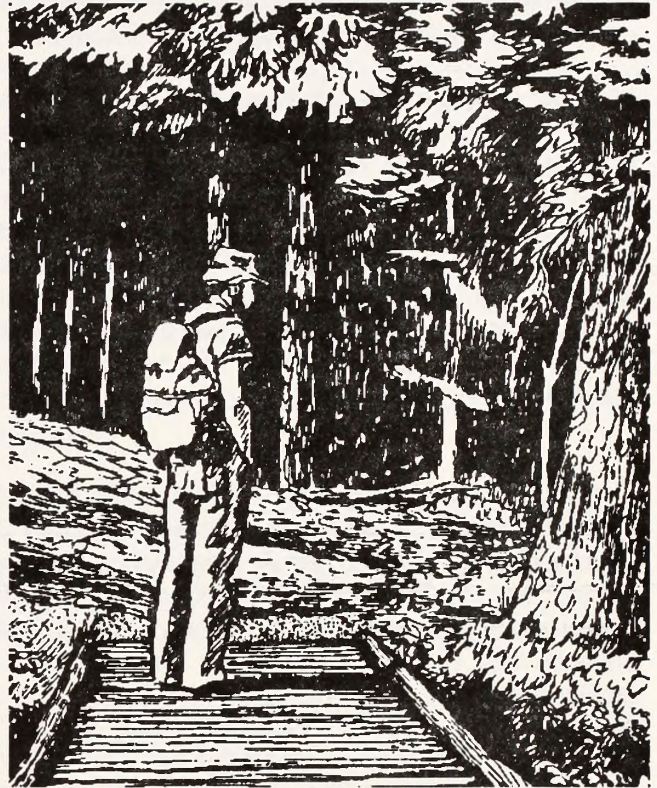
**SPECIAL EMPHASIS AREA CUMULATIVE IMPACTS**

In Alternative B, all the proposed ACECs encompass cumulative economic, ecological, and social values affecting three distinct areas, or "influence zones", within DMRA. These may be defined as follows:

<u>ACEC Nomination</u>	<u>Influence Zones within DMRA</u>
Browns Park Complex Upper Green River Scenic Corridor Red Creek Watershed	Browns Park, Daggett County area
Red Mountain-Dry Fork Vernal, Complex	Population areas of Jensen, Maeser, Davis and Naples within Uintah County
Middle Green River	Uintah and Duchesne Counties
Pariette	
Lower Green River Nine Mile Canyon Lears Canyon	

<u>Wild and Scenic River Nomination</u>	<u>Influence Zones within DMRA</u>
2 stretches of Nine Mile Creek	Uintah and Duchesne Counties
3 stretches of the Green River Argyle Creek	

The following are the cumulative impacts affecting any one or all of the influence zones within the resource area.



The protection of areas and objects significant to the traditional lifeways and religious ceremonies of the Ute Tribe occurring within these areas will have long-term, positive, cumulative impacts on the social diversity, therefore social health, of the resource area, Uinta Basin, and the nation as a whole.

The suppression of wildfires to maintain late to climax ecological stages in relict vegetation communities within the Dry Fork-Red Mountain Complex and Lears Canyon areas will have long-term, positive impacts on the soil, watershed, and vegetation resources in the Vernal and Duchesne County areas. Long-term positive impacts to the regional network of native vegetation comparison areas will also be realized. Data gained from past, present, and future studies of these areas following wildfire disturbance will provide valuable information relating to the natural recovery processes of these communities.

Lands activity decisions involving exclusion areas and protective withdrawals in level 1 lands, and avoidance areas in level 2 lands within the areas will mitigate the negative cumulative water quality impacts to the Green River throughout the resource area.

Continuation of land use management for livestock grazing on level 2, 3, and 4 lands, and on late climax stage riparian communities in level 1 lands (where current grazing is taking place) will have long-term, positive, interactive, cumulative impacts on the social and



economic health of the Uinta Basin residents dependent on public grazing for their traditional rural lifestyles.

Mineral programs and activities would be allowed on all levels with restrictions designed to protect the significant renewable resources occurring within the area. These restrictions would range from no surface occupancy to standard restrictions. These restrictions may pose short-term negative economic impacts on energy companies; however, the long-term positive economic gain to the northeast Utah region and energy companies operating in the basin from recovery of these minerals outweighs the short-term, negative impacts.

There will be conflicting potential cumulative impacts to the Uinta Basin from increased visitor-use days due to the development of facilities (either extensive or intensive in nature) and the realization of Wild and Scenic River designations proposed under this alternative. Negative impacts may include riparian zone site damage, water quality reduction, and an overall lessening of recreation experiences. Positive impacts would include the increased economic revenues to the business communities and county and state coffers due to increased recreational dollars spent in the area.

There are some socioeconomic cumulative impacts in the Green River Scenic Corridor ACEC, Red Creek Watershed ACEC, Red Mountain, Nine Mile, Pariette Wetlands, and the designated Wild and Scenic Rivers. The social perception in the community is divided. The worker group, although sympathetic to conservation/preservation of these areas, would want to protect industry. Social perceptions in the communities are divided over wildlife management, visual resources, and scenic resources. Ranchers and business people oppose restrictions placed on commodities, worker groups want to protect industry, and conservation groups want to protect ecosystems.

Vegetation management decisions in Alternative B allow only biological control of noxious weeds and insects within the ACECs. This may cumulatively affect adjacent lands, via degradation and loss of desired vegetation composition and production levels, causing economic losses to state and private landowners. In contrast, manipulating 1,225 acres of pinyon-juniper woodlands in the Browns Park Complex, Nine Mile Canyon and Red Mountain-Dry Fork Complex areas would have significant, long-term, positive impacts to crucial and/or high priority wildlife habitat, watershed, and water quality values both within and outside the areas.

## **DIRECT AND INDIRECT IMPACTS OF IMPLEMENTING ALTERNATIVE C**

### **IMPACTS TO CULTURAL AND PALEONTOLOGICAL RESOURCES**

#### **From Management Actions for Livestock Programs**

Accidental disturbance of both cultural and paleontology resources would continue to occur as developments such as land treatments and water developments are completed for livestock. These disturbances would occur more frequently in this alternative than in other alternatives.

#### **From Management Actions for Minerals Programs**

Vandalism and accidental disturbance of both cultural and paleontology resources by activities associated with mineral exploration and development would occur more frequently than in any other alternative, except Alternative D, because of the increased mineral development allowed under this alternative.

#### **From Management Actions for Recreation Programs**

Continued active management of the John Jarvie Historic District in Browns Park would allow the public to gain a better understanding of the history of this fascinating area. By preserving, displaying, and interpreting the many structures and items at the site, the public gains a better appreciation of the need to protect and preserve cultural and paleontological resources.

Protecting the Desolation Canyon National Natural Landmark on the lower Green River below the Sand Wash Recreation Site would increase public awareness of the importance of John Wesley Powell's historic trip down the Green River in 1869.

Vandalism and accidental disturbance of cultural and paleontological sites would occur more frequently than in Alternatives A, B, and E, but approximately the same as in Alternative D, because fewer restrictions and increased development and use of resources would result in more opportunities to encounter both cultural and paleontological resources.



### **From Management Actions for Riparian Habitat Resources**

Fencing of important riparian areas within high density cultural areas would restrict uncontrolled uses within these areas, thereby helping to preserve these resources.

### **From Management Actions for Special Emphasis Areas**

Not designating Nine Mile Canyon, the Browns Park Complex, and the remaining portion of the Red Mountain-Dry Fork Complex as ACECs would make it more difficult to stabilize and protect the important cultural resources in these areas due to the lack of management priority for these areas. As a result site deterioration would continue and eventually some resources would be lost.

## **IMPACTS TO FISH AND WILDLIFE HABITAT RESOURCES**

### **From Management Actions for Fish and Wildlife Resources**

Continuing to allow permanent surface disturbance and routine human activity near active ferruginous hawk and golden eagle nest sites, even after the young have left the nest, could result in significant negative impacts to these special status animal species.

### **From Management Actions for Lands Programs**

No additional public access would be acquired into traditionally isolated, low human-use areas heavily used by wildlife. This is a positive, long-term impact for wildlife, and in particular, sensitive species such as black bear and mountain lion as they would not be displaced from their preferred habitats.

Allowing rights-of-way authorizations through riparian habitat as long as mitigation would improve forage would be negatively impact 14 special status species with possible road construction, increased human activity, or short-term habitat destruction.

### **From Management Actions for Livestock Programs**

Implementation of rangeland improvements outlined for this alternative would be designed only to improve livestock production would impact wildlife species, such as sage grouse, who depend on a diversity of vegetation

types in late seral stages would see their habitat replaced with an earlier grass seral stage more preferred by livestock. This would be a significant long-term negative impact to the majority of wildlife species within the resource area.

Allowing livestock use in bighorn sheep habitat would increase the risk of disease transmission from livestock to bighorn sheep. This would reduce or eliminate the successful return of Rocky Mountain bighorn sheep to their native habitat within the resource area.

### **From Management Actions for Minerals Programs**

Development of high potential oil and gas regions would, over time, degrade or compromise existing habitats for various species by removing forage and cover and disturbing through noise or human presence, resulting in animal displacement from preferred habitats.

### **From Management Actions for Riparian Habitat Resources**

Management actions for 52,420 acres of riparian habitat would provide direct long-term benefits to 14 of the 21 special status species in DMRA. Thus these actions are seen to be significant to wildlife habitat management success for the resource area and the region. However, unfenced riparian areas could allow uncontrolled human and livestock use, resulting in continued deterioration of certain riparian areas in the resource area. This would adversely affect water quality and thus fisheries habitat.

### **From Management Actions for Vegetation Resources**

Maintaining wildlife forage demands at their current levels of 27,600 AUMs with no increase and assigning additional forage to livestock would not allow DMRA to meet recreationists' and hunters' demand for increased wildlife numbers. Anticipated annual increases to the local economy of between \$63,400 to \$126,100 realized from increased wildlife numbers and wildlife species diversity would also not occur.

Protecting only sage grouse strutting grounds and nesting habitat within 1,000 feet of each strutting ground (2,800 acres) seasonally, could eliminate a minimum of 72 percent of all sage grouse nests, reducing production significantly, thus causing adverse impacts to the species. Studies show that only 28 percent of all nests are located between 0-1 mile from strutting grounds (Autenrieth, 1973).



## **IMPACTS TO LANDS MANAGEMENT PROGRAMS**

### **From Management Action for Lands Programs**

Forty-one (41) percent of the area involved in the corridor through Jesse Ewing Canyon in the Browns Park area contains slopes greater than 30 percent. Slopes greater than 30 percent pose increased human safety risks when involving heavy equipment. Such slopes within the corridor will cause the width of the corridor to be reduced from 1/4 mile to approximately 1/8 mile. The corridor is presently near capacity, based on industry's prescribed distance requirements between certain types of rights-of-way (i.e., distance between pipelines and transmission lines or between two pipelines) and the 30 percent slopes limiting construction options. Therefore, even though the corridor is established, it is available for a maximum of 3 new facilities. When this capacity is reached, a north-south passage from Wyoming through northeastern Utah would be essentially closed.

## **IMPACTS TO LIVESTOCK MANAGEMENT PROGRAMS**

Overall, Alternative C is the most beneficial to the livestock management program.

Forage assigned to wildlife would not increase and any additional AUMs created from management strategies or vegetation treatments would be assigned to livestock. This additional forage could provide extra income to livestock permittees of approximately \$37,679 a year.

Most rangeland improvements conducted under this alternative would have a significant benefit to livestock in improved quantity and quality of forage. The greatest amount of vegetation treatment would occur in this alternative (27,100 acres). Most of this treatment would consist of pinyon-juniper woodlands and decadent sagebrush prescribed burns. Additional AUMs gained from grazing systems would be approximately 500 AUMs and would apply to all alternatives.



## **IMPACTS TO LEASABLE MINERALS PROGRAMS - OIL AND GAS**

### **From Management Actions for Fish and Wildlife Habitat Resources**

Compared to all alternatives, this alternative and Alternative D have the least number of overlapping seasonal restrictions and would affect only 17 percent of high potential mineral estate. The following are specific discussions of these impacts.

Management actions for protection of deer and elk crucial winter habitat would have a significant negative impacts on 13,000 acres of high potential mineral estate in the Myton Bench-Nine Mile Canyon and the Clay Basin oil producing regions, resulting in significant, negative impacts. The following are specific discussions of these impacts.

Management actions to protect sage grouse involve a no surface occupancy condition on sage grouse strutting grounds and a seasonal restriction of March 1 through June 30 on a six-mile nest protection area. These actions would have significant negative impacts on 76,400 acres of high potential mineral estate in the Myton Bench-Nine Mile Canyon, Horseshoe Bend-Ashley Valley, and Clay Basin oil and gas producing regions.

Raptor protection zones would have a minor negative impact to the exploration and development for oil and gas resources.

### **From Management Actions for Special Emphasis Areas**

The three areas proposed for ACEC designation, Red Mountain, Castle Cove and Lears Canyon are located in low and moderate oil and gas potential regions. The reasonable foreseeable impacts to oil and gas activities in these areas are minor (see Appendix 4: Reasonable Foreseeable Development).

### **From Management Actions for Visual Resources**

Minor negative impacts would occur on 3,200 acres of high potential mineral estate in the Myton Bench-Nine Mile Canyon oil and gas region. The oil and gas operations may be required to be moved to less visible regions or painted in certain environmentally sensitive colors. Roads necessary for the operation may have to be specially



routed. This could cause delays in oil and gas operations and/or additional operational costs.

## **IMPACTS TO RECREATION MANAGEMENT PROGRAMS**

### **From Management Actions for Cultural and Paleontological Resources**

Limiting OHV use to designated roads on 7,400 acres to protect cultural sites eligible for or listed on the National Register of Historic Places and the Desolation Canyon National Historic Landmark would have a minor impact on hunters and people driving for pleasure.

### **From Management Actions for Fish and Wildlife Habitat Resources**

Seasonal restrictions on OHV use on 5,900 acres of special status raptor nesting areas would limit recreation uses such as driving for pleasure in these areas.

### **From Management Actions for Lands Programs**

No additional access to public lands presently surrounded by private lands would be provided, resulting in an adverse impact to hunters and recreationists.

The recommendation to establish protective withdrawals on 8,100 public acres of high value recreation lands would protect scenic, historic, aesthetic and recreational values from future development.

### **From Management Actions for Livestock Programs**

Grazing within the Green River Corridor through Browns Park would greatly lower the quality of the recreation experience on 7,400 acres. Cattle would congregate along the riverbank and adversely affect the visual quality of the corridor.

### **From Management Actions for Minerals Programs**

Development of identified high potential oil and gas areas would result in 165,600 acres currently identified as possessing semi-primitive, motorized values, thereby dropping one class to roaded natural in the Recreation Opportunity Spectrum inventory. This would change the type of recreation opportunities available in these areas

from a somewhat primitive to a more urban nature experience.

### **From Management Actions for Recreation Programs**

Semi-primitive, nonmotorized values on 60,800 would not be protected. This is 100 percent of this type of land in the resource area. This primitive form of recreation opportunity would, over time, no longer be available due to other management actions degrading or compromising these values.

Not providing additional developed facilities, such as campgrounds and picnic areas, would limit opportunities for people who prefer more developed and concentrated forms of recreation. Many of these individuals would not spend time on public lands. However, there would be additional opportunities for people that prefer dispersed types of recreation such as hiking, backpacking, horseback riding and bicycling. These types of use would increase substantially. It is estimated that overall use would increase approximately 2 to 4 percent a year.

### **From Management Actions for Soil and Water Resources**

Management actions to protect highly erodible and saline soils, and municipal watersheds by limiting OHV use on 104,200 acres to designated roads with seasonal restrictions could adversely affect driving for pleasure and, in the fall of the year, close access by hunters to some hunting areas.

### **From Management Actions for Special Emphasis Areas**

All six river segments identified as being eligible for further study and possible inclusion in the Wild and Scenic River System would be dropped from consideration and returned for uses that would benefit other users of public lands. Recreation use would not increase as it would have if Wild and Scenic River status were maintained, and over time, identified outstandingly remarkable values may be affected.

### **From Management Actions for Vegetation Resources**

Limiting OHV use to designated roads on 3,000 acres to protect relict vegetation communities could affect driving for pleasure and, in the fall of the year, access by hunters to some hunting areas.



## **From Management Actions for Woodland Programs**

Firewood gathering and Christmas tree cutting could provide family-centered recreation opportunities on 203,264 acres. In addition, cottonwood could be cut on an additional 17,500 acres, allowing DMRA to meet the local demand for this resource.

## **IMPACTS TO RIPARIAN HABITAT RESOURCES**

Improving approximately 7,200 acres, or 98 miles, of inventoried riparian areas from an early and mid to a late or climax ecological stage would increase vegetation and wildlife species diversity and create wildlife, recreation, and watershed benefits.

Criteria for maintaining a minimum of three (3) inches of herbaceous growth after livestock grazing in riparian areas would enhance riparian vegetation productivity, resulting in streambank and water quality improvements.

## **IMPACTS TO SOIL AND WATER RESOURCES**

### **From Management Actions for Minerals Programs**

In critical watersheds in the Myton Bench-Nine Mile Canyon and the Horseshoe Bend-Ashley Valley oil and gas producing regions, approximately 4,050 acres could be disturbed, causing disruption of the water cycle by exposing bare soil to wind and water, thereby accelerating erosion. This area is difficult to revegetate due to low rainfall (less than 8 inches a year) and poor soil development. Because of difficulty in revegetating these sites, accelerated erosion could increase if an active drilling program continues. This disturbance from oil and gas operations could cause an increase of soil erosion loss from two to five tons per acre per year. With five tons per acre per year increase in erosion from this activity, an additional 20,250 tons of soil per year could be lost.

Oil spills or pit failures would have the potential to cause soil contamination and loss of fertility around drill sites. If the spill were significant, either in extent into sensitive areas or amount of oil spilled, contamination could enter the area's surface water system. This could result in significant negative impacts to the area's riparian ecosystem.

## **From Management Actions for Recreation Programs**

Restricting OHV use to designated roads with seasonal restrictions on 104,200 acres to minimize adverse surface runoff during periods of saturated soils and to protect critical (highly erodible or saline soils) and municipal watersheds would significantly benefit these valuable resources.

## **From Management Actions for Vegetation Resources**

The 27,100 acres of proposed vegetation treatments proposed would consist of juniper-pinyon woodlands and decadent sagebrush prescribed burns and pinyon and juniper firewood harvesting (refer to Appendix 8). These improvements would provide long-term watershed benefits by increasing ground cover through natural establishment and seedings of herbaceous vegetation. One benefit derived from juniper and pinyon burning is increasing diversity of herbaceous vegetation species such as western wheatgrass (Severson and Rinne, 1988). An ancillary benefit derived from this would be greater ground cover to lessen soil movement. Estimating a long-term reduction in soil erosion by 50 percent, 406,500 tons of sediment would be saved over 15 years. (See Appendix 8 for treatment type and acres by allotment.)

Under this alternative 50 percent of all additional forage would go to consumptive use and the remaining 50 percent for watershed maintenance, thus providing for a healthy watershed.

In Alternative C, 7,200 acres of riparian habitat would be improved. This improvement would result in on-site and downstream watershed benefits improving water quality, raising water tables, increasing streambank stability, and reducing downstream flood damage.

## **IMPACTS TO VEGETATION RESOURCES**

### **From Management Actions for Livestock Programs**

Designation of the three relict vegetation communities as ACECs, Red Mountain, Castle Cove and Lears Canyon, will be a positive commitment by management to afford priority management consideration to DMRA's foundation resource for livestock management-vegetation.



## **From Management Actions for Minerals Programs**

Oil and gas activities in the desert Myton Bench-Nine Mile Canyon and the Horseshoe Bend-Ashley Valley oil and gas regions could disturb approximately 4,050 acres. Low precipitation (less than 8 inches annually) and poor soil development in these areas creates difficulty in vegetation reclamation. Surface-disturbed sites in these areas may remain devoid of desired vegetation for years, allowing opportunities for undesired plant species such as halogeton to invade. Wells may produce for five to twenty years before any rehabilitation efforts take place.

## **From Management Actions for Recreation Programs**

Restricting OHV use to designated roads with seasonal restrictions would protect vegetation from damage on 104,200 acres of highly erodible soils and saline soils.



## **From Management Actions for Vegetation Resources**

Treating 27,100 acres would result in high vegetation diversity and forage production because most of the treatment is pinyon-juniper and sagebrush vegetation types in closed stands. A benefit derived from pinyon and juniper burning is increasing diversity of herbaceous vegetation (Severson and Rinne, 1988).

## **IMPACTS TO VISUAL RESOURCES**

### **From Management Actions for Lands Programs**

Not establishing protective withdrawals on the upper and lower Green River would leave these areas open to locatable mineral development which could cause VRM standards to be degraded. VRM Class II would be affected on the upper Green River and Class III on the lower Green River.

The identified utility corridors pass through areas identified as being VRM Class II in Jesse Ewing Canyon, the Green River Scenic Corridor in Browns Park, along the Taylor Mountain Road north of Vernal, and in Nine

Mile Canyon near Gate Canyon. It is doubtful adequate mitigation could be accomplished to maintain the Class II standard if transmission lines are constructed nearby.

### **From Management Actions for Minerals Programs**

Disposal of mineral materials within the Green River Scenic Corridor (VRM Class II) could degrade VRM values at specific locations along the river.

Development of high potential oil and gas resources in the Nine Mile area could impact as much as 3,200 acres of VRM Class II, therefore VRM Class II could not be maintained.

## **IMPACTS TO WOODLAND MANAGEMENT PROGRAMS**

Woodland harvesting would continue to meet demand on 220,800 acres. Commercial quality woodlands open to cutting on 85,500 acres could support an annual harvest of 4,300 cords over an extended period of time on a sustained-yield basis.

## **CUMULATIVE IMPACTS OF IMPLEMENTING ALTERNATIVE C**

### **AREAWIDE CUMULATIVE IMPACTS**

Continued, permanent surface-disturbing activities will have long-term, cumulative impacts on habitat loss for special status raptor species (i.e., continued disruption of nesting sites). Recent development of gas wells in the Duchesne field in and around one ferruginous hawk territory has apparently caused the birds to abandon their former nesting territory.

In addition, the removal of 24,000 acres (56 percent) of sagebrush and conversion to grass within two (2) miles of known sage grouse strutting grounds on Diamond Mountain in the last ten (10) years has had a negative, long-term, cumulative impact on nesting and winter habitat. In this alternative, less than 20 percent of crucial sage grouse nesting habitat (3,600 acres) would be protected seasonally by restricting surface-disturbing activities only within 1,000 feet of known strutting grounds.

No areas of identified potential black-footed ferret habitat in the resource area would be managed for the recovery of the species.



No additional public access would be permitted into traditionally isolated, low human use areas heavily used by wildlife. This is a positive long-term cumulative impact for wildlife, and in particular sensitive species such as black bear and mountain lion because they would not be displaced from preferred habitat. Increased metabolic rates, lowered body weights, reduced fetus weights, and increased mortality associated with increased human activity and harassment would not occur. However, this would pose a negative impact to those recreating publics wishing to view wildlife in their natural habitats.

Forage allocated for wildlife would remain at the current use of 27,600 AUMs. The negative cumulative impacts from loss of habitat from mineral development, urban expansion, increased recreation activities, livestock-wildlife

forage conflicts, and wildlife depredation on private land could not be mitigated.

Utilizing a route for above-ground transmission lines through or near Nine Mile Canyon, in Alternative C, is inconsistent with land management objectives identified by other surface management agencies for lands adjacent to DMRA. Under this strategy, management in this area would be inconsistent with back-country byway objectives, and conflict with the special cultural and visual values present as well.

The cumulative impacts to oil and gas activities under this alternative are summarized below in Table 4-11 by 1) oil and gas producing regions, 2) oil and gas potential, and 3) level of protection (level 2-no surface occupancy).

**TABLE 4-11:  
SUMMARY OF CUMULATIVE IMPACTS TO OIL AND GAS ACTIVITIES  
UNDER ALTERNATIVE C**

OIL AND GAS PRODUCING REGIONS	HIGH POTENTIAL				MODERATE POTENTIAL			
	MANAGEMENT LEVEL 1		MANAGEMENT LEVEL 2		MANAGEMENT LEVEL 1		MANAGEMENT LEVEL 2	
	Acres*	%**	Acres*	%**	Acres*	%**	Acres*	%**
Myton Bench-Nine Mile Canyon	0	0	120	<1	0	0	2,900	1
Horseshoe Bend-Ashley Valley	0	0	630	1	0	0	2,500	2
Clay Basin-Manila	0	0	60	<1	0	0	30	<1

\* Acres of public land mineral estate  
 \*\* Percentage of total high or moderate potential oil and gas mineral estate for the indicated region

Under Alternative C, the number of wells and the amount of daily production that would be precluded by no surface occupancy stipulations (level 1 and 2) are shown in Table 4-12. This analysis is based upon the reasonable

foreseeable development of the oil and gas producing regions (see Appendix 4: Reasonable Foreseeable Development).



**TABLE 4-12:  
OIL AND GAS DEVELOPMENT PRECLUDED UNDER ALTERNATIVE C**

OIL AND GAS PRODUCING REGION	HIGH POTENTIAL OIL/GAS MINERAL ESTATE							
	MANAGEMENT LEVEL 1				MANAGEMENT LEVEL 2			
	# Wells	BOPD <sup>1</sup>	MCFGPD <sup>2</sup>	BWPD <sup>3</sup>	# Wells	BOPD <sup>1</sup>	MCFGPD <sup>2</sup>	BWPD <sup>3</sup>
Myton Bench-Nine Mile Canyon	0	0	0	0	2	210	130	50
Horseshoe Bend-Ashley Valley	0	0	0	0	0.3	50	17	7
Clay Basin-Manila	0		0		0.1		1,300	
1 Barrels of oil per day 2 Thousand cubic feet of gas per day 3 Barrels of water per day								
NOTE: The oil, gas and water production figures represent the cumulative initial production (IP) from the number of wells indicated.								

Based on the success ratio of each producing region, 1.85 precluded wells would be successful. Assuming an oil price of \$20 per barrel, a gas price of \$1.50 per thousand cubic feet of gas, and cumulative production for average oil and gas earnings before royalty and tax payments approximately \$8,915,000 would not be realized. From these earnings a total of \$1,114,400 (12.5 percent of total oil and gas earnings) in royalty payments would not be realized by the state and federal governments. The state and federal governments would both lose royalty payments of \$557,200. The counties would lose royalty payments from the state of up to \$139,300. Counties would also lose revenues from property taxes and associated sales tax. The cumulative, significant, negative impacts to oil and gas activities are minimal in this alternative (see Tables 4-95 and 4-10) since: 1) the amount of restricted lands closed to leasing or with no surface occupancy is low, 2) the number of seasonal restrictions is low, and 3) the number of areas having multiple, overlapping seasonal restrictions are low.

Referencing recreation management objectives in Alternative C, approximately 20,500 acres would be open to OHV use and 688,500 acres would be restricted to designated and/or existing roads. This could impact watershed resources, soils, scenic values, wildlife habitat and nesting sites, and special status species. Traffic counter and visitor register information in Browns Park indicate that visitor-use on the upper Green River corridor will continue to increase between ten (10) and fifteen (15) percent annually. This increase may have cumulative impacts on human health and safety, water quality, and aesthetic values within the river corridor.

Management decisions in Alternative C to improve 7,200 acres (or 98 miles) of riparian areas, by requiring a minimum of three (3) inches of herbaceous growth after grazing use, will insure maintenance of plant vigor, increase plant and animal species diversity, provide streambank protection and aid deposition of sediments to rebuild degraded streambanks, and augment wildlife, recreation, and watershed benefits.

Referencing socioeconomic cumulative impacts for this alternative, on a regional basis the livestock grazing in the Uintah Basin have insignificant economic impacts, however, locally there are significant socioeconomic impacts. Assuming \$9.19 is the value of forage consumed per AUM, and increase in 3,600 AUMs (7 percent) may bring in \$495,300 to the local economy. From the oil and gas management decisions, there may be 65 jobs lost to the local economy in the DMRA.

Pertaining to recreation management decisions, on a regional basis the recreation visitor day total in the Uintah Basin have insignificant economic impacts, however, locally there are significant, socioeconomic impacts. Assuming \$25 is the visitor-user day value, then 164,000 recreation-visitor days will bring \$4,100,000 into the local economy. Ranchers, business people and workers would support lands actions that would encourage commodity development. Recreation, cultural, and visual resource programs draw tourism, which is beneficial, but if commodity development is restrained by restrictions and special management designations, support for these resources may decline.



Oil and gas development in the Myton Bench-Nine Mile Canyon and the Horseshoe Bend-Ashley Valley oil and gas producing regions may reduce vegetation ecological conditions to an early stage, disturbing and/or eroding approximately 20,250 tons of soil per year. In reference to vegetation and rangeland management objectives, improvements on 27,100 acres of rangelands will mitigate a loss of 20,250 annual tons of sediment, and increase both vegetation diversity and forage production for both wildlife and livestock.

## **SPECIAL EMPHASIS AREA CUMULATIVE IMPACTS**

The management prescriptions for the adjoining Red Creek Watershed and Green River Scenic Corridor ACECs may create cumulative impacts in the northeast portion of the resource area. All other designated ACECs do not have significant, cumulative impacts in DMRA. The management prescriptions proposed for the three (3) relict vegetation communities in the ACECs are small and scattered throughout the resource area, and therefore will not result in any appreciable cumulative impacts outside their immediate zones of influence, however, they may add to the overall understanding of the ecology of the Intermountain West.

Not designating the remaining ACEC proposals (Nine Mile Canyon, the middle and lower Green River, the remaining areas within the Red Mountain-Dry Fork Complex, and Pariette Wetlands) may result in long-term, negative impacts culminating in cumulative losses in recreation, aesthetics, social well being, local economics, and cultural sites within this region. Also, current and planned management under this alternative may lose sight of and/or compromise values in these local, commercial and non-commercial resources.

The protection of areas and objects to the traditional lifestyle and religious ceremonies of the Ute Tribe occurring in the Green River Corridor will have a long-term, positive impact on the social diversity and health of the people and resources area, Uinta Basin, and the nation as a whole.

Alternative C fire management objectives will give human health and safety highest priority. At the same time, however, this will allow for a build up of hazardous fire fuels, which may potentially create an even more damaging, large-scale wildfire in the reasonable foreseeable future.

Establishing a corridor for a common river crossing in level 2 lands in the Green River Scenic Corridor ACEC, and avoidance areas in level 2 lands in the Red Creek

Watershed ACEC will mitigate negative, cumulative visual and watershed impacts.

There may be potential impacts to the northeast portion of the resource area from increased visitor-use days. This would be due to the development of additional facilities in level 2 areas and allowing OHV use in the Green River Scenic Corridor ACEC. Impacts may include riparian zone site damage, wildlife disturbance, increased hunting pressure, increased human health and safety risks, and an overall lessening of the recreational experience.

There are some socioeconomic cumulative impacts in the Green River Scenic corridor ACEC, Red Creek Watershed ACEC, Red Mountain, Nine Mile, Pariette Wetlands, and the designated Wild and Scenic Rivers. The social perception in the community is divided. The worker group, although sympathetic to conservation/preservation of these areas, would want to protect industry. Social perceptions in the communities are divided over wildlife management, visual resources, and scenic resources. Ranchers and business people oppose restrictions placed on commodities, labor groups want to protect industry, and conservation groups want to protect ecosystems.

## **DIRECT AND INDIRECT IMPACTS OF IMPLEMENTING ALTERNATIVE D**

### **IMPACTS TO CULTURAL AND PALEONTOLOGICAL RESOURCES**

#### **From Management Action for Fish and Wildlife Habitat Resources**

Accidental disturbance of both cultural and paleontology resources would continue to occur as developments such as land treatments and water developments are completed to benefit wildlife.

#### **From Management Actions for Livestock Programs**

Accidental disturbance of both cultural and paleontology resources would continue to occur as developments such as land treatments and water developments are completed for livestock.



### **From Management Actions for Minerals Programs**

Vandalism and accidental disturbance of both cultural and paleontology resources by activities associated with mineral exploration and development would occur more frequently than in any other alternative because more mineral development would take place.

### **From Management Actions for Recreation Programs**

Continued active management the John Jarvie Historic District in Browns Park would allow the public to gain a better understanding of the history of this fascinating area. By preserving, displaying, and interpreting the many structures and items at the site, the public gains a better appreciation of the need to protect and preserve cultural and paleontological resources.

Protecting the Desolation Canyon National Natural Landmark on the lower Green River below the Sand Wash Recreation Site would increase public awareness of the importance of John Wesley Powell's historic trip down the Green River in 1869.

### **From Management Actions for Riparian Habitat Resources**

Fencing of important riparian areas in high density cultural site areas would restrict uncontrolled uses within these areas.



### **From Management Actions for Special Emphasis Areas**

Not designating Nine Mile Canyon, the Browns Park Complex, and the remaining portion of the Red Mountain-Dry Fork Complex as ACECs would make it more difficult to stabilize and protect the important cultural resources in these areas because they would not receive the management priority consideration afforded an ACEC. As a result site deterioration would continue and eventually some resources would be lost.

### **IMPACTS TO FISH AND WILDLIFE HABITAT RESOURCES**

#### **From Management Actions for Fish and Wildlife Habitat Resources**

Allowing permanent surface disturbance and routine human activity near active ferruginous hawk and golden eagle nest sites, even after the young have left the nest, could result in significant negative impacts to these special status animal species because the animals are forced to continually seek new nesting habitat.

Protecting only sage grouse strutting grounds and nesting habitat within 1,000 feet of each strutting ground (2,800 acres) seasonally, could eliminate a minimum of 72 percent of all sage grouse nests, reducing production significantly, thus causing adverse impacts to the species. Studies show that only 28 percent of all nests are located within 1 mile from strutting grounds (Autenrieth, 1973).

#### **From Management Actions for Lands Programs**

Acquiring additional public vehicle access could open 70,700 public acres of presently inaccessible public lands, resulting in an avoidance response by big game and predator species who would move into lower quality habitat.

#### **From Management Actions for Livestock Programs**

Continuation of existing management actions will exacerbate the decline in high priority sage grouse habitat as 56 percent of known habitat has already been lost (see Chapter 3).

Allowing livestock use in bighorn sheep habitat would increase the risk of disease transmission from livestock to bighorn sheep. This would reduce or eliminate the



successful return of Rocky Mountain bighorn sheep to their native habitat within the resource area.

### **From Management Actions for Minerals Programs**

Development of high potential oil and gas regions would, over time, degrade or compromise existing habitats for various species by removing forage and cover and disturbing through noise or human presence, resulting in animal displacement from preferred habitats.

### **Impacts from Management Actions for Recreation Programs**

Allowing most of the resource area (704,500 acres) to remain open to OHV use would have a significant negative impact to wildlife as virtually 100 percent of riparian habitat, 100 percent of crucial big game habitat, all of existing and potential bighorn sheep habitat, and all sage grouse habitat except the strutting grounds would be open to OHV use year long. All these open OHV areas would significantly impact forage production with increased vegetation destruction and erosion rates. This would also increase the potential for wildlife harassment and the possibility of species moving from their prime habitats to those of lesser quality.

### **From Management Actions for Riparian Habitat Resources**

Management actions for 7,200 acres of riparian habitat would provide direct long-term benefits to 14 of the 21 special status species in DMRA. Thus these actions are seen to be significant to wildlife habitat management success for the resource area and the region. However, unfenced riparian areas could allow uncontrolled human and livestock use, resulting in continued deterioration of certain riparian areas in the resource area. This would adversely affect water quality and thus fisheries habitat.

### **From Management Actions from Vegetation Resources**

Maintaining wildlife forage demands at their current level of 27,600 AUMs with no increase and assigning additional forage to livestock would not allow DMRA to meet recreationists' and hunters' demand for increased wildlife numbers. Anticipated annual increases to the local economy of between \$63,400 to \$126,100 realized from increased wildlife numbers and wildlife species diversity would also not occur.

## **IMPACTS TO LANDS MANAGEMENT PROGRAMS**

Forty-one (41) percent of the area involved in the corridor through Jesse Ewing Canyon in the Browns Park area contains slopes greater than 30 percent. Slopes greater than 30 percent pose increased human safety risks when involving heavy equipment. Such slopes within the corridor will cause the width of the corridor to be reduced from 1/4 mile to approximately 1/8 mile. The corridor is presently near capacity, based on industry's prescribed distance requirements between certain types of rights-of-way (i.e., distance between pipelines and transmission lines or between two pipelines) and the 30 percent slopes limiting construction options. Therefore, even though the corridor is established, it is available for a maximum of 3 new facilities. When this capacity is reached, a north-south passage from Wyoming through northeastern Utah would be essentially closed.

## **IMPACTS TO LIVESTOCK MANAGEMENT PROGRAMS**

### **From Management Actions for Fish and Wildlife Habitat Resources**

Wildlife transplants (bighorn sheep, pronghorn antelope, moose) would be allowed and would require approximately 3,400 AUMs of forage. This requirement could directly compete with livestock and affect 25 allotments and 24 grazing permittees.

### **From Management Actions for Vegetation Resources**

Forage assigned to wildlife would not increase and any additional AUMs created from management strategies or vegetation treatments would be assigned to livestock. This additional forage could provide extra income to livestock permittees of approximately \$38,000 a year.

Most rangeland improvements conducted under this alternative would have a significant benefit to livestock in improved quantity and quality of forage. The greatest amount of vegetation treatment would occur in this alternative (27,100 acres). Most of this treatment would consist of pinyon-juniper woodlands and decadent sagebrush prescribed burns. Additional AUMs gained from grazing systems would be approximately 500 AUMs.



### **From Management Actions for Woodlands Programs**

Allowing for firewood harvesting would benefit livestock due to the increase in forage resulting from increases of native and seeded grasses after removal of the trees. This alternative would provide approximately 225 AUMs from firewood harvest with approximately 100 acres a year being harvested over the live of the plan (15 years).

### **IMPACTS TO LEASABLE MINERALS PROGRAMS - OIL AND GAS**

#### **From Management Actions for Fish and Wildlife Habitat Resources**

Habitat protection would have a significant negative, direct and long-term impact on oil and gas activities. Compared to all alternatives, this alternative and Alternative C have the fewest amount of overlapping seasonal restrictions and would affect the smallest percentage (19 percent) of high potential mineral estate.

Deer and elk winter habitat with limited seasonal stipulations (level 3) under this alternative would have significant impacts on 13,000 acres of high potential mineral estate in the Myton Bench-Nine Mile Canyon and Clay Basin oil and gas producing regions.

No-surface-occupancy stipulations on known sage grouse strutting grounds and a seasonal 1,000-foot buffer surrounding them would significantly impact 1,300 acres in the Myton Bench-Nine Mile Canyon, Horseshoe Bend-Ashley Valley, and Clay Basin oil and gas producing regions by causing delays and/or additional operation costs.

Raptor protection zones would have a minor negative impact to the exploration and development for oil and gas resources.

#### **From Management Actions for Lands Programs**

This alternative would have a significant positive impact on oil and gas activities by providing lands (leases, permits, and land transfers) to improve manageability and support oil and gas activities.

### **From Management Actions for Soil and Water Resources**

Restrictions on OHV use and surface-disturbing activities in areas of critical (highly saline and erodible) soils, floodplains, and municipal watersheds would have a minor negative impact to oil and gas activities by causing costly delays in operations during wet periods.

### **From Management Actions for Visual Resources**

Visual constraints in the Nine Mile Canyon area would have minor negative impacts on 3,200 acres of high potential mineral estate in the Myton Bench-Nine Mile Canyon oil and gas region. Operations may be required to be moved to less visible regions; roads necessary for the operation may have to be specially routed. This may cause delays in oil and gas operations and/or additional operational costs.

### **IMPACTS TO LEASABLE MINERALS PROGRAMS - PHOSPHATE**

Lands now under preference right lease for phosphate (7,650 acres) would be open to development and/or occupancy under this alternative with specific restrictions to minimize adverse impacts to crucial deer winter habitat. This development could allow for the employment of up to 350 workers, adding \$4 million annually to the local economy.

### **IMPACTS TO RECREATION MANAGEMENT PROGRAMS**

#### **From Management Actions for Cultural and Paleontological Resources**

Limiting OHV use to designated roads and trails on 7,400 acres to protect cultural sites eligible for or listed on the *National Register of Historic Places* would preclude off-road use by hunters and sightseers who may depend on off-road vehicular access to pursue their interests.

#### **From Management Actions for Lands Programs**

No additional access to public lands presently surrounded by private lands would be provided, resulting in an adverse impact to hunters and recreationists.



The recommendation to establish protective withdrawals on 8,100 public acres of high value recreation lands would protect scenic, historic, aesthetic and recreational values from future development.

### **From Management Actions for Mineral Programs**

Development of identified high potential oil and gas areas would result in 164,500 acres currently identified as possessing semi-primitive, motorized values, dropping one class to roaded natural in the recreation opportunity inventory. This would result in a more urban recreation experience and would negatively impact people who desire varied opportunities for primitive recreation.

### **From Management Actions for Recreation Programs**

Semi-primitive, nonmotorized values on 60,800 would not be protected. This is 100 percent of this type of land in the resource area. This primitive form of recreation opportunity would, over time, no longer be available due to other management actions degrading or compromising these values.

Not providing additional developed facilities, such as campgrounds and picnic areas, would limit opportunities for people who prefer more developed and concentrated forms of recreation. Many of these individuals would not spend time on public lands. However, there would be additional opportunities for people that prefer dispersed types of recreation, such as hiking, backpacking, horseback riding and bicycling. These types of use would increase substantially. It is estimated that overall use would increase approximately 2 to 4 percent a year.

### **From Management Actions for Soil and Water Programs**

Management actions to protect highly erodible and saline soils, and municipal watersheds by limiting OHV use to designated roads with seasonal restrictions on 104,200 acres could adversely affect driving for pleasure and, in the fall of the year, access by hunters to some hunting areas.

### **From Management Actions for Special Emphasis Areas**

All six river segments identified as being eligible for further study and possible inclusion in the Wild and Scenic River System would be dropped from consideration and returned for uses that would benefit other users of public

lands. Recreation use would not increase as it would have if Wild and Scenic River status were maintained, and over time, identified outstandingly remarkable values could be affected.

### **Impacts from Management Actions for Woodlands Programs**

Firewood gathering and Christmas tree cutting could provide family-centered recreation opportunities on 203,300 acres. In addition, cottonwood could be cut on an additional 17,500 acres, allowing DMRA to meet the local demand for this resource.

## **IMPACTS TO RIPARIAN HABITAT RESOURCES**

The management action is to improve 7,200 acres, or 98 miles, of riparian from early and mid to late or climax ecological stage. This improvement would increase species diversity and result in wildlife, recreation, and watershed benefits.

Criteria for maintaining a minimum of three (3) inches of herbaceous growth after livestock grazing in riparian areas would enhance riparian vegetation productivity, resulting in streambank and water quality improvements.

## **IMPACTS TO SOIL AND WATER RESOURCES**

### **From Management Actions for Minerals Programs**

In critical watersheds in the Myton Bench-Nine Mile Canyon and the Horseshoe Bend-Ashley Valley oil and gas producing regions, approximately 4,050 acres could be disturbed, causing disruption of the water cycle by exposing bare soil to wind and water, thereby accelerating erosion. This area is difficult to revegetate due to low rainfall (less than 8 inches a year) and poor soil development. Because of the difficulty in revegetating these sites, accelerated erosion could increase if an active drilling program continues. This disturbance from oil and gas operation could cause an increase of soil erosion loss from two to five tons per acre per year. With five tons per acre per year increase in erosion from this activity, an additional 20,250 tons of soil per year could be lost.

Oil spills or pit failures would have the potential to cause soil contamination and loss of fertility around drill sites. If the spill were significant, either in extent into sensitive areas or amount of oil spilled, contamination could enter



the area's surface water system. This could result in significant negative impacts to the area's riparian ecosystem.

### **From Management Actions for Recreation Programs**

Restricting OHV use to designated roads with seasonal restrictions on 104,200 acres to minimize adverse surface runoff during periods of saturated soils and to protect critical (highly erodible or saline soils) and municipal watersheds would significantly benefit these valuable resources.

### **From Management Actions for Vegetation Resources**

The 27,100 acres of proposed vegetation treatments proposed would consist of juniper-pinyon woodlands and decadent sagebrush prescribed burns and pinyon and juniper firewood harvesting (refer to Appendix 8). These improvements would provide long-term watershed benefits by increasing ground cover through natural establishment and seedings of herbaceous vegetation. One benefit derived from juniper and pinyon burning is increasing diversity of herbaceous vegetation species such as western wheatgrass (Severson and Rinne, 1988). An ancillary benefit derived from this would be greater ground cover to lessen soil movement. Estimated a long-term reduction in soil erosion by 50 percent, 406,500 tons of sediment would be saved over 15 years. (See Appendix 8 for treatment type and acres by allotment.)

The ecological condition goal of this alternative would provide for a healthy watershed.

About 7,200 acres or 98 miles of riparian habitat would be improved under Alternative D. This improvement would result in on-site and downstream watershed benefits improving water quality, raising water tables, increasing streambank stability, and reducing downstream flood damage.

## **IMPACTS TO VEGETATION RESOURCES**

### **From Management Actions for Minerals Programs**

Oil and gas activities in the desert Myton Bench-Nine Mile Canyon and the Horseshoe Bend-Ashley Valley oil and gas regions could disturb approximately 4,050 acres. Low precipitation (less than 8 inches annually) and poor soil development in these areas creates difficulty in vegetation reclamation. Surface-disturbed sites in these

areas may remain devoid of desired vegetation for years, allowing opportunities for undesired plant species such as halogeton to invade. Wells may produce for five to twenty years before any rehabilitation efforts take place.

### **From Management Actions for Recreation Programs**

Restricting OHV use to designated roads with seasonal restrictions would protect vegetation from damage on 104,200 acres of highly erodible soils and saline soils.

### **From Management Actions for Vegetation Resources**

Treating 27,100 acres would result in high vegetation diversity and forage production because it provides for the most pinyon-juniper and sagebrush vegetation types in closed stands to be manipulated. A benefit derived from pinyon-juniper burning is increasing diversity of herbaceous vegetation (Severson and Rinne, 1988).

## **IMPACTS TO VISUAL RESOURCES**

### **From Management Actions for Lands Programs**

Not establishing protective withdrawals on the upper and lower Green River would leave the area open to locatable mineral development which could cause VRM standards to be degraded. VRM Class II would not be maintained along some sections of the upper Green River and Class III on the lower Green River.

The identified utility corridors pass through areas identified as being VRM Class II in Jesse Ewing Canyon, the Green River Scenic Corridor in Browns Park, along the Taylor Mountain Road north of Vernal, and in Nine Mile Canyon near Gate Canyon. It is doubtful adequate mitigation could be accomplished to maintain the VRM Class II standard if transmission lines are constructed nearby.

### **From Management Actions for Minerals Programs**

Disposal of mineral materials within the Green River Scenic Corridor (VRM Class II) could degrade VRM values at specific locations along the river.

Development of high potential oil and gas resources in the Nine Mile area could impact as much as 3,200 acres



of VRM Class II, therefore VRM Class II could not be maintained.

## IMPACTS TO WOODLAND MANAGEMENT PROGRAMS

Woodland harvesting would continue to meet demand on 220,800 acres. Commercial quality woodlands open to cutting on 85,500 acres could support an annual harvest of 4,300 cords over an extended period of time on a sustained-yield basis.

## CUMULATIVE IMPACTS OF IMPLEMENTING ALTERNATIVE D

### AREAWIDE CUMULATIVE IMPACTS

Placement of an above-ground transmission line through the Nine Mile Canyon would be inconsistent with management objectives of the back-country byway, as well as conflict with the special cultural and visual values present. In addition, using a route through or near Nine Mile Canyon is inconsistent with land management objectives identified by other surface management agencies for lands adjacent to DMRA.

Continued, permanent surface-disturbing activities will have long-term, cumulative impacts on habitat loss for special status raptor species (i.e., continued disruption of nesting sites). Recent development of gas wells in the Duchesne Field in and around one ferruginous hawk territory has apparently caused the birds to abandon their former nesting territory.

In addition, the removal of 24,000 acres (56 percent) of sagebrush and conversion to grass within two (2) miles of known sage grouse strutting grounds on Diamond Mountain in the last ten (10) years has had a negative, long-term, cumulative impact on nesting and winter habitat. In this alternative, as in Alternative C, less than 20 percent of crucial sage grouse nesting habitat (3,600 acres) would be protected seasonally by restricting surface-disturbing activities only within 1,000 feet of known strutting grounds.

No areas of identified potential black-footed ferret habitat in the resource area would be managed for the recovery of the species.

Increasing vehicle access into traditionally isolated, low human use areas would negatively impact wildlife and, in particular, black bear and mountain lion habitat. Studies show that increased human activity and harassment result in displacement of wildlife from preferred habitat, lowered body weights, elevated metabolism, reduced fetus weights, and increased mortality rates.

Forage allocated to wildlife would remain at the current use of 27,600 AUMs. The negative cumulative impacts from the loss of habitat from mineral/energy development, urban expansion, increased recreational activities, livestock-wildlife forage conflicts, and wildlife depredation on private lands could not be mitigated.

The cumulative impacts to the oil and gas activities under this alternative are summarized below in Table 4-13 by 1) oil and gas producing regions, 2) oil and gas potential, and 3) level of protection (level 2 no surface occupancy or special restrictions)





**TABLE 4-13:  
SUMMARY OF CUMULATIVE IMPACTS TO OIL AND GAS ACTIVITIES  
UNDER ALTERNATIVE D**

OIL AND GAS PRODUCING REGIONS	HIGH POTENTIAL				MODERATE POTENTIAL			
	MANAGEMENT LEVEL 1		MANAGEMENT LEVEL 2		MANAGEMENT LEVEL 1		MANAGEMENT LEVEL 2	
	Acres*	%**	Acres*	%**	Acres*	%**	Acres*	%**
Myton Bench-Nine Mile Canyon	0	0	80	<1	0	0	1,500	<1
Horseshoe Bend-Ashley Valley	0	0	633	1	0	0	2,500	2
Clay Basin-Manila	0	0	50	<1	0	0	20	<1

\* Acres of public land mineral estate  
 \*\* Percentage of total high or moderate potential oil and gas mineral estate for the indicated region

Under alternative D, the number of wells and the amount of daily production that would be precluded by no surface occupancy stipulations (level 1 and 2) are shown in Table 4-14. This analysis is based upon the

reasonable foreseeable development of the oil and gas producing regions (see Appendix 4: Reasonable Foreseeable Development).

**TABLE 4-14:  
OIL AND GAS DEVELOPMENT PRECLUDED UNDER ALTERNATIVE D**

OIL AND GAS PRODUCING REGION	HIGH POTENTIAL OIL/GAS MINERAL ESTATE							
	MANAGEMENT LEVEL 1				MANAGEMENT LEVEL 2			
	# Wells	BOPD <sup>1</sup>	MCFGPD <sup>2</sup>	BWPD <sup>3</sup>	# Wells	BOPD <sup>1</sup>	MCFGPD <sup>2</sup>	BWPD <sup>3</sup>
Myton Bench-Nine Mile Canyon	0	0	0	0	2	200	130	50
Horseshoe Bend-Ashley Valley	0	0	0	0	0.3	50	17	7
Clay Basin-Manila	0		0		0.1		1,300	

1 Barrels of oil per day  
 2 Thousand cubic feet of gas per day  
 3 Barrels of water per day

NOTE: The oil, gas and water production figures represent the cumulative initial production (IP) from the number of wells indicated.

Based on the success ratio of each producing region, 1.85 precluded wells would be successful. Assuming an oil price of \$20 per barrel, a gas price of \$1.50 per thousand cubic feet of gas, and cumulative production for average oil and gas wells in each region, approximately \$8,915,000 of oil and gas earnings before royalty and tax payments would not be realized. From these earnings a total of \$1,114,400 (12.5 percent of total oil and gas earnings) in royalty payments would not be realized by

the state and federal governments. The state and federal governments would both lose royalty payments of \$557,200. The counties would lose royalty payments from the state of up to \$139,300. Counties would also lose revenues from property taxes and associated sales tax. The cumulative significant impacts are minimal (see Tables 4-13 and 4-14) because: 1) the amount of restricted lands with no surface occupancy is low, 2) the number of seasonal restrictions are low, and 3) the areas



having multiple, overlapping seasonal restrictions are not abundant.

Referencing recreation management objectives in Alternative D, approximately 609,300 acres would be open to OHV use and 99,700 acres would be restricted to designated and/or existing roads. This could impact watershed resources, soils, scenic values, wildlife habitat and nesting sites, and threatened and endangered species.

Traffic counter and visitor register information in Browns Park indicate that visitor-use on the upper Green River corridor will continue to increase between ten (10) and fifteen (15) percent annually. This may have negative, cumulative impacts on human health and safety, water quality, and aesthetic values within the river corridor.

Management decisions in Alternative D to improve 7,200 acres (or 98 miles) of riparian areas, by requiring a minimum of three (3) inches of herbaceous growth after grazing use, will insure maintenance of plant vigor, increase plant and animal species diversity, provide streambank protection and aid deposition of sediments to rebuild degraded streambanks, and augment wildlife, recreation, and watershed benefits.

In reference to socioeconomic cumulative impacts in Alternative D, on a regional basis the livestock grazing industry in the Uintah Basin have insignificant economic impacts, however, locally there are significant socioeconomic impacts. Assuming \$9.19 is the value of forage consumed per AUM, an increase of 3,600 AUMs (7 percent) may bring \$495,300 into the local economy. From oil and gas management decisions, there may be a decrease of 65 short-term jobs in the local area.

From management actions for recreation, on a regional basis, the recreation visitor day total in the Uintah Basin have insignificant economic impacts, however, locally there are significant socioeconomic impacts. Assuming \$25 is the visitor-user day value, then 164,000 visitor-use days will bring \$4,100,000 into the local economy. Ranchers, workers and business people would support lands actions that would encourage commodity development. Recreation, cultural, and VRM resource programs draw tourism, which is beneficial, but if commodity development is restrained by restrictions and special management designations support for these resources may decline.

Oil and gas development in the desert Myton Bench-Nine Mile Canyon and the Horseshoe Bend-Ashley Valley regions may reduce vegetation ecological conditions to an early stage, disturbing and/or eroding approximately 20,250 tons of soil per year. In reference to vegetation

and rangeland management objectives, improvements on 27,100 acres of rangelands will mitigate a loss of 20,250 annual tons of sediment, and increase both vegetation diversity and forage production for both wildlife and livestock.

## **SPECIAL EMPHASIS AREA CUMULATIVE IMPACTS**

The Green River Scenic Corridor is the only ACEC proposal under this alternative. The existing designation for the Red Creek Watershed ACEC would be removed since it would be inconsistent with the general management theme for Alternative D. All other ACEC proposals discussed in this draft RMP would be managed under multiple-use concepts, as outlined in Chapter 2 under this alternative. As such, inattention will allow for degradation and/or loss of resource values creating negative, cumulative impacts to these non-designated, high resource value areas.

The suppression of wildfire to protect riparian resource values and human safety factors in the corridor will have long-term, positive impacts to the Brown's Park and adjacent recreational, scenic, and wildlife areas. This may, however, create a buildup of forage, fire fuel, which may create negative, large-scale wildfires in the reasonable foreseeable future.

Establishing a window for a common river crossing at Section 31, T.2N., R.25E., in level 2 lands in the Green River Scenic Corridor ACEC will mitigate negative cumulative visual impacts.

The Green River Corridor ACEC level 3 lands open to mineral leasing may have negative impacts to recreation, wildlife, visual, and vegetation resources; however, the leasing of these minerals, geophysical activities, mineral materials, and localities may have enhanced, cumulative, economic impacts in the tri-state area.

There may be potential impacts to the northeast portion of the resource area from increased visitor-use days due to the development of additional facilities in level 2 areas in the corridor. Impacts range from riparian zone site damage, wildlife disturbance, increased hunting pressure, to an overall lessening of recreational experiences. Increased visitor days may adversely impact human health and safety as well.

Surface-disturbing activities within the 330-foot riparian zone, and the manipulation of 900 acres of pinyon-juniper woodlands to increase forage production will have positive impacts to wildlife, recreation, special status plant



species, sediment control, and overall watershed stability in the ACEC and surrounding areas.

There are some socioeconomic cumulative impacts in the Green River Scenic corridor ACEC, Red Creek Watershed ACEC, Red Mountain, Nine Mile, Pariette Wetlands, and the designated Wild and Scenic Rivers. The social perception in the community is divided. The worker group, although sympathetic to conservation/preservation of these areas, would want to protect industry. Social perceptions in the communities are divided over wildlife management, visual resources, and scenic resources. Ranchers and business people oppose restrictions placed on commodities, worker groups want to protect industry, and conservation groups want to protect ecosystems.

## **DIRECT AND INDIRECT IMPACTS OF IMPLEMENTING ALTERNATIVE E**

### **IMPACTS TO CULTURAL AND PALEONTOLOGICAL RESOURCES**

#### **From Management Actions for Fish and Wildlife Resources**

Accidental disturbance of both cultural and paleontology resources would continue to occur as development such as land treatments and water developments are completed to benefit wildlife.

#### **From Management Actions for Livestock Programs**

Accidental disturbance of both cultural and paleontology resources would continue to occur as developments such as land treatments and water developments are completed for livestock.

#### **From Management Actions for Minerals Programs**

Vandalism and accidental disturbance of both cultural and paleontology resources that would normally occur during development of high potential oil and gas and other leasable minerals would continue to occur, but at a rate slightly less than is currently taking place.

#### **From Management Actions for Recreation Programs**

Continued operation of the John Jarvie Historic Site, interpretation of the old Rock Saloon, and a self-guided historic tour in Browns Park would allow the public to gain a better understanding of the history of that fascinating area. By preserving, displaying, and interpreting the many structures and items at the site, it would enable the public to gain a better appreciation of the need to protect and preserve cultural and paleontological resources.

Protecting the Desolation Canyon National Natural Landmark on the lower Green River would increase public awareness of the importance of John Wesley Powell's historic trip down the Green River in 1869. Establishment of the 50,784-acre Nine Mile Canyon ACEC would provide an opportunity to develop and interpret the many cultural resources in the area for public enjoyment.

Vandalism and accidental disturbance of cultural and paleontological sites would continue to occur, but at a rate slightly less than at present because of stricter controls on resource development than exists under the current management.

#### **From Management Actions for Riparian Resources**

Fencing riparian areas having high density cultural site occurrence would restrict uncontrolled uses thereby helping to preserve both riparian and cultural resources.

#### **From Management Actions for Special Emphasis Areas**

Designating Nine Mile Canyon, Lower Green River, Red Mountain-Dry Fork and the Browns Park Complexes as ACECs would increase management priority consideration for these areas. As a result, site deterioration would lessen and very few resources would be lost.

### **IMPACTS TO FISH AND WILDLIFE HABITAT RESOURCES**

#### **From Management Actions for Fish and Wildlife Habitat Resources**

Establishing raptor protection zones on 20,100 acres would have significant positive impacts that would include the year-long protection of special status raptor nest sites.



Sage grouse nesting habitat seasonal protection stipulations would increase the current protection period by one month and the protection zone by 1/2 mile. This should protect up to 85 percent of nests, according to the *Western States Sage Grouse Guidelines*.

Approximately 25,000 acres of identified potential black-footed ferret habitat in the resource area would be managed for the recovery of the species. This could support up to 202 ferrets, assuming 1 ferret per 124 acres.

### **From Management Actions for Lands Management Programs**

Acquiring additional public vehicle access could open 70,700 public acres of presently inaccessible public land, resulting in an avoidance response by big game and predator species who would move into lower quality habitat.

The recommendations to establish withdrawals on 19,400 acres of the Green River Scenic Corridor and 7,900 acres of the lower Green River provides the greatest riparian protection for wildlife of all five alternatives. These riparian areas provide habitat for 14 of the 21 known special status species in DMRA. The withdrawal would prevent loss of habitat and species displacement through mineral and agricultural development for special status species as well as other wildlife associated with riparian habitat.

### **From Management Actions for Livestock Programs**

Negotiating with livestock permittees to eliminate domestic sheep use within a 10-mile buffer of identified bighorn sheep habitat would reduce the chances of disease transmission from domestic to bighorn sheep. This reduction of disease could significantly improve the distribution of bighorn sheep and success for survival within their habitat range. However, the possibility of disease transmission from cattle to bighorn sheep would continue to exist.

Management actions for livestock would, overall, benefit fish and wildlife habitat. Specific grazing prescriptions with modified seasons of use should significantly and positively impact wildlife species if riparian areas, in particular, are improved. Ecological stages should improve from early and mid to late or climax increasing vegetation diversity (i.e., more willows) and thus wildlife species diversity.

### **From Management Actions for Minerals Programs**

Development of high potential oil and gas regions would, over time, degrade or compromise existing habitats for various species by removal forage and cover and disturbance through noise or human presence, resulting in animal displacement from preferred habitats.

### **From Management Actions for Riparian Resources**

Leaving riparian habitat unfenced could continue to deteriorate in the short-term as a result of grazing at current levels since 79 percent of DMRA's riparian habitat is in an early or mid ecological stage. Impacts could include bank sloughing, streamside vegetation loss, and a lowered water table, factors all affecting fisheries habitat. Once grazing systems were established and rangeland improvements completed, the seral stage would stabilize and eventually improve.

### **From Management Actions for Vegetation Resources**

Alternative E allows wildlife forage demand to increase from current levels of 27,600 AUMs to 40,000 AUMs, a 31 percent increase. The additional 12,400 AUMs may come from vegetation treatments, wildlife transplants with additional forage allocations, allowable herd increases, and livestock reductions on crucial wildlife habitat. Additional forage and increased numbers of wildlife could generate up to \$94,750 per year to the local economy in expenditures for lodging, food, transportation, and equipment (Bangerter, 1989).

## **IMPACTS TO LANDS MANAGEMENT PROGRAMS**

### **From Management Actions for Lands Management Programs**

Forty-one (41) percent of the area involved in the corridor through Jesse Ewing Canyon in the Browns Park area contains slopes greater than 30 percent. Slopes greater than 30 percent pose increased human safety risks when involving heavy equipment. Such slopes within the corridor will cause the width of the corridor to be reduced from 1/4 mile to approximately 1/8 mile. The corridor is presently near capacity, based on industry's prescribed distance requirements between certain types of rights-of-way (i.e., distance between pipelines and transmission



lines or between two pipelines) and the 30 percent slopes limiting construction options. Therefore, even though the corridor is established, it is available for a maximum of 3 new facilities. When this capacity is reached, a north-south passage from Wyoming through northeastern Utah would be essentially closed.

## **IMPACTS TO LIVESTOCK MANAGEMENT PROGRAMS**

### **From Management Actions for Fish and Wildlife Habitat Resources**

Allowing wildlife transplants (bighorn sheep, pronghorn antelope, moose) requiring approximately 3,400 AUMs of forage could directly compete with livestock and affect 25 allotments and 24 grazing permittees.

### **From Management Actions for Vegetation Resources**

Forty thousand (40,000) AUMs would be managed for wildlife which is 12,400 AUMs (45 percent) over current wildlife use (27,600 AUMs). After possible additional AUMs from rangeland improvements are realized, livestock AUMs could be reduced by approximately 1,252 AUMs shown by preliminary monitoring indications. This would result in a loss to the local livestock economy of \$11,506 a year. Potentially, 9,400 AUMs could be reduced if forage is needed by increasing wildlife use. However, it is likely that the vegetation composition resulting from the ecological condition goals would maintain enough forage to provide for existing livestock grazing preference. Pinyon-juniper and big sagebrush-browse vegetation types comprise approximately 50 percent of the resource area of which decadent old age stands would be managed in a mid seral stage which would provide the most forage. The AUMs would help to maintain livestock preference due to proposed increases in wildlife use. (Refer to Appendix 8 showing AUMs possible from rangeland improvements by allotment.)

Treating 22,400 acres of vegetation would have a significant benefit to livestock in improved quantity and quality of forage. Most of this treatment would consist of pinyon-juniper woodlands and decadent sagebrush prescribed burns. Additional AUMs gained from grazing systems would be approximately 500 AUMs.

Allowing grazing use after April 1 on winter/spring grazing permits only when spring grazing can be rotated, deferred or rested could impact 11 allotments/permittees (183,906 acres). If spring deferment grazing prescriptions could

not be reached, approximately one month (April 1 to April 30) of spring grazing would be eliminated.

### **From Management Actions for Woodlands Programs**

Allowing for firewood harvesting would benefit livestock due to the increase in forage resulting from increases of native and seeded grasses after removal of the trees. This alternative would provide approximately 225 AUMs from firewood harvest with approximately 100 acres a year being harvested over the life of the plan (15 years).

## **IMPACTS TO LEASABLE MINERALS PROGRAMS - OIL AND GAS**

### **From Management Actions for Recreation Programs**

Closing semi-primitive, nonmotorized areas to surface disturbances would have significant negative impacts on 2,000 acres of high oil and gas potential areas in the Myton Bench-Nine Mile Canyon and the Clay Basin oil and gas producing regions. The impacts would be direct and long term.

### **From Management Actions for Wildlife Habitat Resources**

Habitat protection would have significant, direct, and long-term impacts on oil and gas activities. This alternative and has overlapping seasonal restrictions and would affect 36 percent of high potential mineral estate.

Seasonal restrictions to protect deer and elk critical winter habitat would significantly impact 13,000 acres of high potential mineral estate in the Myton Bench-Nine Mile Canyon and the Clay Basin oil and gas producing regions.

Closures and seasonal restrictions to protect sage grouse strutting grounds and nesting habitat would significantly impact 46,000 acres of high potential mineral estate in the Myton Bench-Nine Mile Canyon, Horseshoe Bend-Ashley Valley, and the Clay Basin oil and gas producing regions.

Raptor protection zones would have significant impacts in the Myton Bench-Nine Mile Canyon, Horseshoe Bend-Ashley Valley, and Clay Basin oil and gas producing regions.

Impacts due to restrictions applied in potential black-footed ferret reintroduction areas prior to and following reintroduction are analyzed for all potential black-footed



ferret reintroduction areas, although only 2 reintroduction sites are assumed to be chosen (see Appendix 2). Table 4-15 outlines general information concerning the potential black-footed ferret habitat reintroduction areas as it relates to oil and gas activity.

**TABLE 4-15:  
POTENTIAL BLACK-FOOTED FERRET REINTRODUCTION AREAS  
UNDER ALTERNATIVE E**

	SUNSHINE BENCH	SHINER	ANTELOPE FLAT	TWELVE MILE	EIGHT-MILE FLAT
Priority for Reintroduction Areas	1	2	3	4	5
Oil/Gas Potential	Moderate	Moderate	Moderate	High	High
Identified Habitat (in acres)	4,800	7,800	2,600	1,700	16,600
Percent of Area Leased*	38	0	0	98	98
Current Number of Producing Wells*	0	0	0	4	55
Projected Number of New Wells	5	5	15	20	100
Oil/Gas Spacing	160	40	40	160	40

\* Source: BLM Automated Lands and Minerals Record System and Automated Inspection Records System, 1991

Prior to ferret releases, restrictions on surface-disturbing activities would increase operational costs up to 25 percent per well by rerouting or moving surface-disturbing activities (such as access roads, pipelines, drill pads, geophysical surveys).

After release of ferrets, no new surface-disturbing activities relating to oil and gas will be allowed between March 1 through August 31 within 1/4 mile of habitat occupied by black-footed ferrets to protect reproductive and active litter periods. These restrictions will not apply to maintenance and operation of existing facilities. The amount of acreage affected by the 1/4 mile buffer in each potential black-footed ferret habitat area is listed at the right.

Prairie dog colonies would be allowed to expand, under this alternative, by 10 percent of their current size in the Sunshine Bench area and in the Twelve Mile area. This may increase operational costs up to 25 percent by rerouting or moving such surface-disturbing activities associated with oil and gas activities (such as access roads, pipelines, drill pads, geophysical surveys). These restrictions will not apply to the maintenance and operation of existing production facilities in the Twelve Mile or Eight Mile Flat areas.

	OIL AND GAS POTENTIAL	1/4 MILE BUFFER IN ACRES
Sunshine Bench	Moderate	8,000
Shiner	Moderate	10,200
Antelope Flat	Moderate	4,300
Twelve Mile	High	3,400
Eight-Mile Flat	High	20,600

**IMPACTS TO LEASABLE MINERALS PROGRAMS - PHOSPHATE**

Lands now under preference right lease for phosphate (7,650 acres) would be open to development and/or occupancy under this alternative with specific restrictions to minimize adverse impacts to crucial deer winter habitat. This development could allow for the employment of up to 350 workers, adding \$4 million annually to the local economy.



## **IMPACTS TO LEASABLE MINERALS - TAR SANDS**

Development of asphaltic materials in the Pariette STSA would be precluded under this alternative. Lands most suited for the development of tar sands as a source of asphalt would be designated as level 2 under this alternative. This could limit surfacing of roads in the Pariette area.

## **IMPACTS TO RECREATION MANAGEMENT PROGRAMS**

### **From Management Actions for Cultural and Paleontological Resources**

OHV restrictions to designated roads on 7,400 acres to protect cultural sites eligible for or listed on National Register Historic Places and the Desolation Canyon National Historic Landmark may limit some users from pursuing sightseeing and hunting recreational interests.

### **From Management Actions for Fish and Wildlife Habitat Resources**

Restricting OHV use to designated roads on 128,300 acres of sage grouse strutting grounds and nesting habitat, special status raptor nesting habitat and black-footed ferret reintroduction areas could preclude off-road use by members of the public who require vehicular access to pursue their recreational interests on public land including the recreation uses of driving for pleasure and hunting.

If a reintroduction of ferrets is made, all recreation use on up to 24,400 acres would be prohibited during early morning and evening hours. This would essentially eliminate hunting opportunities on these areas.

### **From Management Actions for Lands Programs**

Acquiring public access specifically for vehicles or foot/horseback will provide hunters and recreationists with additional opportunities on 77,800 acres of public lands that are surrounded by private land and currently unreachable. Impacts are similar to Alternative A, but more access would be gained to public lands.

A protective withdrawal would be recommended for the lower Green River that would protect the corridor from mineral and agricultural development of mining claims and other development which could impact scenic values.

The utility corridor that goes up Rye Grass Draw passes through an area identified as being maintained as a semi-primitive, nonmotorized area. Development here would not be compatible with semi-primitive, nonmotorized values and experiences.

### **From Management Actions for Minerals Programs**

Development of identified high potential oil and gas areas would result in 150,900 acres currently identified as possessing semi-primitive, motorized values, dropping one class to roaded natural in the recreation opportunity inventory. This would result in a more urban recreation experience.

### **From Management Actions for Recreation Programs**

Seventy-one (71) percent or 43,200 acres identified as having semi-primitive, nonmotorized values would be protected for the enjoyment of primitive forms of recreation.

Managing for both primitive and developed forms of recreation would provide opportunities for both people preferring primitive types of experiences such as hiking, backpacking, horseback riding, and bicycling as well as those that prefer more developed and concentrated forms of recreation. Both types of use would increase and use of public lands would be greater. It is estimated that overall use would increase approximately 10 to 15 percent a year, with the greatest increases taking place along the existing Special Recreation Management Area (SRMA) in Browns Park and the proposed Red Mountain-Dry Fork SRMA north of Vernal.

### **From Management Actions for Soil and Water Resources**

Limiting OHV use to designated roads with seasonal restrictions on 104,200 acres of highly erodible and saline soils, and municipal watersheds, could affect driving for pleasure and, in the fall of the year, access by hunters to some hunting areas.

### **From Management Actions for Special Emphasis Areas**

Outstandingly remarkable wild and scenic river values would continue to be protected along the upper and lower segments of the Green River identified as being eligible for further study and possible inclusion in the Wild and Scenic River System. This status would attract



recreationists that enjoy various water based recreation activities such as canoeing, rafting, fishing, hiking, and camping.

Not identifying the middle Green River segment, two segments along Nine Mile Canyon, and one in Argyle Canyon for protection and further study, would leave the stream corridors open to uses that could damage identified outstandingly remarkable values along the corridors. It is anticipated that the impacts to Nine Mile and Argyle would be minor because both cultural resources and scenic values would continue to receive protection. The middle Green River segment flows through an area identified as having high potential for oil and gas development and it is an important area for sand and gravel. Dropping this segment from further study will open the river corridor to development of these resources.

### **From Management Actions for Vegetation Resources**

Restricting OHV use to designated roads on 11,600 acres of relict vegetation communities and special status plant habitat in Pariette Draw would limit hunting opportunities.

### **From Management Actions for Visual Resources**

Restricting OHV use to designated roads on 17,100 acres along the Green River Scenic Corridor and the lower Green River acres could limit public land users requiring vehicular access for fishing, hunting or other recreational pursuits.

### **From Management Actions for Woodlands Programs**

Firewood gathering could provide family-centered recreation opportunities on 172,800 acres.

## **IMPACTS TO RIPARIAN HABITAT RESOURCES**

Improving 7,200 acres of riparian habitat from early and mid to late or climax ecological stage would improve, thereby providing physical filtering of water, bank stability, water storage, assist in recharge of underground aquifers while improving fisheries habitat which is a product of these functions. This improvement would be accomplished by implementing prescribed grazing practices conducive to riparian improvement, along with rangeland improvements and noxious weed eradication. Maintaining a minimum of three inches of herbaceous

growth after grazing in riparian areas would insure maintenance of plant vigor, provide streambank protection, and aid in deposition of sediments to rebuild degraded streambanks.

## **IMPACTS TO SOIL AND WATER RESOURCES**

### **From Management Actions for Minerals Programs**

In critical watersheds in the Myton Bench-Nine Mile Canyon and the Horseshoe Bend-Ashley Valley oil and gas producing region, over a 15-year period, approximately 4,050 acres could be disturbed, which could cause disruption of the water cycle by exposing bare soil to wind and water, accelerating erosion. This area is difficult to revegetate due to low rainfall (less than 8 inches a year) and poor soil development. These areas receive frequent flash floods which produce high runoff although total annual precipitation is minimal. Because of a difficulty in revegetating these sites, accelerated erosion could increase if an active drilling program continues. This disturbance from oil and gas operations could cause increases of soil erosion loss from two to five tons per acre per year. With five tons per acre per year increase in erosion from this activity an additional 20,250 tons of soil per year could be lost.

Oil spills or pit failures would have the potential to cause soil contamination and loss of fertility around drill sites. If the spill were significant, either in extent into sensitive areas or amount of oil spilled, contamination could enter the area's surface water system. This could result in significant negative impacts to the area's riparian ecosystem.

Phosphate leases could occur on 7,650 acres. Actual surface-disturbing activities would involve a total of approximately 474 acres. It is unlikely this total would be without any revegetation actions at any one time over the life of this plan. Thus, disturbance would have a short-term impact, causing accelerated erosion only to the immediate area disturbed; however, long-term improved erosion conditions would occur due to successful reclamation as the mining activities progressed.

### **From Management Actions for Recreation**

Restricting OHV use to designated roads with seasonal restrictions on 104,200 acres of highly erodible soils, saline soils, and municipal watersheds would reduce accelerated erosion from overland travel.



### **From Management Actions for Riparian Habitat Resources**

Improving 7,200 acres, or 98 miles, of riparian habitat would result in on-site and downstream watershed benefits improving water quality, raising water tables, increasing streambank stability, and reducing downstream flood damage.

### **From Management Actions for Vegetation Resources**

Treating 22,400 acres of closed, unproductive stands of predominantly pinyon-juniper and sagebrush vegetation types would improve long-term watershed conditions by increasing ground cover from herbaceous vegetation re-establishment following treatment. Estimating a long-term reduction in erosion by 50 percent, 336,000 tons of sediment would remain onsite over the life of this plan. (See Appendix 8 for possible treatment opportunities by type and acres for each grazing allotment.)

The ecological goal of this alternative would provide for a healthy watershed. Since optimum herbaceous ground cover occurs in a mid seral stage in juniper-pinyon and big sagebrush-mountain browse vegetation types (Wright, Neuenschwander, Britten, 1979), this alternative would provide optimum watershed benefits. About 50 percent of all additional forage would go to consumptive use and the remaining 50 percent for watershed maintenance.

## **IMPACTS TO VEGETATION RESOURCES**

### **From Management Actions for Minerals Programs**

Oil and gas activity in the desert Myton Bench-Nine Mile Canyon and Horseshoe Bend-Ashley Valley oil and gas regions could disturb approximately 4,050 acres that would be cleared over a 15-year period for well pad, facilities, access roads, and pipeline development. Because of low precipitation (less than 8 inches annually) in the area, poor soil development and difficulty of vegetation reclamation, these areas may remain in an early ecological seral stage for the long-term after vegetation is cleared. Wells may produce for five to twenty years before rehabilitation efforts take place.

### **From Management Actions for Recreation**

Highly erodible soils, saline soils, and municipal watersheds would be protected from OHV disturbance

due to a restriction of designated road use with seasonal restrictions on 104,200 acres.

### **From Management Actions for Vegetation Resources**

Treating 22,400 acres of closed stands of pinyon-juniper and sagebrush community types would result in increased vegetation diversity and overall community health, while providing forage production for livestock and wildlife. A benefit derived from pinyon and juniper burning is increasing diversity of herbaceous vegetation (Severson and Rinne, 1988).

### **From Management Actions for Livestock Programs**

Allowing grazing use after April 1 on winter/spring grazing permits only when spring grazing can be rotated, defer or rested would insure semi-desert vegetation vigor during the critical spring growing season.

## **IMPACTS TO VISUAL RESOURCES**

### **From Management Actions for Minerals Programs**

Development of high potential oil and gas resources in the Nine Mile Canyon area may impact as much as 3,200 acres of Class II VRM, therefore VRM Class II could not be maintained.

## **IMPACTS TO WOODLAND MANAGEMENT PROGRAMS**

### **From Management Actions for Recreation Programs**

To protect potential Wild and Scenic River values along the Green River, cottonwood could not be harvested from 7,400 acres within the Green River corridor between the Ashley Forest Boundary near Little Hole and the Utah/Colorado state line, or 7,900 acres from within this same corridor between Ouray and the Uintah/Carbon County line. This would reduce the amount of cottonwood available for harvest on public lands in the resource area by 75 percent. Although other types of wood (pinyon and juniper) could be substituted for cottonwood, some people prefer it. Therefore, the local demand could only be partially accommodated by DMRA.

To protect identified semi-primitive, nonmotorized areas, pinyon and juniper firewood, juniper posts, and Christmas



trees could not be harvested from 24,400 acres. This would affect 12 percent of the productive woodland areas in the resource area.

### **From Management Actions from Riparian Habitat Resources**

Closures to woodland product harvesting on 7,200 acres of riparian habitat would affect 3 percent of the identified productive woodlands in the resource area.

### **From Management Actions for Woodland Programs**

Pinyon, juniper and cottonwood firewood could be harvested to meet demand on 175,000 acres; juniper fenceposts and Christmas trees could continue to be harvested on 172,800 acres to meet the local demand. Commercial quality woodlands open to cutting on 74,700 acres could support an annual harvest of 3,700 cords over an extended period of time on a sustained-yield basis.

## **CUMULATIVE IMPACTS OF IMPLEMENTING ALTERNATIVE E**

### **AREAWIDE CUMULATIVE IMPACTS**

Special status raptor species habitat receives the maximum protection year-round from permanent surface-disturbing activities (i.e., continued disruption of nesting sites). This is a positive, long-term, cumulative impact for these species. In addition, 60% of crucial sage grouse nesting habitat (91,300 acres) would be protected seasonally by restricting surface-disturbing activities within two (2) miles of strutting grounds. Therefore, the restrictions in this alternative would have a long-term positive benefit in maintaining a viable sage grouse population.

Approximately 25,000 acres of identified black-footed ferret habitat in the resource area will be managed for the recovery of the species.

Increasing vehicle access into traditionally isolated, low human use areas would negatively impact wildlife and, in particular, black bear and mountain lion habitat. Although this alternative allows for the most miles of increased vehicle access, seasonal restrictions or designated road limitations would offset these adverse wildlife impacts.

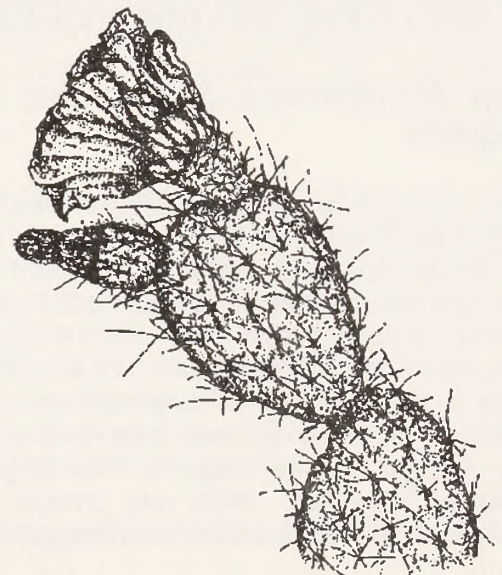
Forage allocated for wildlife would increase from the current use of 27,600 AUMs to 40,000 AUMs, a 31%

increase, which will cumulatively mitigate the following past and present conditions: loss of habitat from mineral development, urban expansion, increased recreational activities, livestock-wildlife forage conflicts, and wildlife depredation on private lands.

Right-of-way construction will be impacted by seasonal restrictions on the 8.5 miles of the corridor route (71 percent) within the Browns Park Complex. This will have negative, cumulative effects on a local scale, however, it will simultaneously mitigate impacts on crucial deer winter range, raptor habitat, cultural properties, semiprimitive-nonmotorized areas, and highly erodible soils.

Cumulative increased wildlife use from 27,600 AUMs to 40,000 AUMs could result in livestock reductions (9,000 AUMs), which may result in a \$11,500 yearly loss to the local livestock industry. However, this increase may also generate up to \$94,800 for the local community from lodging, food, and transportation costs paid by hunters and recreationists.

The cumulative impacts to oil and gas activities under this alternative are summarized below in Table 4-16 by 1) oil and gas producing regions, 2) oil and gas potential, and 3) level of protection (level 1 and level 2 - no surface occupancy).





**TABLE 4-16:  
SUMMARY OF CUMULATIVE IMPACTS TO OIL AND GAS ACTIVITIES  
UNDER ALTERNATIVE E**

OIL AND GAS PRODUCING REGIONS	HIGH POTENTIAL				MODERATE POTENTIAL			
	MANAGEMENT LEVEL 1		MANAGEMENT LEVEL 2		MANAGEMENT LEVEL 1		MANAGEMENT LEVEL 2	
	Acres*	%**	Acres*	%**	Acres*	%**	Acres*	%**
Myton Bench-Nine Mile Canyon	0	0	15,900	10	0	0	23,000	12
Horseshoe Bend-Ashley Valley	0	0	1,100	2	0	0	6,400	2
Clay Basin-Manila	0	0	830	5	0	0	6,700	16

\* Acres of public land mineral estate \*\* Percentage of total high or moderate potential oil and gas mineral estate for the indicated region

Under alternative E, the number of wells and the amount of daily production that would be precluded by no surface occupancy stipulations (level 2) are shown in Table 4-17. This analysis is based upon the reasonable

foreseeable development of the oil and gas producing regions (see Appendix 4: Reasonable Foreseeable Development).

**TABLE 4-17:  
OIL AND GAS DEVELOPMENT PRECLUDED UNDER ALTERNATIVE E**

OIL AND GAS PRODUCING REGION	HIGH POTENTIAL OIL/GAS MINERAL ESTATE							
	MANAGEMENT LEVEL 1				MANAGEMENT LEVEL 2			
	# Wells	BOPD <sup>1</sup>	MCFGPD <sup>2</sup>	BWPD <sup>3</sup>	# Wells	BOPD <sup>1</sup>	MCFGPD <sup>2</sup>	BWPD <sup>3</sup>
Myton Bench-Nine Mile Canyon	0	0	0	0	22	2,300	1,400	600
Horseshoe Bend-Ashley Valley	0	0	0	0	0.6	110	34	15
Clay Basin-Manila	0		0		7		6,700	

1 Barrels of oil per day  
2 Thousand cubic feet of gas per day  
3 Barrels of water per day

NOTE: The oil, gas and water production figures represent the cumulative initial production (IP) from the number of wells indicated.

Based on the success ratio of each producing region, 18.1 precluded wells would be successful. Assuming an oil price of \$20 per barrel, a gas price of \$1.50 per thousand cubic feet of gas, and cumulative production for average oil and gas wells in each region, approximately

\$76,117,500 of oil and gas earnings before royalty and tax payments would not be realized. From these earnings a total of \$9,514,700 (12.5 percent of total oil and gas earnings) in royalty payments would not be obtained by the state and federal governments. The state and federal



governments would both lose royalty payments of \$4,757,300. The counties would lose royalty payments from the state of up to \$1,189,300. Counties would lose revenues from property taxes and associated sales tax. The cumulative impacts are significant and negative in nature because (see Tables 4-14 and 4-15): 1) the amount of restricted no surface occupancy lands is high, 2) the number of seasonal restrictions is high, and 3) areas having multiple, overlapping seasonal restrictions are abundant. Generally, the significant negative impacts in Alternative E are much greater than Alternative C and D, but are less than Alternative B. In summation, the cumulative negative impacts under Alternative E would restrict oil and gas development and subsequent economic benefits.

Referencing recreation management objectives in Alternative E, approximately 547,400 acres would be open to OHV use, 75,900 acres would be restricted to designated and/or existing roads, and 43,200 acres would be closed. This could impact watershed resources, soils, scenic values, wildlife habitat and nesting sites, and threatened and endangered species.

Traffic counter and visitor register information in Browns Park indicate that visitor-use on the upper Green River corridor will continue to increase between ten (10) and fifteen (15) percent annually. This increase may create cumulative impacts on human health and safety, water quality, and aesthetic values within the river corridor.

Improving 7,200 acres (or 98 miles) of riparian areas, by requiring a minimum of three (3) inches of herbaceous growth after grazing use, would ensure maintenance of plant vigor, increase species diversity, aid deposition of sediments to rebuild degraded streambanks, thereby providing protection and increasing wildlife habitat, recreation, and watershed benefits.

In reference to socioeconomic cumulative impacts in Alternative E, on a regional basis the livestock grazing industry in the Uintah Basin has insignificant economic impacts, however, locally there are significant socioeconomic impacts. Assuming \$9.19 is the value of forage consumed per AUM, then an increase of 9,600 AUMs (19 percent) may bring \$374,000 into the local economy. Alternatively, the management decisions concerning minerals will create a short-term loss of 600 agricultural jobs in the local area.

From management actions for recreation, on a regional basis the recreation visitor day total in the Uintah Basin have insignificant economic impacts, however, locally there are significant socioeconomic impacts. Assuming \$25 is the visitor-user day value, then 239,000 recreation-visitor days will bring \$5,975,000 into the local economy,

along with 95 projected jobs (from projected recreation visitor-use days). Ranchers and business people would probably be opposed to any lands actions that would apply to special management designation and/or restrictions on commodities. Recreation, cultural, and VRM resource programs draw tourism, which is beneficial, but if commodity development is restrained by restrictions and special management designations, then support for these resources may decline.

Oil and gas development in the desert Myton Bench/Nine Mile Canyon and the Horseshoe Bend/Ashley Valley Regions could potentially increase 20,250 tons annually of soil erosion. However, seasonally restricting OHV use to designated roads, approximately 104,200 acres (consisting of highly erodible soils, saline soils, and municipal watersheds), along with rangeland improvements (saving 22,400 tons annually) together will mitigate negative, cumulative erosion impacts within DMRA.

## SPECIAL EMPHASIS AREA CUMULATIVE IMPACTS

Management decisions under Alternative E list the Green River Scenic Corridor ACEC and the Red Creek Watershed ACEC as continuing to occur under this plan. The cumulative impacts attributable to the designation of the six ACEC proposals considered under this alternative are described below. As a result of this analysis, three distinct "influence zones" within the resource area were identified as:

<u>ACEC Nomination</u>	<u>Influence Zone within Resource Area</u>
Browns Park Complex Red Creek Watershed	Browns Park, Daggett County
Red Mountain-Dry Fork Complex	Population areas of Vernal, Maeser, and Dry Fork within Uintah County
Pariette Lower Green River Nine Mile Canyon Lears Canyon	Uintah and Duchesne Counties

The following are the cumulative impacts affecting any one or all of the influence zones within DMRA.

The protection of areas and objects significant to the traditional lifestyle and religious ceremonies of the Ute Tribe occurring within these ACECs will have a long-term positive impact on the social diversity and thus social



health of the resource area, Uinta Basin and the nation as a whole.

The reintroduction of bighorn sheep, black-footed ferrets and other historical wildlife species to these ACECs may result in long-term positive impacts. Such reintroduction may increase the biological diversity and thus overall health and stability of the ecosystems on which these species are dependent, both within the resource area and the Intermountain West as a whole.

The suppression of large-scale wildfires in the relict vegetation communities of Lears Canyon and Red Mountain-Dry Fork areas will have a long-term positive impact on the soil and watershed, and vegetation resources in their respective influence zones. Long-term positive impacts to the regional network of native vegetation comparison areas, used for scientific research and study, will also be realized. The fire management objectives for the Browns Park Complex will result in long-term positive impacts to the crucial deer winter and important bighorn sheep habitats by improving or maintaining desired vegetation compositions and productivity. Additional positive impacts will be realized due to the reduction of hazardous fire fuel buildups, thus increasing human safety and reducing private property damage or loss in the Browns Park area.

Lands action decisions involving exclusion areas and protective withdrawals in level 1 lands, and avoidance areas in level 2 lands within all the ACECs will result in long-term positive benefits to the water quality of the Green River, as well as scenic and recreational values of the remaining level 1 areas. These actions will support the tri-counties' desire to expand the tourism industry in northeastern Utah.

Continuation of livestock grazing in ACECs on level 2, 3, and 4 lands will have long-term positive impacts on the social and economic health of the Uinta Basin residents dependent on public grazing for their traditional, rural lifestyles and economic welfare. The closure or heavy use restrictions imposed on livestock grazing within level 1 areas will result in a long-term ecological benefit to the improved riparian ecosystem in these areas and water quality of the Green River drainage. A secondary positive benefit to the basin's economic future will be the closure of developed recreation sites to livestock grazing, areas where recreation activities and livestock use have been historically and presently incompatible.

Mineral leasing and geophysical activities would be allowed on the majority of the ACECs with restrictions designed to protect the identified high value resources. Only level 1 lands in Red Mountain-Dry Fork Complex would be closed to such actions. These restrictions may

pose short-term negative economic impacts on energy companies; however, the long-term positive economic gains to northeastern Utah from recovery of these minerals outweigh the short-term negative impacts. Level 1 areas within the Browns Park Complex, Lears Canyon, and Red Mountain-Dry Fork Complex will be protected under a withdrawal to preclude mining activity other than casual use. This would pose a negative long-term impact to those individuals or companies dependent on mining activity for all or a portion of their economic livelihood.

There will be impacts to the northeastern portion of the RMP area from increased visitor days due to the development of facilities in level 1 and 2 areas. Impacts may include, but are not limited to, riparian zone site damage, wildlife disturbance, and an overall lessening of recreational experiences from increased water travel, hiking, OHV use, and camping. Increased visitor days will impact human health and safety along the high intensity use areas of the Green River Scenic Corridor (Browns Park Complex) and the Desolation Canyon National Natural Landmark (lower Green River). The positive impacts to the tri-counties' economies, however, due to the increased recreation use in the area can not be emphasized enough.

There are some socioeconomic cumulative impacts in the Green River Scenic corridor ACEC, Red Creek Watershed ACEC, Red Mountain, Nine Mile, Pariette Wetlands, and the designated Wild and Scenic Rivers. The social perception in the community is divided. The labor group, although sympathetic to conservation/preservation of these areas, would want to protect industry. Social perceptions in the communities are divided over wildlife management, visual resources, and scenic resources. Ranchers and business people oppose restrictions placed on commodities, labor groups want to protect industry, and conservation groups want to protect ecosystems.

Vegetation management objectives in Alternative E relating to riparian, wildlife, and special status plant species will have positive impacts for those resources, as well as sediment control and watershed stability in the designated ACECs and their adjacent areas.



**TABLE 4-18:  
SUMMARY OF IMPACTS**

ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D	ALTERNATIVE E
IMPACTS TO CULTURAL AND PALEONTOLOGICAL RESOURCES				
Accidental disturbance to both cultural and paleontological resources would continue due to surface-disturbing activities.	Accidental disturbance to both cultural and paleontological resources would continue, but would be less due to surface-disturbing activities held to a minimum.	Same as Alternative A	Same as Alternative A	Same as Alternative A
Continuation of the Green River Scenic Corridor ACEC would increase priority management of the area, thus reducing site deterioration of important cultural resources in this area only.	Designation of the Nine Mile Canyon, Browns Park and Red Mountain-Dry Fork Complexes as ACECs would increase management of these areas, reducing site deterioration of important cultural and paleontological resources within DMRA.	Same as Alternative A	Same as Alternative A	Same as Alternative B
IMPACTS TO FISH AND WILDLIFE HABITAT				
Black-footed ferret reintroductions could be realized on 2 identified reintroduction sites totalling 19,000 acres, thus supporting approximately 100 ferrets, and aiding in the recovery of this endangered species.	Black-footed ferret reintroductions could be realized on 2 identified sites totalling 33,500 acres, supporting 196 ferrets; thus, affording the greatest opportunity for DMRA to aid in the recovery of this endangered species.			Black-footed ferret reintroductions would be realized on 2 reintroduction sites totalling 25,000 acres, thus supporting approximately 200 ferrets, and aiding in the recovery of this endangered species.
Special status raptor species' nest sites would be protected from permanent surface-disturbing activities only during the species' active reproduction periods. This would be the least beneficial option for these species.	Special status raptor species' nest sites and maintenance of suitable raptor habitat would involve year-long protection. This alternative affords the greatest opportunity to aid in the eventual delisting of these species.	Same as Alternative A	Same as Alternative A	Special status raptor species nest sites would be protected year-long from permanent surface-disturbing activities, thus affording a positive, long-term benefit in the management of these species.



**TABLE 4-18 (Continued):  
SUMMARY OF IMPACTS**

ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D	ALTERNATIVE E
IMPACTS TO FISH AND WILDLIFE (Continued)				
Big game and nongame wildlife species forage assignments would be allowed to increase 21 percent over current use, to 35,000 AUMs.	Big game and nongame wildlife species forage assignments would be allowed to increase to 46,000 AUMs (a 66 percent increase), affording the greatest benefit for wildlife.	Big game and nongame wildlife species forage assignments would remain at present levels (27,600 AUMs)	Same as Alternative A	Big game and nongame wildlife species forage assignments would be allowed to increase 31 percent over current use, to 40,000 AUMs.
42 percent (90,030 acres) of crucial sage grouse nesting habitat would be seasonally protected.	173,000 acres (95 percent) of crucial sage grouse nesting habitat would be seasonally protected, offering the greatest protection to this species.	3,600 acres (20%) of crucial sage grouse nesting habitat would be seasonally protected.	Same as Alternative C	91,300 acres (60 percent) of crucial sage grouse nesting habitat would be seasonally protected.
Acquiring additional public vehicle access would open 70,700 acres of presently inaccessible land, and could result in wildlife displacement from their preferred habitat within these areas.	No additional vehicle access would be acquired; however, 48,400 additional public acres could be open to public foot access.	No additional public access would be acquired. This is a positive, long-term benefit for wildlife species sensitive to human activities in their preferred habitats.	Same as Alternative C	Same as Alternative A
24 miles of priority fisheries habitat would be protected under a withdrawal excluding mineral entry. This would be a beneficial impact for fisheries and 14 of the 21 special status animal species habitats in DMRA.	This alternative offers the greatest protection to fisheries habitat and special status animal species dependent on riparian habitat by recommending a protective withdrawal on all riparian habitat within DMRA.	Same as Alternative A	Riparian areas would not be recommended for protective withdrawal; however, seasonal restrictions would be imposed to protect and enhance riparian and, thus, fisheries habitat.	This alternative affords 45 miles of priority fisheries habitat protection from mineral entry with a protective withdrawal. This is seen as a beneficial impact for fisheries, but is not as extensive as Alternative B.
Release of bighorn sheep on 31,000 acres of identified bighorn sheep management areas could be realized. Negotiating with domestic sheep permittees within a 10-mile radius of bighorn habitat would increase bighorn sheep's survivability.	123,800 acres would be open to the reintroduction of bighorn sheep. This would offer the total acres identified for the reintroduction of bighorn sheep to managed for that purpose.	Only 3,900 acres of existing bighorn sheep habitat would continue. An opportunity to reintroduce bighorn sheep into additional historical habitat areas would be lost.	Same as Alternative C	Same as Alternative B. Opportunities to eliminate disease transmission from domestic sheep grazing would occur through negotiations.
	Designation of the special emphasis areas as ACECs would increase management of these areas for wildlife crucial habitat enhancement and protection.			Same as Alternative B



**TABLE 4-18 (Continued):  
SUMMARY OF IMPACTS**

ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D	ALTERNATIVE E
IMPACTS TO LIVESTOCK PROGRAMS				
<p>Livestock forage assignments would remain at current levels (50,299 AUMs). In crucial big game habitat additional AUMs gained through management and vegetation actions could be assigned to livestock on a temporary, nonrenewable basis until needed by wildlife. These AUMs would help maintain livestock preference. Preliminary monitoring data indicates no livestock preference reductions would be necessary.</p>	<p>Livestock forage assignments would be held at their current level. Additional AUMs gained through management and vegetation actions would not be available to livestock. Preliminary monitoring data indicates 11,467 AUMs could be reduced from livestock preference.</p>	<p>Livestock forage assignments would be maintained at their current level. However, additional AUMs gained from rangeland improvements and management practices would be assigned to livestock. No loss in livestock preference would be realized under this alternative. This alternative affords the greatest positive opportunities for livestock management.</p>	<p>Same as Alternative C</p>	<p>Livestock forage assignments would be held at current levels (50,200 AUMs). Additional AUMs gained through management and vegetation actions could be assigned to livestock on a temporary basis. Preliminary monitoring data indicates a 1,300-AUM reduction in current livestock preference would be necessary under this alternative.</p>
<p>Livestock grazing would continue to be closed on 3,500 public acres due to the Green River Scenic Corridor ACEC and the small, scattered unadjudicated public parcels.</p>	<p>No livestock grazing would be allowed on 26,000 acres due to municipal watershed and riparian resource values. This would reduce livestock preference by 4,600 AUMs.</p>	<p>No public lands would be closed to livestock grazing; however, seasonal restrictions would be imposed to protect critical resource values in specific allotments.</p>	<p>Same as Alternative C</p>	<p>Same as Alternative A</p>
<p>Negotiations with livestock permittees to eliminate domestic sheep grazing within 10 miles of bighorn sheep reintroduction areas could result in the least adverse impacts to the involved livestock permittees.</p>	<p>Livestock would be excluded from approximately 184,000 acres of bighorn sheep management areas. This would reduce livestock use by 8,500 AUMs, affecting 20 allotments and 20 grazing permittees.</p>	<p>No reduction in livestock preference due to additional reintroductions of bighorn sheep would be realized as no releases have been proposed under this alternative.</p>	<p>Same as Alternative C</p>	<p>Same as Alternative A</p>



**TABLE 4-18 (Continued):  
SUMMARY OF IMPACTS**

ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D	ALTERNATIVE E
IMPACTS TO MINERALS MANAGEMENT				
<p>Approximately 27 percent (228,000 acres) of unleased high potential oil and gas areas within the resource area would be open to leasing with special or standard restrictions. However, all lands would be open to geophysical exploration.</p>	<p>Approximately 16 percent (38,600 acres) of high potential oil and gas areas within DMRA would be open to leasing with special or standard restrictions. About 44 percent (106,000 acres) of high potential oil and gas areas would be precluded from geophysical exploration due to protection of critical resource values.</p>	<p>Approximately 28 percent (67,500 acres) of high potential oil and gas areas within the resource area would be open to leasing with special or standard restriction. All lands would be open to geophysical exploration.</p>	<p>Approximately 28 percent (67,500 acres) of high potential oil and gas areas within the resource area would be open to leasing with special or standard restriction. All lands would be open to geophysical exploration.</p>	<p>Approximately 26 percent (62,700 acres) of high potential oil and gas areas within the resource area would be open to leasing with special or standard restrictions. Approximately 14,460 acres of high potential oil and gas areas would be precluded from geophysical exploration due to protection of critical resource values.</p>
<p>Seasonal wildlife restrictions would affect 17 percent (41,000 acres) of high potential oil and gas areas resource areawide.</p>	<p>Seasonal wildlife restrictions would affect 61 percent (147,000 acres) of high potential oil and gas areas resource areawide. Several of the seasonal restrictions in specific areas overlap, resulting in an extended, and in certain areas prolonged, closures.</p>	<p>Seasonal wildlife restrictions would affect 17 percent (41,000 acres) of high potential oil and gas areas resource areawide.</p>	<p>Seasonal wildlife restrictions would affect 19 percent (46,000 acres) of high potential oil and gas areas resource areawide.</p>	<p>Seasonal wildlife restrictions would affect 36 percent (87,000 acres) of high potential oil and gas areas resource areawide. Several of the seasonal restrictions in specific areas overlap, resulting in an extended, and in certain areas prolonged, closures.</p>
<p>Approximately 1,700 of identified potential black-footed ferret habitat would have significant negative impacts to less than 1 percent of high potential oil and gas areas in the Myton Bench-Nine Mile Canyon and Horseshoe Bend-Ashley Valley oil and gas producing regions.</p>	<p>Approximately 26,000 acres of identified potential black-footed ferret habitat would have significant negative impacts on 12 percent of high potential oil and gas areas in the Myton Bench-Nine Mile Canyon and Horseshoe Bend-Ashley Valley oil and gas regions.</p>			<p>Approximately 18,300 acres of identified potential black-footed ferret habitat would have significant negative impacts on 7 percent of high potential oil and gas areas in the Myton Bench-Nine Mile Canyon and Horseshoe Bend-Ashley Valley oil and gas regions.</p>
<p>Tar sand development would be authorized on 66,200 acres of federal mineral estate, based on demand and limited by protection measures for critical resources. Such opportunities could result in increased income into the region.</p>	<p>Two-thirds of federal mineral estate in existing STSAs would be closed to tar sand development. This would preclude development of alternative sources of asphalt in the southern portion of the resource area.</p>	<p>Same as Alternative A</p>	<p>Same as Alternative A</p>	<p>Development of tar sands in the Pariette STSA would be precluded under this alternative. This would delay or preclude paving of roads in the area.</p>



**TABLE 4-18 (Continued):  
SUMMARY OF IMPACTS**

ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D	ALTERNATIVE E
IMPACTS TO MINERALS MANAGEMENT (Continued)				
7,650 acres of moderate to high grade phosphate lands would be open to development and occupancy with restrictions designed to protect crucial deer winter range. Such opportunities could result in approximately 350 additional jobs and increased income to the area.	95% of moderate to high grade phosphate lands would be closed. This would result in a lost opportunity to employ additional workers causing a loss in local revenues.	Same as Alternative A	Same as Alternative A	Same as Alternative A
IMPACTS TO RECREATION MANAGEMENT				
Managing for both primitive and developed forms of recreation would provide the greatest diversity for the recreating public.	Recreation management would limit opportunities to those publics preferring more primitive forms of recreation. This could have a negative impact on those segments of the public preferring more developed and concentrated forms of recreation.	Recreation demand on public lands would be met by maintaining existing developed sites at their present size and providing necessary primitive recreation sites only. Like Alternative B, this would be a positive impact to those publics oriented to a more primitive recreation experience.	Recreation demand on public lands would be met with 3 new developed recreation sites and expansion of 3 existing sites. This would be a positive benefit to the recreating publics relying on a mix of recreation activities.	This alternative would afford the maximum number of developed recreation sites: develop 5 new sites, expand facilities at 4 existing sites, maintain 5 existing sites at their present size. A primitive recreation sites have been identified for 14 areas. Such an alternative would provide the greatest positive benefits to those recreating publics oriented to myriad forms of recreation.
DMRA would be open to OHV use; however, 12 percent (85,600 acres) would be restricted to designated or existing roads and trails to protect critical soils and municipal watershed values. Such management would adversely affect driving for pleasure and, in some areas, close access to hunting.	553,000 acres (or 78 percent) of DMRA would be open to OHV use; of which 37% would be restricted to designated roads and trails. The remaining public lands within DMRA (156,000 acres) would be closed to OHV use to protect critical resource values.	687,700 acres (97 percent) of the resource area would be restricted to designated roads and trails to reduce livestock harassment and vegetation destruction. Although no OHV closures would be in effect, this alternative is the most limiting to recreationists driving for pleasure or hunting.	99,300 acres (14 percent) of DMRA would be restricted to designated roads and trails to protect critical resource values. No OHV closures would be in effect under this alternative. This management objective would provide the greatest opportunity for driving for pleasure or hunting.	Approximately 666,500 acres, or 94 percent, of the resource area would be open to OHV use; of which 6% would be restricted to designated roads and trails. The remaining public land within DMRA would be closed to OHV use to protect critical resource values.
6,900 acres (or 11 percent) of semi-primitive, nonmotorized values would be protected for primitive forms of recreation.	100 percent (60,800 acres) of semi-primitive, nonmotorized value lands would be protected for primitive forms of recreation.	100 percent of semi-primitive, nonmotorized value lands would not be protected, and thus maintained, for primitive forms of recreation.	Same as Alternative C	71 percent (43,200 acres) of semi-primitive, nonmotorized values would be protected for the enjoyment of primitive forms of recreation.



**TABLE 4-18 (Continued):  
SUMMARY OF IMPACTS**

ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D	ALTERNATIVE E
IMPACTS TO RECREATION MANAGEMENT (Continued)				
Continuation of the Green River Scenic Corridor ACEC would continue priority recreation management in the area, thus aiding to meet the increasing needs of the recreating public in this area.	Designation of all the special emphasis areas as ACECs would increase the recreation management emphasis in these areas, thus providing protection and enhancement of those resources valued by the recreating public preferring more primitive recreational experiences.	Same as Alternative A	Same as Alternative A	Same as Alternative B
	Designation of all the special emphasis areas as ACECs would increase the recreation management emphasis in these areas, thus providing protection and enhancement of those resources valued by the recreating public preferring more primitive recreational experiences.	Same as Alternative A	Same as Alternative A	Same as Alternative B
IMPACTS TO RIPARIAN RESOURCES				
Improving 7,200 public acres of riparian habitat from its present early and mid ecological condition to a late or climax condition would be a significant positive impact to wildlife, recreation, and watershed values.	Same as Alternative A; however, the fencing necessary to implement the objective would extend into nonriparian, upland sites in specific areas, extending the protection to riparian areas.	Same as Alternative A	Same as Alternative A	Same as Alternative A
IMPACTS TO SOILS AND WATER RESOURCES				
Continuation of the Red Creek Watershed ACEC would continue to focus management on this area, thus maintaining or improving watershed conditions where possible and support the BLM Rock Springs District in meeting their management objectives for this watershed.	Continuation of the Red Creek Watershed ACEC and designation of the Pariette special emphasis area as an ACEC would emphasize watershed management for these two watersheds, thus aiding in meeting the objectives of the Colorado River Compact.			Same as Alternative B



**TABLE 4-18 (Continued):  
SUMMARY OF IMPACTS**

ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D	ALTERNATIVE E
IMPACTS TO SOIL AND WATER RESOURCES (Continued)				
<p>Over the life of this plan, approximately 22,400 acres have been identified for vegetation treatment. Vegetation treatment projects involving pinyon-juniper woodlands would result in a net long-term savings of 336,000 tons of soil per year.</p>	<p>Vegetation treatment projects involving pinyon-juniper woodlands would result in a net long-term savings of 135,750 tons of soil per acre per year. Over the life of this plan, approximately 9,050 acres have been identified for vegetation treatment.</p>	<p>Vegetation treatment projects involving pinyon-juniper woodlands would result in a net long-term savings of 406,500 tons of soil per acre per year. Over the life of this plan, approximately 27,100 acres have been identified for vegetation treatment.</p>	<p>Same as Alternative C</p>	<p>Same as Alternative A</p>
<p>4,050 acres within critical watersheds in the Myton Bench-Nine Mile Canyon and Horseshoe Bend-Ashley Valley oil and gas producing regions could be disturbed due to oil and gas activities. Such disturbances could result in accelerated erosion of approximately 20,250 tons of soil per year.</p>	<p>Same as Alternative A</p>	<p>Same as Alternative A</p>	<p>Same as Alternative A</p>	<p>Same as Alternative A</p>
IMPACTS TO VISUAL RESOURCES				
<p>1,800 acres (3 percent) of present VRM Class II areas within DMRA would be adversely affected by unmitigable actions associated with the possible transmission line placement within the identified utility corridors.</p>	<p>Designation of the Red Mountain-Dry Fork Complex, Pariette, Lower Green River, Lears Canyon and Nine Mile Canyon special emphasis areas as ACECs would increase vegetation management emphasis in these areas for both special status plant species and relict vegetation communities.</p>	<p>Designation of the three relict vegetation communities as ACECs would add to the scientific knowledge of natural vegetation communities in the intermountain region.</p>	<p>2,400 acres (4 percent) of present VRM Class II areas would be adversely affected by unmitigable actions associated with the possible transmission line placement within the identified utility corridors.</p>	<p>Same as Alternative B</p>
<p>1,800 acres (3 percent) of present VRM Class II areas within DMRA would be adversely affected by unmitigable actions associated with the possible transmission line placement within the identified utility corridors.</p>	<p>1,200 acres (2 percent) of present VRM Class II areas would be adversely affected by unmitigable actions associated with the possible transmission line placement within the identified utility corridors.</p>	<p>2,400 acres (4 percent) of present VRM Class II areas would be adversely affected by unmitigable actions associated with the possible transmission line placement within the identified utility corridors.</p>	<p>2,400 acres (4 percent) of present VRM Class II areas would be adversely affected by unmitigable actions associated with the possible transmission line placement within the identified utility corridors.</p>	<p>1,200 acres (2 percent) of present VRM Class II areas would be adversely affected by unmitigable actions associated with the possible transmission line placement within the identified utility corridors.</p>



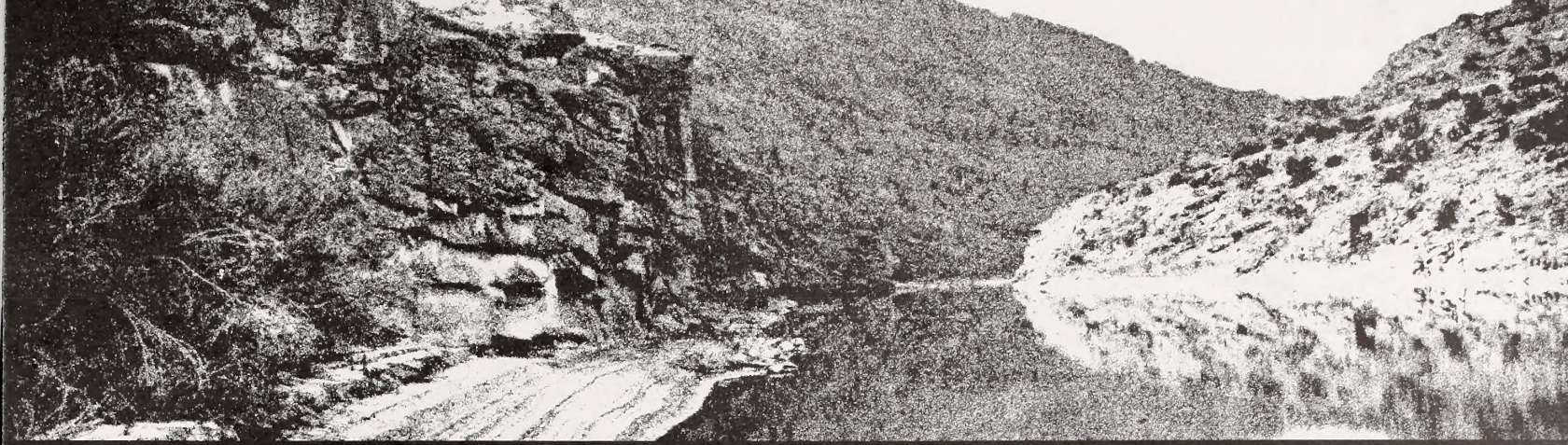
**TABLE 4-18 (Continued):  
SUMMARY OF IMPACTS**

ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D	ALTERNATIVE E
IMPACTS TO WOODLANDS MANAGEMENT				
<p>Continuing the harvest of woodland products to meet public demand would be a local benefit.</p>	<p>A 57% reduction in current harvest levels would be necessary to protect critical resource values. This would be a negative impact to the local communities dependent on public woodlands for fuelwood.</p>	<p>A 69% increase in current harvest levels could be accommodated in this alternative using sustained yield principles. This would be a positive impact to the local communities dependent on public woodlands for fuelwood.</p>	<p>Same as Alternative C</p>	<p>A 45% increase in current harvest levels could be accommodated in this alternative using sustained yield principles. This would be a positive impact to the local communities dependent on public woodlands for fuelwood.</p>









## CONSULTATION AND COORDINATION 5

Resource specialists in the Diamond Mountain Resource Area and Vernal District prepared the Diamond Mountain Resource Management Plan/Environmental Impact Statement (RMP/EIS). The Vernal District Office and Utah State Office management teams and resource program leaders provided technical and policy reviews and suggestions.

Consultation, coordination, and public involvement have occurred throughout the process through public meetings, informal meetings, individual contacts, news releases, and *Federal Register* notices.

Initial steps in the process began in 1988 with the development of a preparation plan. Other early efforts included research, inventory, analysis, and interagency coordination.

### PUBLIC PARTICIPATION

A public participation plan was prepared to ensure that the public would have numerous opportunities to be actively involved in the planning and environmental process. Both formal and informal input have been encouraged and used.

A notice published in the *Federal Register* in January 1989, indicated the intention of the BLM to prepare a resource management plan and requested information on resources and proposed future uses within the Diamond Mountain Resource Area. Nominations for ACEC consideration were also requested. Letters and a news release requesting information on the potential for occurrence of minerals were mailed in spring 1989.

A news release was issued in September 1989, and notices were mailed to solicit comments on a set of proposed planning criteria.

A news release was issued in January 1991, and a brochure was mailed providing information on the results of the ACEC nomination process and subsequent analysis as well as a brief summary of the alternatives. Invitations to review the Management Situation Analysis and provide nominations for Wild and Scenic River designation were also extended.

The Vernal District Advisory Council has been kept apprised of the RMP progress, and comments and recommendations of the members have been solicited.

Formal and informal meetings have been held with many members of the ranching and minerals industries and with other interest groups and with Uintah Basin governmental agencies and entities. A summary of comments generated from these meetings is on file in the Vernal District.

### CONSISTENCY

Coordination with other agencies and consistency with other plans were accomplished through frequent communications and cooperative efforts between the BLM and involved federal, state, and local agencies and organizations.

The Utah Governor's Resource Development Coordinating Committee (RDCC) has been heavily involved in the development of this draft RMP/EIS. Numerous meetings and a field tour were conducted to assure consistency with the state's ongoing plans. The RMP team reviewed the land use plans for Daggett, Duchesne, and Uintah Counties to ensure consistency. BLM personnel have met with the respective county planners and commissioners to promote greater understanding of goals, objectives, and resources of both the counties and the BLM.



## **AGENCIES AND ORGANIZATIONS CONSULTED**

Members of the RMP team have consulted formally or informally with numerous agencies, groups, and individuals during development of the plan. The following list is representative of the business agencies, organizations, and individuals that have indicated an interest in the Diamond Mountain RMP and those that have been contacted during the planning process. This list is not inclusive. A complete list is on file at the Vernal District Office.

### **U.S. SENATORS**

Senator Jake Garn  
Senator Orrin Hatch

### **CONGRESSIONAL REPRESENTATIVES**

Representative Bill Orton District 3

### **STATE OFFICIALS**

Norman Bangerter, Governor

### **STATE SENATORS**

Myrin Alarik, District 26

### **S T A T E C O N G R E S S I O N A L R E P R E S E N T A T I V E S**

Beverly Ann Evans, District 55  
Dan Price, District 56

### **FEDERAL AGENCIES**

National Park Service  
Dinosaur, CO; Jensen, UT;  
Washington, DC

National Park Service RMRO  
Branch of Compliance  
Denver, CO

National Wildlife Federation  
Washington, DC

U.S. Air Force Environmental Office-Central  
Dallas, TX

U.S. Bureau of Indian Affairs  
Phoenix, AZ

U.S. Bureau of Indian Affairs  
Uintah and Ouray Agency  
Fort Duchesne, UT

U.S. Bureau of Land Management  
Green River Resource Area  
Rock Springs, WY

U.S. Bureau of Land Management  
Price River Resource Area  
Price, UT

U.S. Bureau of Land Management  
White River Resource Area  
Meeker, CO

U.S. Bureau of Land Management  
Little Snake Resource Area  
Craig, CO

U.S. Bureau of Land Management  
Planning Coordinator  
Craig, CO; Moab and Salt Lake City, UT

U.S. Bureau of Mines  
Denver, CO; Tucson, AZ; Washington, DC

U.S. Bureau of Reclamation  
Division Environmental Affairs  
Washington, DC

U.S. Bureau of Reclamation  
Denver, CO; Salt Lake City, UT

U.S. Department of Energy  
Laramie, WY

U.S. Department of Housing and Urban Development  
Denver, CO

U.S. Environmental Protection Agency  
Denver, CO

USDA, Farmers Home Administration  
Roosevelt and Vernal, UT

U.S. Federal Energy Regulatory Commission  
Washington, DC

U.S. Fish and Wildlife Service  
Colorado River Fisheries  
Vernal, UT



U.S. Fish and Wildlife Service  
Denver, CO; Vernal, and Salt Lake City, UT;  
Washington, DC

U.S. Forest Service  
District Ranger  
Roosevelt, UT

U.S. Forest Service  
Forest Supervisor  
Vernal, UT

U.S. Forest Service  
Regional Forester  
Ogden, UT

U.S. Geological Survey  
National Center (423)  
Reston, VA

U.S. Health and Human Services  
Environmental Health  
Disease Control Centers  
Atlanta, GA

U.S. Mineral Management  
Denver, CO

U.S. Soil Conservation Service  
Vernal, UT

## STATE AGENCIES

Utah Department of Health  
Salt Lake City, UT

Utah Department of Natural Resources  
Salt Lake City, UT

Utah Division of Lands and Forestry  
Salt Lake City, UT

Utah Division of Oil, Gas, and Mining  
Salt Lake City, UT

Utah Division of Transportation  
Salt Lake City, UT

Utah Division of Water Resources  
Salt Lake City, UT

Utah Division of Water Rights  
Salt Lake City, UT

Utah Division of Wildlife Resources  
Salt Lake City, Price, and Vernal, UT

Utah Field House of Natural History  
Vernal, UT

Utah Geological Survey  
Salt Lake City, UT

Utah State Preservation Office  
Salt Lake City, UT

Utah State University  
Utah Water Research Laboratory  
Logan, UT

## COUNTY AND LOCAL OFFICIALS

Daggett County Commission  
Manila, UT

Duchesne County Commission  
Duchesne, UT

Uintah County Commission  
Vernal, UT

## COUNTY AND LOCAL AGENCIES

Chamber of Commerce  
Vernal, UT

Duchesne County Agents  
Duchesne, UT

Uintah County Library  
Vernal, UT

Uintah County Planner  
Uintah Courthouse  
Vernal, UT

Uintah County Transportation  
Vernal, UT

Vernal City Corporation  
Vernal, UT

Vernal District Advisory Council  
Vernal, UT

Vernal District Grazing Advisory Board  
Vernal, UT



## INDIAN ORGANIZATIONS

Ute Indian Tribe  
Business Committee  
Fort Duchesne, UT

Ute Indian Tribe  
Resource Department  
Fort Duchesne, UT

Ute Research Laboratories  
Fort Duchesne, UT

## MEDIA

Cortez Newspapers Inc.  
Cortez, CO

Daily Northwest Colorado Press  
Craig, CO

Daily Rocket Miner  
Rock Springs, WY

Deseret News  
Vernal, UT

High Country News  
Paonia, CO

KVEL/KUIN News  
Vernal, UT

Public Lands Newsletter  
Ucon, ID

Vernal Express  
Vernal, UT

## OTHER ORGANIZATIONS

American Fisheries Society  
Bethesda, MD

American Rivers  
Washington, DC

American Wilderness Alliance  
Englewood, CO

AMOCO Corporation (2903)  
Chicago, IL

Apache Corporation  
Denver, CO

Archaeological Society of Utah  
Bountiful, UT

Audubon Society  
Boulder, CO; Salt Lake City, UT

Brigham Young University  
Provo, UT

Brigham Young University  
Environmental Analysis Lab  
Provo, UT

Celsius Energy Company  
Salt Lake City, UT

Chevron Resources  
Vernal, UT

CNG Producing Company  
Roosevelt, UT

Dames and Moore  
Salt Lake City, UT

Dinaland Aviation Inc.  
Vernal, UT

Dry Fork Residents  
Vernal, UT

Exxon USA Company  
Vernal, UT

Flaming Gorge Lodge  
Dutch John, UT

Geokinetics Inc.  
Salt Lake City, UT

Grand Canyon Trust  
Flagstaff, AZ

Hart Crowser Inc.  
Seattle, WA

Hatch River Expeditions  
Vernal, UT

High Country River Rafters  
Golden, CO



Chapter 5 - Coordination and Consultation

Humane Society of Utah  
West Valley City, UT

Independent PET Association Mtn  
Denver, CO

International Right of Way Association  
Gardena, CA

IWG Corporation  
San Diego, CA

Karren Brothers Ranch  
Jensen, UT

Marathon Oil (3347)  
Houston, TX

Merrion Oil and Gas  
Farmington, NM

Mountain States Legal Foundation  
Denver, CO

Mountain West Environmental Service  
Cheyenne, WY

National Parks and Conservation  
Salt Lake City, UT

New Paraho Corporation  
Lakewood, CO

New West Resources  
Cody, WY

NGC Energy Company  
Vernal, UT

Pace Synthetic Fuels  
Niwot, CO

PIC Technologies Inc.  
Denver, CO

Public Lands Foundation  
McLean, VA

Quintana Petroleum  
Houston, TX

Rangeland Consulting  
Fort Collins, CO

Rocky Mountain Oil and Gas Association  
Denver, CO

Sam Oil Inc.  
Roosevelt, UT

Sierra Club  
Salt Lake City, UT

Sinclair Oil Corporation  
Denver, CO

Solvex Corporation  
Albuquerque, NM

Southern Utah Wilderness Alliance  
Salt Lake City, UT

Texaco USA  
Denver, CO

True Oil  
Casper, WY

Uintah Basin Association of Governments  
Roosevelt, UT

Uintah Basin Cattle Association  
Duchesne, UT

Uintah Basin Sportsmen's Association  
Vernal, UT

Uintah Cattlemen  
Vernal, UT

Uintah Mountain Club  
Vernal, UT

University of Colorado  
Department of Geology  
Wilderness Study  
Boulder, CO

USX--US Diversified Group  
Provo, UT

Utah Agency Clearinghouse  
Salt Lake City, UT

Utah Archaeological Society  
Vernal and Salt Lake City, UT

Utah Association of Counties  
Salt Lake City, UT

Utah Biomedical Test Laboratory  
Salt Lake City, UT



Utah Cattlemen's Association  
Salt Lake City, UT

Vernal Rod and Gun  
Vernal, UT

Utah Cooperative Association  
Salt Lake City, UT

Wilderness Coalition  
Salt Lake City, UT

Utah Farm Bureau  
Springville, UT

Wilderness Society  
Denver, CO; Salt Lake City, UT, and Washington, DC

Utah Farm Bureau Federation  
Salt Lake City, UT

Wild Horse Organized Assistance  
Reno, NV

Utah Geological Association  
Salt Lake City, UT

Wild Horse Preservation and Management  
Leasburg, NC

Utah International Inc.  
Salt Lake City, UT

Wildlife Management Institute  
Portland, OR

Utah Mining Association  
Salt Lake City, UT

Wildlife Society Inc.  
Bethesda, MD

Utah Nature Study  
Salt Lake City, UT

Wolverine Exploration  
Denver, CO and Ft. Worth, TX

Utah Petroleum Association  
Salt Lake City, UT

## LIST OF PREPARERS

Utah Power and Light Company  
Salt Lake City, UT

The following lists in alphabetical order the principal players in the preparation of this plan. Numerous other individuals from the resource area, district, and state offices as well as other federal, state, county representatives and public individuals provided valuable assistance in the formulation of this plan. For brevity only, just those district and state office individuals providing major support and assistance are listed. The contributions of those not listed are also deeply appreciated.

Utah Professional Archeological Society  
Utah State University  
Logan, UT

**Tom Dabbs**, DMRA Wildlife Biologist. B.S. Wildlife Management, Humboldt State University, Arcata, California. Member of the core team since its inception covering wildlife, special status animal species, and fire matters. He has worked for 12 years with BLM.

Utah State University  
Range Science Dept.  
Extension Service  
Logan, UT

**Steve Hartmann**, DMRA Supervisory Range Conservationist. B.S. Range Management, University of Montana, Missoula. Member of the core team from its inception covering livestock, soils and water, and vegetation (including special status plant species). He has worked for 13 years with BLM, the last 2 in Vernal.

Utah Trail Machine Association  
American Fork, UT

Utah Wilderness Association  
Salt Lake City, UT

Utah Wildlife Federation  
Vernal and Salt Lake City, UT

Utah Woolgrowers  
Salt Lake City, UT

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Vernal Fish and Wildlife Assistance  
Vernal, UT



# PREPARERS



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Realty Specialist



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Technical Coordinator



Dave Plume  
Geologist



Tom Dabbs  
Wildlife Biologist



Penny Smalley  
Team Leader



Steve Hartmann  
Supervisory Range  
Conservationist



Tim Ingwell  
District Geologist



Dave Moore  
Recreation Specialist



Phyllis Phillips  
Word Processor Operator



minerals and groundwater concerns. Tim comes from the private sector, with 3 years of experience with BLM.

**Dave Moore**, DMRA Outdoor Recreation Planner. B.S. Forestry, Utah State University, Logan. Member of the core team from its inception covering recreation (including Wild and Scenic River evaluation) and woodland concerns. Dave also wrote the Cultural Resources and Hazardous Materials sections from information prepared by others. Dave has 26 years experience with BLM.

**Jean Nitschke-Sinclear**, DMRA Range Conservationist. B.S. Range Management, Utah State University, Logan. Member of the core team from its inception serving as Technical Coordinator and working with special emphasis areas. She has worked for 18 years with BLM.

**Phyllis Phillips**, Vernal District Word Processor Operator. Phyllis performed the monumental task of completing the word processing of the RMP/EIS and all the unseen written documentation behind the document. Phyllis has 5½ years experience with BLM.

**Dave Plume**, DMRA Geologist. B.S. Geology, Metropolitan State College, Denver. Member of the core team from its inception covering solid minerals development. Dave also functioned as a key player in the preparation, analysis, and depiction of GIS data. He has worked for 4 years with BLM.

**Earle Smith**, Vernal District GIS Coordinator. B.S. Forestry, Utah State University, Logan; M.S. Forestry, Oregon State University, Corvallis. Earle was GIS Coordinator and member of the core team from its inception through the preparation of the draft RMP/EIS.

**Penny Smalley**, Vernal District Planning Chief. B.S. Business, University of Colorado, Boulder. Member of the core team from its inception serving as Team Leader and management coordinator. Penny has worked for 13 years with BLM.

**Kathy Stubbs**, Vernal District Realty Specialist. Member of the core team from its inception, covering lands and realty. She also wrote the air, climate and socioeconomic sections from information prepared by others. Kathy has worked 14 years with BLM. Kathy was instrumental in entering the resource area's myriad land status data into a complicated yet efficient GIS database.

**Ron Trogstad**, DMRA Area Manager. B.S. Biological Science, University of Utah, Salt Lake City. Member of the core team from its inception, providing coordination

and management assistance. Ron has worked 24 years with BLM.

## SPECIAL ASSISTANCE

### Vernal District Office

*Tanya Bullock*, GIS Coordinator. Tanya assumed the duties of GIS Coordinator following the transfer of Earle Smith.

*Keith Chapman*, Soils Scientist. Keith formulated the soils and surface water information in the Management Situation Analysis and oversaw the input of soils and watershed information into the GIS database.

*Gerald Kenzcka*, Petroleum Engineer. Jerry formulated the fluid minerals section of the Management Situation Analysis and oversaw the input of the fluid minerals data into GIS.

*Dwain Nelson*, Range Conservationist. Dwain assisted in the mapping of soils inventory and ecological condition information in the Diamond Mountain and Three Corners areas of the resource area.

*Blaine Phillips*, Archeologist. Blaine formulated the cultural and paleontological section of the Management Situation Analysis and oversaw the input of such information into GIS.

*Kyle Smith*, Cartographic Technician. Kyle inputted spatial inventory information into the GIS database for use by the team.

*Ray Tate*, Public Affairs Officer. Ray lent his editorial assistance and wrote news releases during the planning process.

*Jo Ann Stroh*, Computer Specialist. Jo Ann prepared the graphics and photographics for presentation. She also developed the interactive computer system for use during review.

*Karl Wright*, Hydrologist. Karl assisted in the inputting of riparian, floodplain, and watershed data into the GIS database. He also aided in the formulation of the Soil and Water section of the Management Situation Analysis.

### Utah State Office

*Carla Garrison*, Cartographer. Carla provided technical oversight for the digitizing of the original information into the GIS database.



*Steve Howard*, Planning Coordinator. Steve provide technical oversight on the various facets of the planning effort and coordinated state office input and support.

*Jack Sheffey*, GIS Coordinator. Jack provided training, support, and guidance in the use of GIS as an analysis tool.

*Bill Wagner*, Physical Scientist. Bill prepared the air and climate sections of the Management Situation Analysis. Bill also provided assistance with Hazardous Materials information.

## **Others**

The Bureau's Phoenix Training Center provided us with many of the graphics and drawings used in this document.

Patti Britton designed the chapter headings from an original 1870 survey photo of Swallow Canyon by USGS surveyor W.H. Jackson (333a).

The U.S. Forest Service (Region 4 office and the Ashley National Forest supervisor's office) kindly allowed us to use their socioeconomic model.

Mary Read lent her expertise in impact analysis during the final phase of document preparation.

Trina Strong provided the artwork for the cover.

Debbie Wheeler and Corinne Jacobsen drew the vegetation artwork used in the document.

## **OTHER ASSISTANCE**

### **Vernal District**

David E. Little, District Manager  
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Howard Cleavinger, Assistant District Manager Minerals  
Duane DePaepe, Environmental Coordinator  
Dean Evans, Assistant District Manager Lands and Renewable Resources  
Gary Hunter, Assistant District Manager Operations  
Andy Smith, Administrative Officer  
Ed Wehking, Fire Management Officer

### **Utah State Office**

Mike Barnes, Land Law Examiner  
George Diwachak, Environmental Scientist  
Jim Fouts, Geologist  
Terry Graham, Writer-Editor  
Maggie Kelsey, Environmental Specialist  
Howard Lemm, Deputy State Director Mineral Resources  
Bob Lopez, Land Law Examiner  
Dick Page, Natural Resource Specialist  
Gary Peterson, Cartographic Technician  
Shelley Smith, Archeologist  
Ted Stephenson, Chief, Branch of Operations  
Randy Weatherly, Computer Programmer



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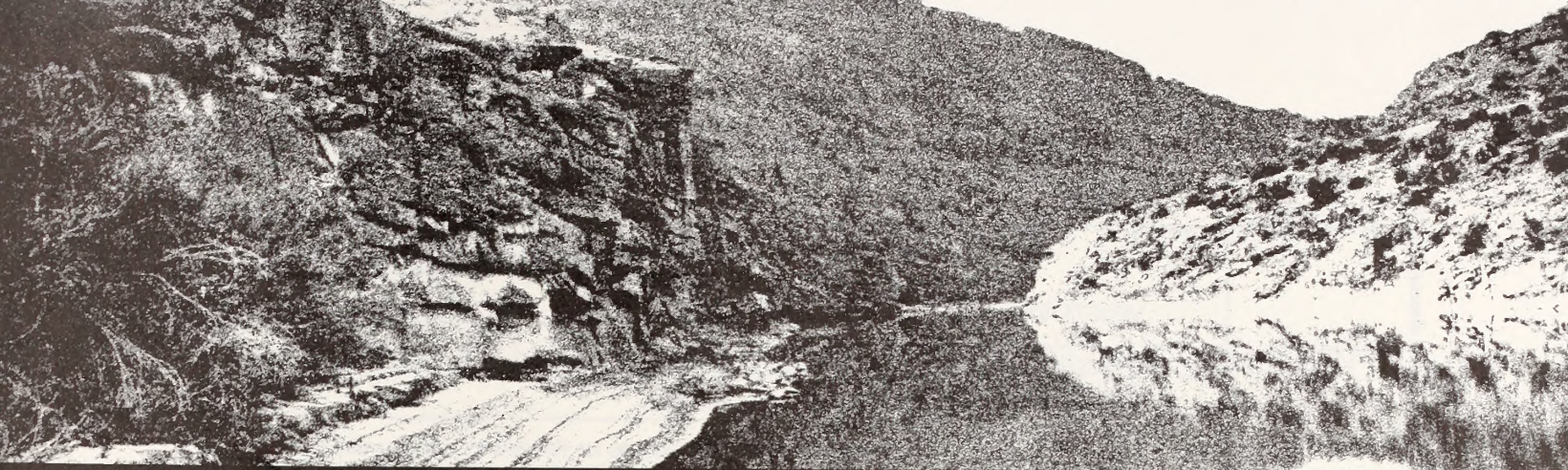
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# APPENDICES

The following pages contain appendices referenced in the body of the Diamond Mountain RMP. The Appendices are arranged in this order:

APPENDIX NUMBER	APPENDIX NAME	TOPICS
1	CULTURAL/ PALEONTOLOGICAL	Cultural Site Management Category Allocations for Alternatives B and E
		Cultural Program Inventory
		Utah State Guidelines for Paleontological Resource Mitigation
2	FISH AND WILDLIFE	Wildlife Forage Allocation
		Standard Operating Procedures for Wildlife
		Vegetation Manipulation Guidelines for Sage Grouse Habitat
		Wildlife Monitoring Studies
		DMRA Guidelines for Potential Black-Footed Ferret Reintroductions
3	LANDS	Standard Operating Procedures
		Utility Corridor Routes Overlaying other Resource Values
		Sales Parcels by Alternative
4	MINERALS	Competitive Oil and Gas Leasing
		Oil and Gas Operations
		Occurrence of Oil and Gas Resources
		Reasonable Foreseeable Development
		Current Oil and Gas Leasing Stipulations and Guidance
5	RECREATION	Recreation Opportunity Spectrum Criteria
6	RIPARIAN	Utah BLM Riparian Policy of 1988
7	SPECIAL EMPHASIS AREAS	Areas of Critical Environmental Concern (ACEC) Analysis
		Wild and Scenic Rivers Eligibility and Suitability Analysis



Appendices

APPENDIX NUMBER	APPENDIX NAME	TOPICS
8	VEGETATION AND LIVESTOCK MANAGEMENT	Vegetation Inventory History and Ecological Condition
		Forage Allocation
		Allotment Categorization
		Range Monitoring Studies
		Standard Operating Procedures for Rangeland Improvements
9	WATERSHED	Utah State Water Quality Standards



# APPENDIX 1

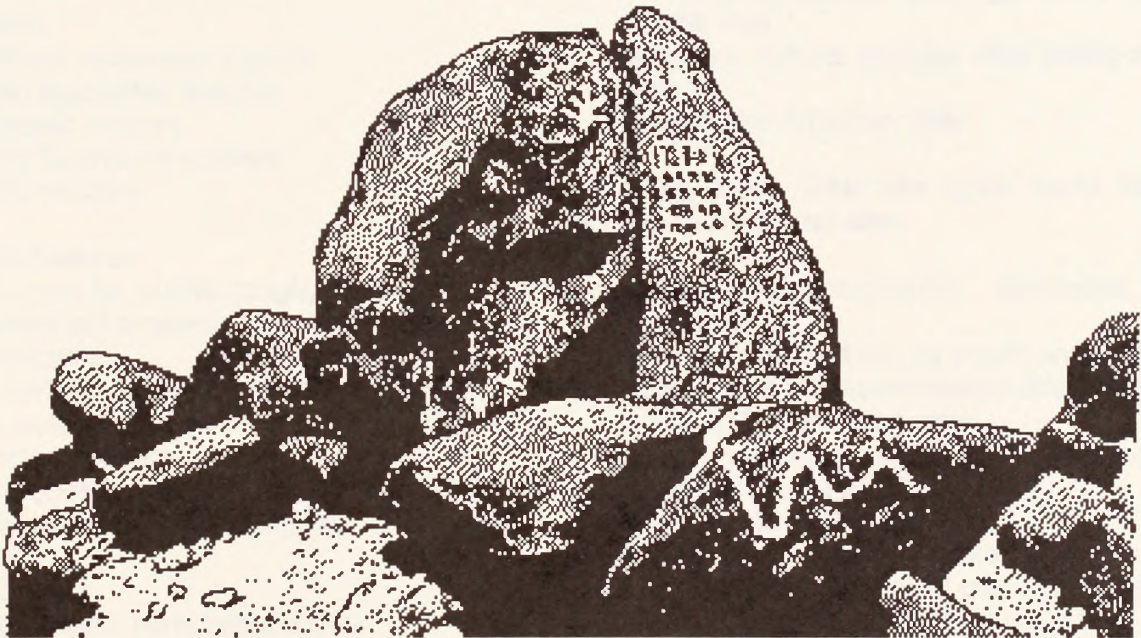
## CULTURAL AND PALEONTOLOGICAL RESOURCES

### CONTENTS:

*Cultural Site Management Category Allocation*

*Cultural Program Inventory*

*Utah Guidelines for Paleontological Resource Mitigation*





APPENDIX

THE UNIVERSITY OF CHICAGO PRESS

CHICAGO, ILL.

1968

1969

1970





## CULTURAL SITE MANAGEMENT CATEGORY ALLOCATIONS

Cultural sites including ethnographic properties within DMRA will be allocated to one of three management categories. These allocations will be made in cultural resource management plans upon completion of an approved RMP. Under Alternatives B and E, the sites will be allocated as follows.

### INFORMATION POTENTIAL CATEGORY

- Prehistoric villages: 10 acres or over
- Prehistoric villages: 10 acres or less
- Stratified rock shelters, caves, overhangs
- Masonry structures/sites
- Petroglyph/pictograph sites
  - Archaic
  - Fremont
  - Anasazi
- Open camps
- Hearth/oven clusters
- Middens
- Lithic scatters
  - Without associated features
  - With associated features
  - Ceramic scatters
  - With Burntstone scatters
  - With middens
- Buried sites/features
- Prehistoric, non-Ute, burials (single/multiple)
- Historic period trail systems (Euro-American and Native American)
- Historic period ranches, corrals, isolated structures, isolated features
- Historic period middens
- Historic water works, features, and structures.
- Bedrock mortar sites, bedrock metate
- Scatters:
  - Ceramics
  - Bone, shell, horn, teeth, antlers
  - Charcoal
  - Burned/fire cracked rocks
  - Cobs
  - Jacal
- Figurine, ceramic non-ceramic scatters, caches
- Dinosaur exploration, quarry sites
- Civilian Conservation Corp. (CCC) structures, features, camps, etc. (also Works Progress Administration (WPA))
- Fur trade/trapping sites

- Mining/mineral exploration, extraction and processing sites, features, areas
- Farming/ranching sites, features, areas
- Ethnic (non Native American) sites
- Post Office
- Engineering: bridges, canals, flumes, etc.
- Military/Indian conflict sites, structures, areas
- Logging/timber sites, structures, areas
- Unknown as to period, function, age, etc.
- Kill sites including associated butchering stations, camps, features
  - Drive sites
  - Jump sites
  - Arroyo traps
  - Blinds
- Paleo-Indian sites (well preserved and threatened)
  - Plano
- Paleo-Indian sites (poor condition or threatened: llano period)

### PUBLIC VALUES CATEGORY

- Ute cultural heritage sites (all types) (socio-cultural use)
- Shoshone cultural heritage sites (socio-cultural use)
- Other Native American sites

The following public value site types would also be categorized as public use sites.

- Petroglyphs/pictographs (excludes Ute, Shoshone)
- Historic sites identified by public and local CLG as important with substantiated documentation.
- National Register listed sites
- Sites, structures, objects, areas interpreted through the recreation program
- Stone saloon in Browns Park
- Site types listed under the information potential Category where controlled use can be instituted for education and recreational uses, i.e.
  - Open Camps
  - Small villages
  - Middens
  - Historic trail systems
  - CCC/WPA sites, structures
  - Masonry structures
  - Bed rock mortar/metate sites
  - Fur trading/trapping sites
  - Mining/mineral industry sites, structures
  - Farming/ranching sites, structures
  - Logging/timber sites, structures



- Engineering sites
  - Bridges
  - Flumes
  - Power generation structures
  - Ditches and canals

**CONSERVATION CATEGORY**

- Paleo-Indian sites (well preserved)
  - llano period (all site types)
  - Burials, human remains
- Paleo-Indian components
  - llano affiliation

**CULTURAL PROGRAM INVENTORY**

The Vernal District Class I inventory was completed in November 1980 (Jones and McKay, 1980). Since that time an area-wide Class I survey and report has not been written. The Class I documents for various projects in DRMA have updated information for certain portions of the resource area. A 1990 survey (Phillips) updated information concerning the late prehistoric Fremont horticulturalist for the Uinta Basin and Mountain areas.

**PALEONTOLOGICAL RESOURCES**

Table A1-1 displays the guidelines the Utah State Paleontologist has distributed concerning mitigation of paleontological resources.

**TABLE A1-1  
MITIGATION LEVEL TABLE**

SENSITIVITY LEVELS	MITIGATION
<p><u>Critical (Class I)</u> Any locality from which holotype or critical reference material (eg., paratype, lectotype, etc.) has been collected. Any type geologic reference section which is critical for future reference.</p>	<p><u>Critical</u> No action will be allowed which will damage the fossil resource or alter the contextual relationships of fossil materials. Materials may be removed, but by special permit only, to qualified professionals.</p>
<p><u>Significant (Class II)</u> Any locality which contains rare, exceptionally well preserved or critical materials for stratigraphic or paleoenvironmental interpretation.</p>	<p><u>Significant</u> Depending on the size of the deposit, approved mitigation may include total salvage or may be limited to a statistically valid sample of all forms present.</p>
<p><u>Important (Class III)</u> Any locality which has produced plentiful, relatively common in the locality and elsewhere, fossil materials which are useful for stratigraphic and variability studies.</p>	<p><u>Important</u> A statistically valid sample will be obtained to mitigate any adverse impact on the resource.</p>
<p><u>Insignificant (Class IV)</u> Any locality which produces poorly preserved, common elsewhere, or stratigraphically unimportant material.</p>	<p><u>Insignificant</u> Mitigation is optional.</p>
<p><u>Unimportant (Class V)</u> Any locality which has been intensively surveyed and determined, therefore, to be of minimal scientific interest. This can include the outcrop of geological formations described as unfossiliferous in technical journals or publications.</p>	<p><u>Unimportant</u> No mitigation necessary.</p>



# APPENDIX 2

## FISH AND WILDLIFE RESOURCES

### CONTENTS:

*Wildlife Forage Requirements*

*Standard Operating Procedures*

*Vegetation Manipulation on Sage Grouse Habitat*

*Wildlife Monitoring Studies*

*Potential Wildlife Reintroduction*

*DMRA Guidelines for Potential  
Black-Footed Ferret Reintroduction*





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## WILDLIFE FORAGE ALLOCATION HISTORY

Starting in 1958, the Vernal BLM District underwent an extensive adjudication process on public rangelands to adjust them to the proper carrying capacities. Formal adjudication of forage in the Diamond Mountain Resource Area for wildlife was completed between 1958-1967 coinciding with livestock grazing adjustments. Utah Division of Wildlife Resources (UDWR)-BLM cooperative agreements since this time have emphasized big game habitat enhancement. Over 6,500 acres of habitat improvement work has been completed since the mid 1960s as well as forage reservations for wildlife (2,361 Animal Unit Months [AUMs]) in Browns Park as mitigation for lost habitat from the Flaming Gorge Reservoir development.

Wildlife forage allocations were increased to 21,888 AUMs as a result of these events as well as the completion of the 1980 Three Corners and 1982 Ashley-Duchesne Grazing Environmental Impact Statements.

Table A2-1 summarizes the forage allocation for wildlife as of 1991. Current use levels are estimated at 27,600 AUMs based on UDWR annual surveys. Objective stocking levels by herd unit were also determined by UDWR based on prior stable numbers and optimum stocking levels.

Table A2-1 reflects BLM's analysis of these requests which have been further divided to corresponding grazing allotments within each herd unit. Forage allocation decisions for wildlife were made to support objective wildlife populations identified by UDWR where they didn't exceed proper carrying capacities. Monitoring, continued vegetation improvement work, and land acquisition will eventually determine if objective levels can be met. Total AUM levels for each allotment were calculated from actual use and utilization studies where data was available. In cases where this data was not available, total AUMs were determined by vegetation type based on referenced studies from similar sites.

## STANDARD OPERATING PROCEDURES FOR WILDLIFE

1. Gather baseline data on 40 management indicator species and use that data to monitor the health of and the BLM's effects on all habitats within the Diamond Mountain Resource Area. Manage to delist all special status species which are indicator species and prevent the need for listing other species.

2. Wildlife habitat improvement projects will require consultation with Utah Division of Wildlife Resources on job design and construction techniques one year in advance of implementation.
3. Keep the construction of all new stream crossings to a minimum. Culverted stream crossings will be designed and constructed to allow fish passage. All stream crossings will be designed and constructed to keep impacts to riparian and aquatic habitat at a minimum.
4. Relocate existing roads out of riparian areas where feasible or necessary to restore watershed and riparian stability.
5. Maintain the natural configuration of all streams.
6. Avoid direct and indirect support of floodplain development and new construction in wetlands wherever there is a practical alternative.
7. Quantification of instream flows to secure favorable conditions of water flow will be accomplished over a 15 year period by priority. Priority 1 = Pariette Wash; 2 = tributaries into the Green River in Browns Park; 3 = Argyle-Nine Mile drainage.
8. All powerlines will be constructed or modified to prevent electrocution of raptors.
9. Water will be provided to wildlife on all BLM water developments, including troughs, after livestock have been removed.

## VEGETATION MANIPULATION GUIDELINES FOR SAGE GROUSE HABITAT

Treatments of sagebrush in sage grouse habitat should meet the following guidelines:

--Treatments within 2 miles of leks generally are not recommended.

--Treatments should not occur when sagebrush canopy density is less than 20 percent. A minimum of 20 percent sagebrush should remain after treatment.

--Living strips of sagebrush in irregular patterns should be maintained in 300 foot strips on each side of streams.



- Treated areas should be no wider than 100 feet.
- Untreated areas should be at least 200 feet wide.
- Herbicides should be applied with helicopters or ground equipment for best control of the spray.
- Sagebrush kills on treated areas should not exceed 90 percent.
- Utah Division of Wildlife Resources should be notified of each specific proposal to control vegetation a minimum of 2 years in advance of treatment by means of an Environmental Assessment. UDWR may waive the 2-year notice in cases where sagebrush manipulation would not affect sage grouse.

## WILDLIFE MONITORING STUDIES

### PROCEDURES FOR ESTABLISHING PELLET GROUP TRANSECTS

#### Pellet Group Counts

##### General

The pellet-group study can provide valuable trend information on range use, especially in conjunction with, and as a supplement to browse utilization transects. Maximum worth for trend purposes is attained through use of permanent, swept plots. This assures greater precision and comparability of year to year data with far fewer total plots than random samples, even though they require a bit more initial effort and cost.

Guidelines for optimal use levels, as indicated by pellet-group densities per unit area, cannot be given separately from estimates of available forage resources and use patterns. This is largely a judgmental decision based on a sound concept of carrying capacity at each local site. Thus, an area of winter range with an exceptionally good mix of forage species might support 250 deer-days use per hectare (one hectare = 2.5 acres). Conversely, another area with sparse forage or dominated by species of lesser value might be maximally used at 50 deer-days use per hectare or less.

##### Plot Size

The preferred plot size is the 10 square meter circular plot (70 inches radius). This plot is 1/1000 of a hectare. A transect of 100 such plots is a tenth hectare so total pellet

groups would be divided by 13 and multiplied by 10 to derive deer-days use.

The merits of the 10 square meter plot over larger sizes include: (1) one person can read and record pellet groups efficiently, (2) distribution of smaller sized plots over a larger area provides more reliable estimates than a smaller number of larger plots in a restricted area, and (3) counts are more accurate because possibility of missing groups is minimized, especially when making counts after new growth of vegetation has begun.

#### Number and Distribution of Plots:

**Short Transect in Vicinity of Browse Utilization Transect** - A transect of 100 (10 square meter) plots should be made at an interval of 10 meters apart. The pellet-group transect should be laid out so as to "criss-cross" the browse transect line, or in the case of permanent swept plots, can be laid out in a straight line for ease of relocation. The short pellet-group transect is to be used as the principal transect for management purposes.

**Long Transects** - The main function of the long transect is to gain supplemental information on a range unit. This transect diagonally bisects the entire range or a large portion of it. Use of the long transect is optional. A minimum of 200 (10 square meter) circular plots should be established at an interval of 20 meters. Pellet-group data should be recorded separately by cover type.

#### Conducting Counts

Permanent, swept-plots transects are preferred, especially in areas where there is overlap in summer and winter distribution and in the dryer climate of southern Utah.

Groups may persist more than one year so, to avoid confusion, pellets should be crushed or removed from the permanent plot. Paint spraying to mark groups is not recommended since paints do not last sufficiently well to assure positive age identification of the group. A workable sweeping method is to use a small whisk broom and a plastic scoop made from a plastic bleach bottle.

Scattered groups strung out across the plot sometimes present a problem. For consistency, use 25 individual pellets within the plot boundary as a criteria for counting the group in each case.



## POTENTIAL WILDLIFE REINTRODUCTIONS

It is reasonable to expect the resource area will provide suitable habitat for the following wildlife species in the foreseeable future. To support these populations, protective actions, such as seasonal restrictions, avoidance or no-surface-occupancy stipulations, would be implemented on a site-specific basis. Additional forage for big game would be gained through vegetation treatments, or reassignment of existing AUMs from livestock to big game in their crucial habitat areas.

### Bighorn Sheep

Approximately 1,200 AUMs would be assigned and maintained for bighorn sheep in Browns Park, Island Park, Dry Fork, and Nine Mile Canyon areas. Crucial habitat areas, such as lambing and rutting areas, would be protected by seasonal closures during active reproduction periods; closures to permanent human occupancy or development; and, closure to domestic sheep grazing within 10 miles of bighorn sheep occupied habitat boundaries.

### Rocky Mountain Elk

Approximately 2,000 additional AUMs over current assignments would be assigned and maintained for reasonable increases in elk populations in the Browns Park and Nine Mile Canyon areas.

### Antelope

Forage assignments of approximately 400 AUMs would be made to antelope on the Diamond Mountain Plateau and Browns Park areas. Presently no antelope are known to reside on the plateau; however, it is reasonable to expect the existing Island Park herd to expand onto Diamond Mountain in search of suitable summer habitat. Such an expansion could involve approximately 50 percent of the additional AUMs assigned to antelope. Restrictions involving this species on the Diamond Mountain Plateau would center on future fence placements and construction specifications.

### Moose

During the life of this RMP, moose could be reintroduced into the Nine Mile Canyon area. Sightings of moose have been uncommon in the canyon; however, habitat potential is excellent for additional releases. Management objectives to protect and/or enhance riparian habitat

would enhance the probability of moose release in this area.

### Other species

Numerous other wildlife species have been considered for release, reintroduction or reestablishment in DMRA. These actions would be in conformance with existing cooperative agreements with UDWR and USF&WS. Vegetation needed by these species for forage and/or cover would be provided by the 50 percent of annual forage production held "in reserve" for vegetation maintenance, watershed enhancement, and nonbig game species' cover and forage base. The following species that would be released onto public land within DMRA include:

Peregrine falcon	Natural reestablishment	Browns Park
River otter	Reintroduction	Green River Nine Mile Creek
Colorado cutthroat trout	Reintroduction	Browns Park
Turkey	Reintroduction	Green River Ashley Valley
Chukar	Reintroduction	Resource areawide
Black-footed ferrets*	Reintroduction	Resource areawide

[\*discussed later in this appendix]

Restrictions that would be imposed due to the presence of these animals would revolve around seasonal protection of active nesting sites (falcons), and enhancement of riparian values (otter, trout, and turkey).

Specific management objectives for any of these releases, reintroductions and/or reestablishments would be set out in habitat management plans and analyzed in the accompanying environmental assessments (or EISs, as necessary). The reader is referred to DMRA's management situation analysis (MSA) for a complete discussion of the current fisheries and wildlife management program and opportunities and challenges forecasted for the foreseeable future.



**TABLE A2-1  
WILDLIFE FORAGE ASSIGNMENTS BY ALLOTMENT ON PUBLIC DOMAIN LAND ADMINISTERED BY THE DIAMOND MOUNTAIN RESOURCE AREA<sup>a</sup>**

	Acres PDL	Current Wildlife Use (AUMS) <sup>b</sup>		Objective Wildlife Stocking Level (AUMS) <sup>c</sup>			Total Wildlife AUMs		Livestock Use (AUMs) 5-Year Pref. Ave. Use	Allotment Carrying Capacity in AC/AUM PDL		Wildlife Treatment Opportunity Acres (AUMs gained)	Livestock Plus Wildlife AUM Demand		Total <sup>d</sup> AUMs Present
		Deer	Antelope	Elk	Bighorn	Moose	Current	Objective		Current	Objective		Current	Objective	
Antelope Powers	41,672	35	65	33	100	201	106	133	3,421	12	11	0	3,554	3,828	3,567
Aunt Knoll	5,476	78	10	15	46	31	40	41	729	7	6	28	770	846	792
Argyle Ridge	9,341	233	0	90	350	0	377	388	540	10	7	0	928	1,317	1,352
Asphalt Ridge	545	5	6	10	5	9	35	21	26	12	7	0	47	75	76
Bates Spring	339	9	0	15	16	2	20	24	67	4	3	0	91	107	102
Bealer Basin	1,813	60	0	15	88	20	93	75	246	6	4	0	321	447	447
Big Wash	4,571	70	20	63	157	69	126	172	980	4	3	40	1,152	1,332*	1,332*
Big Wash Draw	7,384	103	14	156	204	30	241	273	516	9	7	82	789	991	1,141*
Blair Basin	384	9	0	32	36	5	34	41	15	7	4	0	56	92	92
Bridgeport	9,179	534	25	57	534	31	100	616	139	12	11	82	755	834	1,877*
Browns Park	5,615	112	25	60	309	75	60	197	530	8	5	140	727	1,233	842
Brush Creek	14,133	864	0	130	902	2	219	994	884	8	7	41	1878	2,007	2,115
Bull Canyon	15,974	100	10	32	215	31	83	251	1,000	13	10	54	1,251	1,561	1,651*
Canal	2,719	41	10	0	41	40	15	51	224	10	8	0	275	320	359*
Castle Peak	36,390	78	41	55	129	217	255	174	2,903	13	11	41	3,077	3,504	3,870*
Clay Basin Meadows	4,264	45	35	150	73	60	150	230	365	7	6	55	595	668	881*
Coal Mine Basin	4,615	296	0	136	355	2	140	432	720	4	3	161	1,152	1,218	1,327
Cooper Draw	2,357	103	21	190	208	50	298	384	345	3	3	0	729	931	931*
Cottonwood Springs	13,688	482	10	350	515	25	685	842	945	8	6	130	1,787	2,180	2,898
Cove and W. Cow Hollow	2,057	103	0	64	120	15	84	167	277	5	4	0	444	506	506
Current Canyon	6,433	231	0	21	315	10	179	252	240	13	8	55	492	802	1,000*
Deep Creek	234	21	0	3	21	2	10	24	8	7	5	0	32	43	31
Devils Canyon	14,823	175	10	40	227	30	101	271	1,368	9	8	0	1,639	1,846	1,950*
Diamond Mountain	5,721	531	21	116	546	50	494	668	788	4	3	14	1,456	192	2,339*
Diamond Rim	2,535	131	0	128	201	0	174	259	120	7	5	28	379	495	495*
Dinosaur Park	1,429	96	15	10	129	25	36	121	103	6	5	14	224	293	293



**TABLE A2-1 (Continued)**  
**WILDLIFE FORAGE ASSIGNMENTS BY ALLOTMENT ON PUBLIC DOMAIN LAND ADMINISTERED BY DIAMOND MOUNTAIN RESOURCE AREA<sup>a</sup>**

Allotments	Acres PDL	Current Wildlife Use (AUMS) <sup>b</sup>		Objective Wildlife Stocking Levels (AUMS) <sup>c</sup>				Total Wildlife AUMs		Livestock Use (AUMs)		Allotment Carrying Capacity In AC/AUM PDL		Wildlife Treatment Opportunity Acres (AUMs Gained)	Livestock Plus Wildlife AUM Demand		Total AUMs Present
		Deer	Antelope	Elk	Bighorn	Deer	Antelope	Elk	Bighorn	Moose	Current	Objective	Current		Objective	Current	
Donkey Flat	5,510	550	0	154	0	211	0	600	2	704	813	402	431	30	1,106	1,215	1,142
Dry Fork	5,154	604	0	240	0	340	45	628	5	844	390	390	377	40	1,154	1,300	1,261
E. Cow Hollow	528	22	0	30	0	32	0	29	0	54	71	58	0	0	199	121	112
E. Huber	16,663	15	35	0	21	50	18	21	0	50	89	1,048	731	0	1,098	1,137	1,137*
E. Little Mountain	2,580	262	0	152	298	2	180	298	10	117	490	265	338	48	679	755	774
Eight Mile Flat	22,629	57	37	13	139	108	18	139	0	107	295	1,520	225	0	1,627	1,815	2,367
Five Mile	13,205	254	10	272	698	50	390	698	30	536	1,087	1,056	666	96	1,592	2,143	2,563*
Flynn's Point	289	81	0	18	25	2	25	25	0	36	77	40	0	0	76	87	76
Gadsden	1,056	83	0	30	199	10	124	199	1	113	243	57	0	0	170	300	300
Gadsden Draw	1,329	61	0	56	94	10	122	94	1	117	227	106	0	0	223	333	833
Goslin Mountain	27,955	905	201	653	1,416	313	860	1,416	40	1,759	2,948	2,521	2,438	77	4,280	5,469	7,906
Green River Bottoms	6,272	192	0	25	230	35	25	230	90	219	380	390	331	0	549	710	756
Hacking	656	10	0	18	51	0	25	51	1	54	77	62	76	0	121	139	112
Halfway Hollow	3,386	5	10	2	10	25	0	10	0	15	35	154	215	0	169	189	497
Hatch Cove	2,891	154	0	63	196	25	32	196	1	220	309	281	0	48	501	584	833
Holmes-Palmer	1,707	32	2	4	92	0	10	92	0	98	106	129	92	0	822	139	235
Horseshoe Bend	2,153	83	0	2	103	0	0	103	0	45	109	145	141	10	190	254	300
Hoy Mountain	3,480	120	0	104	184	10	190	184	10	228	309	552	202	42	780	861	857
Island Park	7,350	227	0	166	484	25	517	484	5	393	1,206	45	33	69	428	1,241	1,854*
Jackson/Crouse/Dry Hollow	9,602	511	0	211	662	30	512	662	33	722	1,290	980	0	138	1,702	2,270	2,305
Johnson	528	61	0	25	92	2	81	92	2	77	147	86	86	28	163	233	193
Lambson/Crouse/Davis	3,592	180	0	10	221	10	120	221	5	250	356	572	0	40	822	928	900
Lears Canyon	3,480	240	0	18	290	2	141	290	30	258	461	308	202	28	566	755	809*
Little Brush Creek	10	7	0	2	10	0	0	10	0	9	13	6	0	0	9	13	0
Little Desert	43,323	44	94	32	50	119	94	50	45	156	309	2,339	1,179	48	2,495	2,647	2,569*



**TABLE A2-1 (Continued)**  
**WILDLIFE FORAGE ASSIGNMENTS BY ALLOTMENT ON PUBLIC DOMAIN LAND ADMINISTERED BY DIAMOND MOUNTAIN RESOURCE AREA<sup>a</sup>**

Allotments	Acres PDL	Current Wildlife Use (AUMs) <sup>b</sup>		Objective Wildlife Stocking Levels (AUMs) <sup>c</sup>				Total Wildlife AUMs		Livestock Use (AUMs) Pref. 5-Year Ave. Use	Allotment Carrying Capacity in AC/AUM PDL Current Objective	Wildlife Treatment Opportunity Acres (AUMs Gained)	Livestock Plus Wildlife AUM Demand Current Objective	Total AUMs Present			
		Deer	Antelope	Elk	Bighorn	Moose	Current	Objective									
Little Hole	6,755	532	0	79	1,015	0	220	0	30	611	1,265	330	7	8	941	1,595	1,556
Log Cabin	639	17	0	17	29	5	31		13	34	73	58	7	8	67	131	161
Mame Hole-Bear Hollow	1,451	22	0	26	87	0	70		10	48	172	100	6	5	188	312	364
Mail Draw	817	26	0	19	31	5	45			45	81	100	6	4	184	221	221
Marshall Draw	5,404	239	0	75	302	5	233	25	14	314	569		17	6	314	569	1,035
McCoy Flat	12,604	211	15	0	332	19	0			226	304	867	12	10	1,093	1,218	1,599
McFarley Flat	7,556	328	25	18	408	36	47			314	491	418	17	8	139	909	1,093
McKee Spring	795	69	0	20	77	0	54	3		89	115	170	6	3	259	313	313
Mosby	2,152	180	2	194	309	0	278	20		376	611	220	4	3	596	831	825*
Natural Lake	801	26	0	13	50	0	54	6		39	115	100	8	4	139	215	205
Oden	11	5	0	0	10	2	3			5	15	2	2	4	7	17	
Ouray Road	16,958	62	16	0	134	50	0			89	184	857	19	16	935	1,041	3,002
Ouray Valley	489	23	2	0	31	12	0			45	73	62	8	8	87	105	214*
Paddys Gap	3,820	289	0	23	529	0	160			312	679	291	6	4	603	970	970
Parley Canyon	14,728	316	0	53	404	0	390	41	60	369	895	355	20	12	724	1,250	2,245
Pelican Lake	6,461	56	6	0	93	25	0			62	115	544	17	12	606	662	781
Perry	1,629	97	0	125	206	0	168	10		222	384	77	6	4	299	461	451*
Powell/Sadler	2,124	62	2	2	93	12	4			66	115	100	8	8	231	276	700
Red Creek Flat	8,212	503	20	57	797	30	90	15	3	580	935	500	8	8	1,088	1,435	1,844
Red Mountain	6,661	567	0	103	618	2	400	13		670	1,030	275	7	5	945	1,305	1,305*
Rich and Stetson	689	5	10	0	8	12	0			45	20	58	8	8	87	85	79
Ruple Cabin	12,004	203	0	187	384	50	408	15	20	390	902	1,610	6	8	2,000	2,512	2,512
Rye Grass	3,386	308	0	101	631	5	177	35	13	409	861		7	8	139	861	972*
S.J. Hatch	24,903	726	0	196	1,108	50	439	2		922	1,930	1,681	17	8	2,900	3,280	3,230*
School Bus Draw	1,629	52	0	42	75	0	98	2		48	180	180	6	4	274	360	970
Sears Canyon	5,021	187	0	91	422	5	245	14		278	836		17	5	278	836	877



**TABLE A2-1 (Continued)**  
**WILDLIFE FORAGE ASSIGNMENTS BY ALLOTMENT ON PUBLIC DOMAIN LAND ADMINISTERED BY DIAMOND MOUNTAIN RESOURCE AREA<sup>a</sup>**

Allotments	Acres PDL	Current Wildlife Use (AUMS) <sup>b</sup>			Objective Wildlife Stocking Levels (AUMS) <sup>c</sup>				Total Wildlife AUMs			Livestock Use (AUMs)		Allotment Carrying Capacity In AC/AUM PDL		Wildlife Treatment Opportunity Acres (AUMs Gained)	Livestock Plus Wildlife AUM Demand	Total AUMs Present
		Deer	Antelope	Elk	Bighorn	Deer	Antelope	Elk	Bighorn	Moose	Current	Objective	Preference	Ave. Use	Current			
Serviceberry Spring	1,974	34	0	10	121	9	35	2	88	161	113	12	7	0	160	274	407	
Shindy	2,913	120	0	50	219	2	96	2	235	374	68	10	8	69	303	405	958	
Shiner	38,697	601	25	600	866	124	1,178	50	1,226	2,230	3,000	5	8	137	4,226	5,230	5,206	
Smelter Springs	384	21	0	48	30	9	48	2	69	81	24	4	8	0	93	405	83	
Spring Creek	4,164	128	0	17	441	2	48	50	445	577	196	9	5	0	641	773	773*	
Taylor Flat	5,371	568	0	7	668	3	24	18	675	715	400	5	8	42	1,075	1,115	1,777*	
Three Corners	1,0369	28	27	25	55	75	130	10	171	238	167	4	3	14	338	405	580*	
Twelve Mile	4,904	21	15	0	55	103	27		29	185	316	14	10	0	345	501	712	
Twin Knolls	6,032	81	15	10	125	77	92	10	166	343	596	5	8	0	762	939	939	
N. Warren Draw	4,984	21	0	108	189	75	140	25	185	374	190	14	7	42	345	564	950	
S. Warren Draw	3,186	60	0	84	148	10	140	10	144	288		22	11	28	107	288	695	
Water Canyon #1	1,095	55	0	40	48	9	126	10	136	212	153	4	3	0	289	365	234	
Water Canyon #2	5,059	157	0	40	157	75	92	30	192	335	138	15	10	0	330	473	798	
Watson	6,672	1,241	0	10	1,826	2	45	32	536	876		12	8	28	536	876	937	
Wells Draw	9,596	16	0	208	30	75	303	2	232	416	814	9	8	0	1,046	1,230	1,555*	
West Huber	4,984	62	12	0	62	75	10		74	97	402	9	3	0	476	495	875	
W. Little Mountain	1,156	131	0	173	148	2	288	30	304	288	124	5	7	74	428	608	551*	
W. Pelican Lake	2,257	21	0	0	21	9	0		23	97	251	9	8	0	274	281	798	
W. Pot Creek	1,368	48	0	32	125	5	114	2	80	246	107	7	8	28	187	353	285	
Wetlands	17,914	129	10	10	226	75	30	3	146	337	1,043	15	13	0	1,189	1,380	2,583	
Wild Mountain	384	120	0	48	120	9	48	50	168	223	90	4	3	0	209	313	313	
Wilkerson	200	48	0	0	48	2	7	2	80	27	15	5	8	0	38	48	42	
Willow Springs	917	51	0	26	88	9	92	5	74	126	93	9	8	0	170	219	196	
Willow Creek	6,322	83	27	173	150	75	308	35	303	590	501	9	2	154	804	1,091	1,385*	
Young	7,927	34	15	0	75	75	7		53	100	535	14	10	0	603	635	633*	



**TABLE A2-1 (Continued)**  
**WILDLIFE FORAGE ASSIGNMENTS BY ALLOTMENT ON PUBLIC DOMAIN LAND ADMINISTERED BY DIAMOND MOUNTAIN RESOURCE AREA<sup>a</sup>**

Allotments	Acres PDL	Current Wildlife Use (AUMS) <sup>b</sup>		Objective Wildlife Stocking Levels (AUMS) <sup>c</sup>			Total Wildlife AUMs		Livestock Use (AUMs) 5-Year Preference	Allotment Carrying Capacity in AC/AUM PDL Current	Wildlife Treatment Opportunity Acres (AUMs Gained)	Livestock Plus Wildlife AUM Demand Current	Total AUMs Present						
		Deer	Antelope	Elk	Bighorn	Moose	Current	Objective											
Allotments Located North of Carbon County Line That Price RA Administers but DMRA Allocates Forage.																			
Blind Canyon	0																		
Green River	3,706	194	8	0	217	30	26	3	0	208	276	185	140	9	3	0	393	461	461
Kyune I	1,235	125	0	28	149	0	92	0	0	154	245	53		6	3	0	207	298	298
Max Canyon	115	12	0	0	19	0	0	10	0	12	29	5		7	3	0	17	34	34
Stone Cabin	320	24	0	0	30	0	1	20	0	25	56	2		12	6	0	27	58	58
Sulfur Canyon	4,116	214	0	59	290	0	198	0	12	275	470	158		10	3	14	433	628	628
<b>GRANDTOTAL</b>										<b>27,570</b>	<b>47,695</b>	<b>49,693</b>							<b>113,810</b>

a. Wildlife forage allocation for non-game species is included in table.  
 b. Current Use is an estimate developed by UDWR and BLM.  
 c. Objective, stocking levels were determined by UDWR by herd units in 1991 and may increase or decrease according to habitat conditions. BLM divided up the herd unit totals by allotment as displayed in this table.  
 d. Total AUMs available on each allotment were derived from actual use and utilization studies (marked by and asterisk) or through determining carrying capacities by vegetative type from referenced studies when actual use and utilization data were not available.



## DMRA GUIDELINES FOR POTENTIAL BLACK-FOOTED FERRET REINTRODUCTION

These guidelines are a collection of prairie dog management recommendations that originated from the draft guidelines completed by the USF&WS in July 1990. These guidelines were meant to protect identified prairie dog habitat that would be considered for future black-footed ferret (BFF) reintroductions and the ferrets themselves.

### Assumptions

The following areas were prioritized as "best" potential habitat by alternatives based on:

- a. Current BLM planning decisions
- b. Existing Prairie dog density data as of 1986
- c. Size of potential habitat
- d. Potential conflicts with other management activities and resources

Alternative A (19,000 acres)	Acres	Alternative B & E (33,500 acres)	Acres
1. Sunshine Bench	4,800	1. Sunshine Bench	4,800
2. Shiner	7,800	2. Shiner	7,800
3. Antelope Flat	2,600	3. Antelope Flat	2,600
4. Twelve Mile	1,700	4. Twelve Mile	1,700
5. Buckskin Hills	2,400	5. Eight Mile Flat	16,600

Note: Alternative C & D did not maintain habitat for BFFs.

The Utah BFF Working Group has identified Coyote Basin (Book Cliffs R.A., Vernal District) and the Cisco Desert (Grand R.A., Moab District) as its two primary release sites in Utah. DMRA probably won't receive any ferrets until 1997-1999 at the earliest, if approved in the RMP, and in only 2 sites at the most.

Up to 50 ferrets would be released initially with subsequent yearly releases of additional ferrets until a self-sustaining population is established.

BLM lessees, private landowners, and the public would supply representatives to develop a local working group to receive comments and dispense information on the BFF reintroduction program.

Surface Use Plan of the APD permit (BLM's 13-point plan) would serve as a means of implementing BFF mitigation during the "onsite" inspection. As leases are reissued,

notification would be given that the lessee is in a potential BFF area and additional restrictions could apply as listed in these guidelines.

More restrictive conditions could be imposed by the USF&WS once BFFs were released if other reintroduced BFF populations separate from DMRA suddenly died and those in DMRA existed.

If BFFs leave identified reintroduction areas, all the protective stipulations that applied to the reintroduction area would not apply. It would be USF&WS's responsibility to trap and return the BFFs to the reintroduction area.

All new activities which could negatively impact the BFF would require informal consultation with USF&WS.

All proposed reintroduction areas will be uniformly managed with the BLM BFF guidelines.

Surface disturbing activities, for the purpose of these guidelines, are described as any mechanical activity resulting in removal of existing vegetation or topsoil such as pipelines, roads, reservoir construction, gravel pits, etc.

BFF reintroductions will be experimental, non-essential, as outlined in these guidelines.

Any BFF accidentally killed must be reported to USF&WS immediately.

All prairie dog towns in joint ownership would require the development of a cooperative management agreement consistent with RMP guidelines prior to reintroduction.

BLM management guidelines recommend no changes to currently authorized permits or leases in areas where BFF are being proposed for reintroductions. This "no change" policy also applies to the maintenance and operation of existing facilities.

A mitigation agreement should be negotiated whenever proposed oil and gas developments under new lease or within new fields can't be designed to avoid translocating ferrets out of the area or destroying habitat occupied by BFFs. All costs would be paid by the company proposing the development. This mitigation agreement should be established during the permitting process at the time of the proposed development. BFF surveys are recommended prior to construction to develop plans to avoid harm to ferrets that may occupy the site.

When USF&WS guidelines become final, only those conforming to DMRA guidelines, or those that are less restrictive, would apply to proposed reintroduction areas.



Appendix 2 - Fish and Wildlife

An RMP amendment would be required if a more restrictive reintroduction proposal is designed.

If a complete site-specific analysis results in a finding that one or more of the potential BFF reintroduction areas is not suitable for BFF release after all, those sites will be removed from management under the guidelines.

HABITAT PROTECTION PRIOR TO BFF REINTRODUCTION	
ALTERNATIVES A & E	ALTERNATIVE B
New surface disturbing activities would be limited to a maximum of 10% within each reintroduction area to protect potential BFF habitat.	Total surface disturbing activities would be limited to a maximum of 10% at any one time within each reintroduction area to protect potential BFF habitat.
Surface disturbing activities would avoid potential BFF habitat. If activities cannot, they would cross in areas of low prairie dog density (<10 burrows/acre), cross at the shortest distance through prairie dog habitat, or disturb sites not currently being used by prairie dogs. This guideline would not apply to the maintenance and operation of existing facilities.	Surface disturbing activities would avoid potential BFF habitat. If activities cannot, they would cross in areas of low prairie dog density (<10 burrows/acre), cross at the shortest distance through prairie dog habitat, or disturb sites not currently being used by prairie dogs.
Vehicular travel within potential BFF reintroduction areas would be restricted to designated roads and trails.	Same as Alternative A
Reintroduction areas would remain open to mineral entry with appropriate mitigation.	Reintroduction areas would be recommended for withdrawal from additional mineral entry to protect existing habitat.
Powerlines would avoid potential BFF habitat. If they cannot, they would be buried or designed to preclude raptors from using them as hunting perches.	Same as Alternative A



Appendix 2 - Fish and Wildlife

MANAGEMENT GUIDELINES ONCE BFF ARE REINTRODUCED	
ALTERNATIVES A & E	ALTERNATIVE B
Do not allow new surface disturbing activities between March 1 through August 31 within 1/4 mile of habitat occupied by BFFs to protect reproductive and active litter periods. These restrictions do not apply to maintenance and operation of existing facilities.	Same as Alternative A
Vehicular travel within occupied BFF habitat would be restricted to designated roads and trails. Periods of heavy vehicular traffic (i.e., drilling) would be encouraged during daylight hours.	Same as Alternative A
To the extent that BLM has the authority, human activity would only be allowed during daylight hours from 2 hours after sunrise to 2 hours before sunset. The only exceptions would be: in case of emergencies; petroleum drilling and associated servicing related traffic in all areas; and production operations in the Eight Mile Flat and Twelve Mile areas only.	Same as Alternative A
Mufflers would be installed to reduce noise on all equipment located within 1/4 mile and within all BFF occupied reintroduction areas.	Same as Alternative A
Prairie dog colonies in Sunshine Bench and Twelve Mile would be allowed to expand 10% from present size (650 total acres) to enhance potential BFF habitat. BLM's guidelines would also apply to the expanded areas. Where feasible, vegetation treatments would be planned to replace AUMs lost to prairie dog expansion.	Prairie dog colonies in Sunshine Bench, Twelve Mile, and Antelope Flat would be allowed to expand 50% from their present size to enhance potential BFF habitat. BLM guidelines would also apply to the expanded areas at the time of BFF release. Where feasible, vegetation treatments would be planned to replace AUMs lost to prairie dog expansion.
Animal damage control within occupied BFF habitat would be allowed with restrictions on placement of M-44s, traps, and snares to avoid accidental killing of BFFs. If prairie dog colonies needed reducing, no poisons would be permitted, only non-toxic methods.	Animal damage control within occupied BFF habitat would be allowed using only non-toxic methods. If prairie dog colonies needed reducing, no poisons would be permitted, only non-toxic methods.
If it is not shown to be detrimental to BFFs, BLM would continue to support UDWR hunting regulations as they apply to prairie dogs.	BLM would encourage UDWR to prohibit prairie dog shooting on habitat that is occupied by the BFF.
All owners of livestock herding dogs that are used within occupied BFF habitat would require proof of annual distemper vaccinations. No other free-roaming dogs would be allowed within established reintroduction areas.	Same as Alternative A



Date	Description
1/1/2020	Initial deposit of \$10,000.00
1/15/2020	Withdrawal of \$500.00
2/1/2020	Interest earned \$10.00
2/15/2020	Withdrawal of \$200.00
3/1/2020	Interest earned \$15.00
3/15/2020	Withdrawal of \$100.00
4/1/2020	Interest earned \$20.00
4/15/2020	Withdrawal of \$50.00
5/1/2020	Interest earned \$25.00
5/15/2020	Withdrawal of \$25.00
6/1/2020	Interest earned \$30.00
6/15/2020	Withdrawal of \$10.00
7/1/2020	Interest earned \$35.00
7/15/2020	Withdrawal of \$5.00
8/1/2020	Interest earned \$40.00
8/15/2020	Withdrawal of \$2.00
9/1/2020	Interest earned \$45.00
9/15/2020	Withdrawal of \$1.00
10/1/2020	Interest earned \$50.00
10/15/2020	Withdrawal of \$0.50
11/1/2020	Interest earned \$55.00



# APPENDIX 3

## LANDS PROGRAM MANAGEMENT

### CONTENTS:

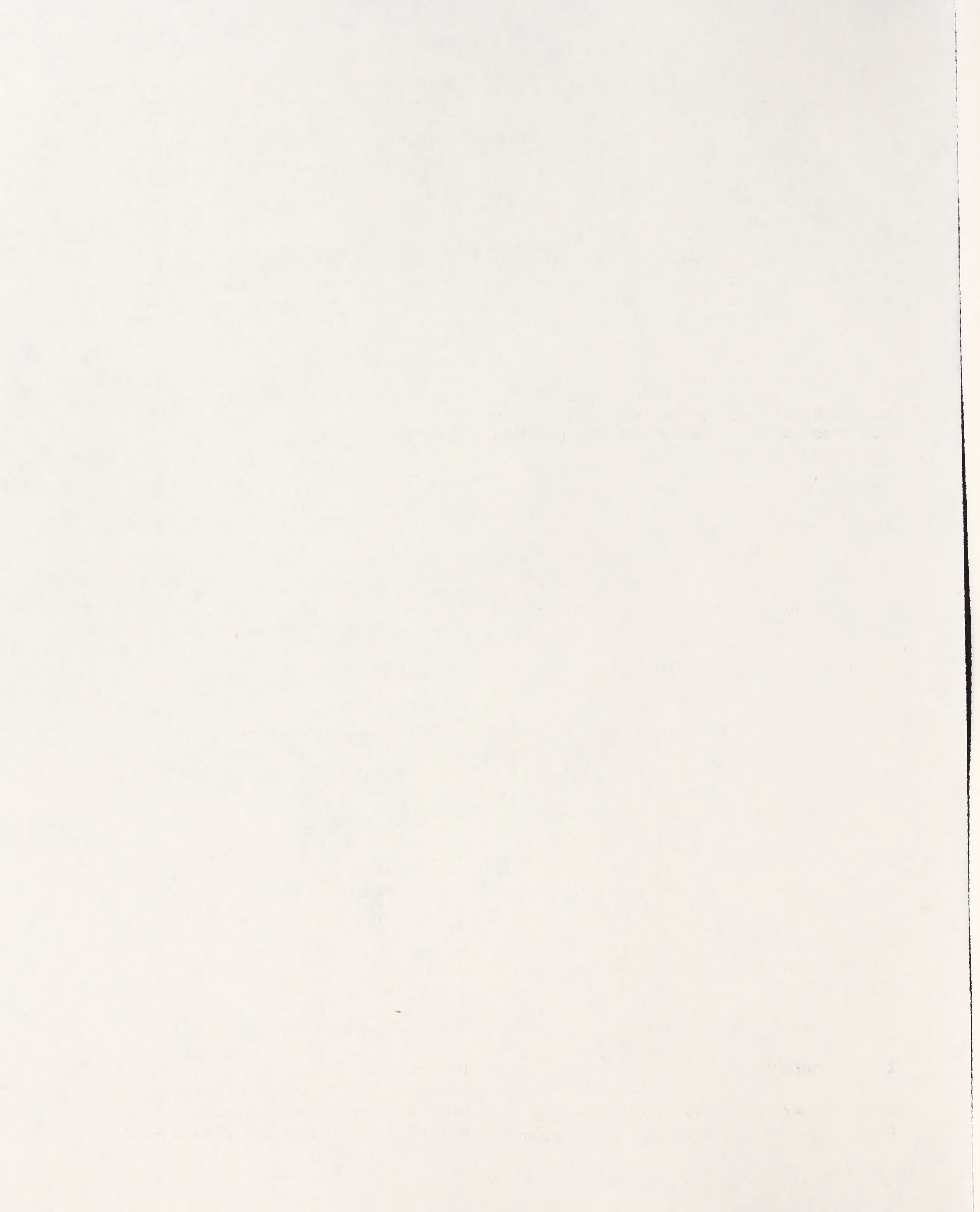
*Standard Operating Procedures*

*Utility Corridor Routes Overlaying other Resource Values*

*Sales Parcels by Alternative*









# STANDARD OPERATING PROCEDURES

## RIGHTS-OF-WAY AND R&PP LEASES/SALES

Application for use of the public lands for right-of-way grant, R&PP lease/sale, and land-use permit/lease will continue to be approved or disapproved case by case, under the Federal Land Policy and Management Act (FLPMA) of 1976, as amended; the Mineral Leasing Act (MLA) of 1920, as amended; Recreation and Public Purposes Act (R&PP) of 1926, as amended; and the Federal Aid Highway Act of 1958, as amended.

Under the R&PP Act, state, county, and municipal governments as well as qualified nonprofit corporations can obtain public lands for definitely proposed projects with reasonable time schedules and a comprehensive development and management plan.

Applications for rights-of-way would be accompanied by a complete plan of development as described in BLM Manual H-2801. After an interdisciplinary review of each proposal, stipulations to protect important resource values would be employed.

Table A3-1 describes the utility corridors and resource values encountered.

## LANDOWNERSHIP ADJUSTMENTS

### Introduction

Specific parcels of public land are considered for disposal in this RMP under the authority of FLPMA. This is only a tentative selection of lands for sale and community expansion. The BLM would conduct a further environmental analysis on any lands considered for disposal. This environmental analysis would include a cultural inventory, a mineral report, an environmental assessment, and any other documentation necessary to make an informed decision on whether the land should be disposed. The lands would not be disposed if the environmental analysis showed that disposal would not be appropriate because of important natural, cultural, or mineral resources.

## CRITERIA FOR DISPOSALS

### Landownership

Lands will be considered for disposal when lands are classified as suitable and will provide the maximum

benefit for the general public. Such disposal action would be, but are not limited to, exchanges, sales, and state selections.

### Exchange

Lands within the resource area would be considered for exchange on a case-by-case basis where the acquired land would contain higher intrinsic/resource values than the BLM lands. Land exchanges would be considered when they are mutually benefitting and in the public interest. In addition, land exchanges would be utilized to form more logical and efficient land and resource management areas. Exchanges of public lands for nonfederal lands or interests would be a consideration if the exchange provides for better federal management and the needs for both state and local communities.

### Sale

Lands identified in Table A3-2 would tentatively be considered for sale. In addition, lands available for community expansion are listed on Table A3-3.

Lands which meet the following criteria would be identified and made available for further study as public land sales areas:

- Lands which are difficult and uneconomical to manage.
- Lands which are no longer required for a previously designated purpose, or
- Disposal of such lands would serve important public objective including, but not limited to, expansion of communities and economic development.

### Other Disposals

Lands available for state selection, Recreation and Public Purposes Act patent, private/state exchange, or other disposal are listed in Tables A3-2 and A3-3.

More specific consideration would be given to any parcel being contemplated for disposal before any actual disposal action takes place.

### Withdrawals and Classification

Withdrawals and classifications listed on Table 3-6 (see Chapter 3) would be reviewed individually to determine which should be terminated, continued and which should be modified as required by section 204 of FLPMA.



TABLE A3-1

UTILITY CORRIDOR ROUTES OVERLAYING OTHER RESOURCE VALUES

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ALT	PLANNING LEVEL	TWP	RGE	SEC	RESTRICTIONS	SEASON	CLOSED	NSO
B	L1	T 2 N	R 25 E	29	POTENTIAL NATIONAL REGISTER SITE (BUFFER)		X	
B	L2	T 2 N	R 25 E	29	NO SD ACTIVITIES RESULTING IN ADOVERSE IMPACTS TO BIG GAME			X
B	L3	T 2 N	R 25 E	29	NO SURFACE OISTURBING ACTIVITES WITHIN 6M RAOIUS OF LEKS	MAR 1 - JUN 30		
B	L1	T 3 N	R 24 E	21	RIPARIAN 700-FOOT BUFFER			X
B	L1	T 3 N	R 24 E	26	RIPARIAN 700-FOOT BUFFER		X	
B	L1	T 3 N	R 24 E	27	RIPARIAN 700-FOOT BUFFER		X	
B	L1	T 3 N	R 24 E	28	RIPARIAN 700-FOOT BUFFER		X	
B	L1	T 2 N	R 24 E	1	RIPARIAN 700-FOOT BUFFER		X	
B	L1	T 2 N	R 25 E	6	RIPARIAN 700-FOOT BUFFER		X	
B	L1	T 2 N	R 25 E	7	RIPARIAN 700-FOOT BUFFER		X	
B	L1	T 2 N	R 24 E	30	RIPARIAN 700-FOOT BUFFER		X	
B	L1	T 2 N	R 25 E	8	POTENTIAL NATIONAL REGISTER SITE		X	
B	L1	T 2 N	R 24 E	1	PRECLUOE SURFACE OISTURBING ACTIVITIES WHEN SOILS SATURATED		X	
B	L1	T 2 N	R 24 E	6	PRECLUOE SURFACE OISTURBING ACTIVITIES WHEN SOILS SATURATEO		X	
B	L1	T 2 N	R 25 E	7	PRECLUOE SURFACE OISTURBING ACTIVITIES WHEN SOILS SATURATEO		X	
B	L2	T 3 N	R 24 E	26	PRECLUOE SO ACTIVITIES MAINTAIN OR ENHANCE WATERSHEO	SPRING & FALL		X
B	L2	T 3 N	R 24 E	27	PRECLUOE SO ACTIVITIES MAINTIAN OR ENHANCE WATERSHEO	SPRING & FALL		X
B	L2	T 3 N	R 24 E	28	PRECLUOE SO ACTIVITIES MAINTAIN OR ENHANCE WATERSHEO	SPRING & FALL		X
B	L2	T 2 N	R 25 E	19	PRECLUOE SO ACTIVITIES MAINTAIN OR ENHANCE WATERSHED	SPRING & FALL		X
B	L2	T 3 N	R 24 E	17	PLUS 200'BUF N/R REG SITES & HI SENSITIVE ARCH & PALEO ZONES			X
B	L2	T 3 N	R 24 E	20	PLUS 200'BUF N/R REG SITES & HI SENSITIVE ARCH & PALEO ZONES			X
B	L2	T 3 N	R 24 E	21	PLUS 200'BUF N/R REG SITES & HI SENSITIVE ARCH & PALEO ZONES			X
B	L2	T 2 N	R 24 E	13	PLUS 200'BUF N/R REG SITES & HI SENSITIVE ARCH & PALEO ZONES			X
B	L3	T 3 N	R 24 E	17	CRITICAL ANTELOPE NO SPECIFIC RESTRICTION			
B	L3	T 3 N	R 24 E	20	CRITICAL ANTELOPE NO SPECIFIC RESTRICTION			
B	L3	T 3 N	R 24 E	21	CRITICAL ANTELOPE NO SPECIFIC RESTRICTION			
B	L3	T 3 N	R 24 E	25	CRITICAL ANTELOPE NO SPECIFIC RESTRICTION			
B	L3	T 3 N	R 24 E	26	CRITICAL ANTELOPE NO SPECIFIC RESTRICTION			
B	L3	T 3 N	R 24 E	27	CRITICAL ANTELOPE NO SPECIFIC RESTRICTION			
B	L3	T 3 N	R 24 E	28	CRITICAL ANTELOPE NO SPECIFIC RESTRICTION			
B	L3	T 3 N	R 24 E	17	BIG HORN SHEEP HABITAT NO SPECIFIC RESTRICTION			
B	L3	T 3 N	R 24 E	17	NO SURFACE OISTURBING ACTIVITIES WITHIN 6M RADIUS OF LEKS	MAR 1 - JUN 30		
B	L3	T 3 N	R 24 E	20	NO SURFACE OISTURBING ACTIVITIES WITHIN 6M RAOIUS OF LEKS	MAR 1 - JUN 30		
B	L3	T 3 N	R 24 E	21	NO SURFACE DISTURBING ACTIVITIES WITHIN 6M RADIUS OF LEKS	MAR 1 - JUN 30		
B	L3	T 3 N	R 24 E	22	NO SURFACE DISTURBING ACTIVITIES WITHIN 6M RAOIUS OF LEKS	MAR 1 - JUN 30		
B	L3	T 3 N	R 24 E	25	NO SURFACE DISTURBING ACTIVITIES WITHIN 6M RAOIUS OF LEKS	MAR 1 - JUN 30		
B	L3	T 3 N	R 24 E	26	NO SURFACE OISTURBING ACTIVITIES WITHIN 6M RAOIUS OF LEKS	MAR 1 - JUN 30		
B	L3	T 3 N	R 24 E	27	NO SURFACE OISTURBING ACTIVITIES WITHIN 6M RAOIUS OF LEKS	MAR 1 - JUN 30		
B	L3	T 3 N	R 24 E	28	NO SURFACE DISTURBING ACTIVITIES WITHIN 6M RAOIUS OF LEKS	MAR 1 - JUN 30		
B	L2	T 3 N	R 24 E	17	NO SO ACTIVITIES RESULTING IN ADVERSE IMPACTS TO BIG GAME			X
B	L2	T 3 N	R 24 E	21	NO SD ACTIVITIES RESULTING IN AOVERSE IMPACTS TO BIG GAME			X
B	L2	T 3 N	R 24 E	25	NO SO ACTIVITIES RESULTING IN ADVERSE IMPACTS TO BIG GAME			X
B	L2	T 3 N	R 24 E	26	NO SD ACTIVITIES RESULTING IN ADVERSE IMPACTS TO BIG GAME			X
B	L2	T 3 N	R 24 E	27	NO SD ACTIVITIES RESULTING IN ADVERSE IMPACTS TO BIG GAME			X
B	L2	T 3 N	R 24 E	28	NO SO ACTIVITIES RESULTING IN ADVERSE IMPACTS TO BIG GAME			X
B	L2	T 2 N	R 24 E	13	NO SO ACTIVITIES RESULTING IN AOVERSE IMPACTS TO BIG GAME			X
B	L2	T 2 N	R 25 E	7	NO SO ACTIVITIES RESULTING IN AOVERSE IMPACTS TO BIG GAME			X
B	L2	T 2 N	R 25 E	18	NO SO ACTIVITIES RESULTING IN AOVERSE IMPACTS TO BIG GAME			X



TABLE A3-1 (Continued)  
UTILITY CORRIDOR ROUTES OVERLAYING OTHER RESOURCE VALUES

ALT	PLANNING LEVEL	TWP	RGE	SEC	RESTRICTIONS	SEASON	CLOSED	NSO
B	L2	T 2 N	R 25 E	19	NO SD ACTIVITIES RESULTING IN ADVERSE IMPACTS TO BIG GAME			X
B	L2	T 2 N	R 24 E	30	NO SD ACTIVITIES RESULTING IN ADVERSE IMPACTS TO BIG GAME			X
B	L2	T 1 N	R 25 E	20	PLUS 200'BUF N/R SITES & HI SENSITIVE ARCH & PALEO ZONES			X
B	L1	T 2 N	R 25 E	30	BROWN PARK, GREEN RIVER 1/2 MI VIEW		X	
B	L1	T 1 N	R 25 E	6	BROWN PARK, GREEN RIVER 1/2 MI VIEW		X	
B	L1	T 1 N	R 25 E	7	BROWN PARK, GREEN RIVER 1/2 MI VIEW		X	
B	L1	T 2 N	R 25 E	30	RIPARIAN STREAMS/SPRINGS		X	
B	L1	T 1 N	R 25 E	6	RIPARIAN STREAMS/SPRINGS		X	
B	L1	T 1 N	R 25 E	7	RIPARIAN STREAMS/SPRINGS		X	
B	L1	T 1 N	R 25 E	7	POTENTIAL NATIONAL REGISTER SITE		X	
B	L1	T 1 N	R 25 E	18	POTENTIAL NATIONAL REGISTER SITE		X	
B	L2	T 2 N	R 25 E	30	NO SD ACTIVITIES RESULTING IN ADVERSE IMPACTS TO BIG GAME			X
B	L2	T 1 N	R 25 E	6	NO SD ACTIVITIES RESULTING IN ADVERSE IMPACTS TO BIG GAME			X
B	L2	T 1 N	R 25 E	7	NO SD ACTIVITIES RESULTING IN ADVERSE IMPACTS TO BIG GAME			X
B	L2	T 1 N	R 25 E	19	PLUS 200'BUF N/R REG SITES & HI SENSITIVE ARCH & PALEO ZONE			X
B	L2	T 1 N	R 25 E	30	PLUS 200'BUF N/R REG SITES & HI SENSITIVE ARCH & PALEO ZONES			X
B	L2	T 2 N	R 25 E	30	VRM & BROWNS PARK RIPARIAN RESTRICTIONS			X
B	L2	T 2 N	R 25 E	31	VRM & BROWNS PARK RIPARIAN RESTRICTIONS			X
B	L2	T 1 N	R 25 E	6	VRM & BROWNS PARK RIPARIAN RESTRICTIONS			X
B	L2	T 1 N	R 25 E	7	VRM & BROWNS PARK RIPARIAN RESTRICTIONS			X
B	L3	T 1 N	R 25 E	7	BIG HORN SHEEP HABITAT NO SPECIFIC RESTRICTIONS			X
B	L3	T 1 N	R 25 E	17	BIG HORN SHEEP HABITAT NO SPECIFIC RESTRICTIONS			
B	L3	T 1 N	R 25 E	18	BIG HORN SHEEP HABITAT NO SPECIFIC RESTRICTIONS			
B	L3	T 1 N	R 25 E	19	BIG HORN SHEEP HABITAT NO SPECIFIC RESTRICTIONS			
B	L3	T 1 N	R 25 E	30	BIG HORN SHEEP HABITAT NO SPECIFIC RESTRICTIONS			
B	L3	T 1 N	R 25 E	6	NO SURFACE DISTURBING ACTIVITIES WITHIN 6M RADIUS OF LEKS	MAR 1 - JUN 30		
B	L3	T 1 N	R 25 E	7	NO SURFACE DISTURBING ACTIVITIES WITH 6M RADIUS OF LEKS	MAR 1 - JUN 30		
B	L3	T 2 N	R 25 E	30	NO SURFACE DISTURBING ACTIVITIES WITHIN 6 M RADIUS OF LEKS	MAR 1 - JUN 30		
B	L3	T 1 N	R 25 E	31	NO SURFACE DISTURBING ACTIVITIES WITH 6MI RADIUS OF LEKS	MAR 1 - JUN 30		
B	L1	T 2 S	R 23 E	34	RIPARIAN STREAMS/SPRINGS		X	
B	L1	T 2 S	R 23 E	35	RIPARIAN STREAMS/SPRINGS		X	
B	L1	T 3 S	R 23 E	3	RIPARIAN STREAMS/SPRINGS		X	
B	L1	T 2 S	R 23 E	10	RIPARIAN STREAMS/SPRINGS		X	
B	L2	T 2 S	R 23 E	34	NO SD ACTIVITIES RESULTING IN ADVERSE IMPACTS TO BIG GAME			X
B	L2	T 2 S	R 23 E	35	NO SD ACTIVITIES RESULTING IN ADVERSE IMPACTS TO BIG GAME			X
B	L2	T 3 S	R 23 E	3	NO SD ACTIVITIES RESULTING IN ADVERSE IMPACTS TO BIG GAME			X
B	L2	T 3 S	R 23 E	10	NO SD ACTIVITIES RESULTING IN ADVERSE IMPACTS TO BIG GAME			X
B	L2	T 4 S	R 23 E	5	NO SD ACTIVITY RESULTING IN ADVERSE IMPACTS W/I 1M ACT. NEST			X
B	L2	T 4 S	R 23 E	6	NO SD ACTIVITY RESULTING IN ADVERSE IMPACTS W/I 1M ACT. NEST			X
B	L2	T 2 S	R 23 E	35	PRECLUDE SD ACTIVITIES MAINTAIN OR ENHANCE WATERSHED	SPRING & FALL		
B	L2	T 2 S	R 23 E	3	PRECLUDE SD ACTIVITIES MAINTAIN OR ENHANCE WATERSHED	SPRING & FALL		
B	L2	T 2 S	R 23 E	9	PRECLUDE SD ACTIVITIES MAINTAIN OR ENHANCE WATERSHED	SPRING & FALL		
B	L2	T 2 S	R 23 E	10	PRECLUDE SD ACTIVITIES MAINTAIN OR ENHANCE WATERSHED	SPRING & FALL		
B	L2	T 2 S	R 23 E	20	PRECLUDE SD ACTIVITIES MAINTAIN OR ENHANCE WATERSHED	SPRING & FALL		
B	L2	T 2 S	R 23 E	29	PRECLUDE SD ACTIVITIES MAINTAIN OR EHHANCE WATERSHED	SPRING & FALL		
B	L2	T 2 S	R 23 E	31	PRECLUDE SD ACTIVITIES MAINTAIN OR ENHANCE WATERSHED	SPRING & FALL		
B	L2	T 4 S	R 23 E	5	PLUS 200'BUF N/R REG SITES & HI SENSITIVE ARCH & PALEO ZONES			X
B	L2	T 4 S	R 23 E	6	PLUS 200'BUF N/R REG SITES & HI SENSITIVE ARCH & PALEO ZONES			X
B	L2	T 3 S	R 23 E	20	PRECLUDE SURFACE DISTURBING ACTIVITIES WHEN SOILS SATURATED	SPRING & FALL		X



TABLE A3-1 (Continued)  
 UTILITY CORRIDOR ROUTES OVERLAYING OTHER RESOURCE VALUES

ALT	PLANNING LEVEL	TWP	RGE	SEC	RESTRICTIONS	SEASON	CLOSED	NSO
B	L2	T 3 S	R 23 E	21	PRECLUDE SURFACE DISTURBING ACTIVITIES WHEN SOILS SATURATED	SPRING & FALL		X
B	L2	T 3 S	R 23 E	29	PRECLUDE SURFACE DISTURBING ACTIVITIES WHEN SOILS SATURATED	SPRING & FALL		X
B	L2	T 4 S	R 23 E	5	PRECLUDE SURFACE DISTURBING ACTIVITIES WHEN SOILS SATURATED	SPRING & FALL		X
B	L2	T 4 S	R 23 E	6	PRECLUDE SURFACE DISTURBING ACTIVITIES WHEN SOILS SATURATED	SPRING & FALL		X
B	L3	T 3 S	R 23 E	9	NO SURFACE DISTURBING ACTIVITIES WITHIN 6M RADIUS OF LEK	MAR 1 - JUN 30		
B	L3	T 3 S	R 23 E	10	NO SURFACE DISTURBING ACTIVITIES WITHIN 6M RADIUS OF LEK	MAR 1 - JUN 30		
B	L3	T 3 S	R 23 E	20	NO SURFACE DISTURBING ACTIVITIES WITHIN 6M RADIUS OF LEK	MAR 1 - JUN 30		
B	L3	T 3 S	R 23 E	21	NO SURFACE DISTURBING ACTIVITIES WITHIN 6M RADIUS OF LEK	MAR 1 - JUN 30		
B	L3	T 3 S	R 23 E	29	NO SURFACE DISTURBING ACTIVITIES WITHIN 6M RADIUS OF LEK	MAR 1 - JUN 30		
B	L3	T 3 S	R 23 E	31	NO SURFACE DISTURBING ACTIVITIES WITHIN 6M RADIUS OF LEK	MAR 1 - JUN 30		
B	L3	T 4 S	R 23 E	5	NO SURFACE DISTURBING ACTIVITIES WITHIN 6M RADIUS OF LEK	MAR 1 - JUN 30		
B	L3	T 4 S	R 23 E	6	NO SURFACE DISTURBING ACTIVITIES WITHIN 6M RADIUS OF LEK	MAR 1 - JUN 30		
B	L2	T 3 S	R 20 E	17	NO SD ACTIVITIES RESULTING IN ADVERSE IMPACTS TO BIG GAME			X
B	L2	T 3 S	R 20 E	20	NO SD ACTIVITIES RESULTING IN ADVERSE IMPACTS TO BIG GAME			X
B	L2	T 3 S	R 20 E	29	NO SD ACTIVITIES RESULTING IN ADVERSE IMPACTS TO BIG GAME			X
B	L2	T 3 S	R 20 E	33	NO SD ACTIVITIES RESULTING IN ADVERSE IMPACTS TO BIG GAME			X
B	L2	T 3 S	R 20 E	17	PLUS 200'BUF N/R SITES & HI SENSITIVE ARCH & PALEO ZONES			X
B	L2	T 3 S	R 20 E	20	PLUS 200'BUF N/R SITES & HI SENSITIVE ARCH & PALEO ZONES			X
B	L2	T 3 S	R 20 E	29	PLUS 200'BUF N/R SITES & HI SENSITIVE ARCH & PALEO ZONES			X
B	L2	T 3 S	R 20 E	33	PLUS 200'BUF N/R SITES & HI SENSITIVE ARCH & PALEO ZONES			X
B	L2	T 3 S	R 20 E	17	PLUS 200'BUF N/R SITES & HI SENSITIVE ARCH & PALEO ZONES			X
B	L2	T 3 S	R 20 E	20	PLUS 200'BUF N/R SITES & HI SENSITIVE ARCH & PALEO ZONES			X
B	L2	T 3 S	R 20 E	29	PLUS 200'BUF N/R SITES & HI SENSITIVE ARCH & PALEO ZONES			X
B	L2	T 3 S	R 20 E	33	PLUS 200'BUF N/R SITES & HI SENSITIVE ARCH & PALEO ZONES			X
B	L2	T 4 S	R 23 E	6	NO SD ACTIVITY WITHIN 1MI FER. HAWK NEST AND REST 1/2M NEST			X
B	L2	T 4 S	R 23 E	7	NO SD ACTIVITY WITHIN 1MI FER. HAWK NEST AND REST 1/2M NEST			X
B	L2	T 4 S	R 23 E	18	NO SD ACTIVITY WITHIN 1MI FER. HAWK NEST AND REST 1/2M NEST			X
B	L2	T 4 S	R 23 E	29	PRECLUDE SD ACTIVITIES MAINTAIN OR ENHANCE WATERSHED	SPRING & FALL		X
B	L2	T 4 S	R 23 E	33	PRECLUDE SD ACTIVITIES MAINTAIN OR ENHANCE WATERSHED	SPRING & FALL		X
B	L2	T 4 S	R 23 E	6	PLUS 200'BUF N/R REG SITES & HI SENSITIVE ARCH & PALEO ZONES			X
B	L2	T 4 S	R 23 E	7	PLUS 200'BUF N/R REG SITES & HI SENSITIVE ARCH & PALEO ZONES			X
B	L2	T 4 S	R 23 E	18	PLUS 200'BUF N/R REG SITES & HI SENSITIVE ARCH & PALEO ZONES			X
B	L2	T 4 S	R 23 E	19	PLUS 200'BUF N/R REG SITES & HI SENSITIVE ARCH & PALEO ZONES			X
B	L2	T 4 S	R 23 E	29	PLUS 200'BUF N/R REG SITES & HI SENSITIVE ARCH & PALEO ZONES			X
B	L2	T 5 S	R 23 E	15	MIDDLE GREEN RIVER FLOODPLAIN BOUNDARY			X
B	L2	T 5 S	R 23 E	15	MIDDLE GREEN RIVER FLOODPLAIN BOUNDARY			X
B	L2	T 4 S	R 23 E	33	MIDDLE GREEN RIVER FLOODPLAIN BOUNDARY			X
B	L2	T 5 S	R 23 E	15	MIDDLE GREEN RIVER FLOODPLAIN BOUNDARY			X
B	L2	T 4 S	R 23 E	6	PRECLUDE SURFACE DISTURBING ACTIVITIES WHEN SOILS SATURATED			X
B	L3	T 4 S	R 23 E	7	AVOID SD & MAINTAIN HABITAT FOR BLACK FOOTED FERRET			
B	L2	T 4 S	R 23 E	7	NO SD ACT RESULTING IN ADVERSE IMPACT W/I 1M ACTIVE NEST	MAR 1 - JUL 15		X
B	L2	T 4 S	R 23 E	7	PLUS 200'BUF N/R REG SITES & HI SENSITIVE ARCH & PALEO ZONES			X
B	L3	T 6 S	R 19 E	25	ANTELOPE HABITAT NO SPECIAL RESTRICTIONS			
B	L3	T 6 S	R 19 E	26	ANTELOPE HABITAT NO SPECIAL RESTRICTIONS			
B	L3	T 6 S	R 20 E	27	ANTELOPE HABITAT NO SPECIAL RESTRICTIONS			
B	L3	T 6 S	R 20 E	28	ANTELOPE HABITAT NO SPECIAL RESTRICTIONS			
B	L3	T 6 S	R 20 E	29	ANTELOPE HABITAT NO SPECIAL RESTRICTIONS			
B	L3	T 6 S	R 20 E	30	ANTELOPE HABITAT NO SPECIAL RESTRICTIONS			
B	L3	T 6 S	R 20 E	33	ANTELOPE HABITAT NO SPECIAL RESTRICTIONS			



TABLE A3-1 (Continued)  
 UTILITY CORRIDOR ROUTES OVERLAYING OTHER RESOURCE VALUES

ALT	PLANNING LEVEL	TWP	RGE	SEC	RESTRICTIONS	SEASON	CLOSED	NSO
B	L3	T 6 S	R 20 E	34	ANTELOPE HABITAT NO SPECIAL RESTRICTIONS			
B	L3	T 6 S	R 19 E	35	ANTELOPE HABITAT NO SPECIAL RESTRICTIONS			
B	L3	T 6 S	R 19 E	25	NO SURFACE DISTURBING ACTIVITIES WITHIN 6M RADIUS OF LEKS	MAR 1 - JUN 30		
B	L3	T 6 S	R 19 E	26	NO SURFACE DISTURBING ACTIVITIES WITHIN 6M RADIUS OF LEKS	MAR 1 - JUN 30		
B	L3	T 6 S	R 20 E	27	NO SURFACE DISTURBING ACTIVITIES WITHIN 6M RADIUS OF LEKS	MAR 1 - JUN 30		
B	L3	T 6 S	R 19 E	28	NO SURFACE DISTURBING ACTIVITIES WITHIN 6M RADIUS OF LEKS	MAR 1 - JUN 30		
B	L3	T 6 S	R 19 E	29	NO SURFACE DISTURBING ACTIVITIES WITHIN 6M RADIUS OF LEKS	MAR 1 - JUN 30		
B	L3	T 6 S	R 19 E	30	NO SURFACE DISTURBING ACTIVITIES WITHIN 6M RADIUS OF LEKS	MAR 1 - JUN 30		
B	L3	T 6 S	R 19 E	33	NO SURFACE DISTURBING ACTIVITIES WITHIN 6M RADIUS OF LEKS	MAR 1 - JUN 30		
B	L3	T 6 S	R 19 E	34	NO SURFACE DISTURBING ACTIVITIES WITHIN 6M RADIUS OF LEKS	MAR 1 - JUN 30		
B	L3	T 6 S	R 19 E	26	ANTELOPE HABITAT NO SPECIAL RESTRICTIONS			
B	L3	T 6 S	R 19 E	26	NO SURFACE DISTURBING ACTIVITIES WITHIN 6M RADIUS OF LEKS	MAR 1 - JUN 30		
B	L3	T 6 S	R 19 E	27	NO SURFACE DISTURBING ACTIVITIES WITHIN 6M RADIUS OF LEKS	MAR 1 - JUN 30		
B	L2	T 6 S	R 21 E	31	MIDDLE GREEN RIVER FLOODPLAIN BOUNDARY			X
B	L2	T 7 S	R 21 E	6	MIDDLE GREEN RIVER FLOODPLAIN BOUNDARY			X
B	L1	T 7 S	R 21 E	6	RIPARIAN 700-FOOT BUFFER			X
B	L2	T 7 S	R 21 E	6	PRECLUDE SURFACE DISTURBING ACTIVITIES WHEN SOILS SATURATED SPRING & FALL			X
B	L2	T 6 S	R 20 E	31	PLUS 200'BUFF N/R REG SITES & HI SENSITIVE ARCH & PALEO ZONES			X
B	L2	T 7 S	R 20 E	6	PLUS 200'BUFF N/R REG SITES & HI SENSITIVE ARCH & PALEO ZONES			X
B	L3	T 9 S	R 16 E	1	ANTELOPE HABITAT NO SPECIAL RESTRICTIONS			
B	L3	T 9 S	R 16 E	12	ANTELOPE HABITAT NO SPECIAL RESTRICTIONS			
B	L3	T 9 S	R 16 E	13	ANTELOPE HABITAT NO SPECIAL RESTRICTIONS			
B	L3	T 9 S	R 16 E	24	ANTELOPE HABITAT NO SPECIAL RESTRICTIONS			
B	L3	T 9 S	R 16 E	25	ANTELOPE HABITAT NO SPECIAL RESTRICTIONS			
B	L3	T 9 S	R 17 E	7	ANTELOPE HABITAT NO SPECIAL RESTRICTIONS			
B	L3	T 9 S	R 16 E	18	ANTELOPE HABITAT NO SPECIAL RESTRICTIONS			
B	L3	T 9 S	R 16 E	19	ANTELOPE HABITAT NO SPECIAL RESTRICTIONS			
B	L3	T 9 S	R 16 E	30	ANTELOPE HABITAT NO SPECIAL RESTRICTIONS			
B	L2	T 8 S	R 16 E	13	PLUS 200'BUFF N/R REG SITES & HI SENSITIVE ARCH & PALEO ZONE			X
B	L2	T 8 S	R 16 E	14	PLUS 200'BUFF N/R REG SITES & HI SENSITIVE ARCH & PALEO ZONE			X
B	L2	T 8 S	R 16 E	24	PLUS 200'BUFF N/R REG SITES & HI SENSITIVE ARCH & PALEO ZONE			X
B	L2	T 8 S	R 16 E	25	PLUS 200'BUFF N/R REG SITES & HI SENSITIVE ARCH & PALEO ZONE			X
B	L2	T 98	R 16 E	1	PLUS 200'BUFF N/R REG SITES & HI SENSITIVE ARCH & PALEO ZONE			X
B	L2	T 8 S	R 16 E	12	PLUS 200'BUFF N/R REG SITES & HI SENSITIVE ARCH & PALEO ZONE			X
B	L2	T 8 S	R 16 E	13	PLUS 200'BUFF N/R REG SITES & HI SENSITIVE ARCH & PALEO ZONE			X
B	L2	T 8 S	R 16 E	7	PLUS 200'BUFF N/R REG SITES & HI SENSITIVE ARCH & PALEO ZONE			X
B	L2	T 8 S	R 16 E	18	PLUS 200'BUFF N/R REG SITES & HI SENSITIVE ARCH & PALEO ZONE			X
B,C,D	L3	T 2 N	R 25 E	6	ONLY SHORT TERM/MITIGABLE INTRUSION W/I 1/2M L/O/S GR RVR			
B,C,D	L3	T 2 N	R 25 E	7	ONLY SHORT TERM/MITIGABLE INTRUSION W/I 1/2M L/O/S GR RVR			
B,C,D	L3	T 2 N	R 25 E	30	ONLY SHORT TERM/MITIGABLE INTRUSION W/I 1/2M L/O/S GR RVR			
B,C,D	L3	T 2 N	R 24 E	13	ONLY SHORT TERM/MITIGABLE INTRUSION W/I 1/2M L/O/S GR RVR			
B,C,D	L3	T 1 N	R 25 E	6	ONLY SHORT TERM/MITIGABLE INTRUSIONS W/I 1/2M L/O/S OF GR RVR			
B,C,D	L3	T 3 S	R 20 E	17	ONLY SHORT TERM/MITIGABLE INTRUSION W/I 1/2M L/O/S GR RVR			
B,C,D	L3	T 3 S	R 20 E	20	ONLY SHORT TERM/MITIGABLE INTRUSION W/I 1/2M L/O/S GR RVR			
B,C,D	L3	T 3 S	R 20 E	29	ONLY SHORT TERM/MITIGABLE INTRUSION W/I 1/2M L/O/S GR RVR			
B,C,D	L3	T 3 S	R 20 E	33	ONLY SHORT TERM/MITIGABLE INTRUSION W/I 1/2M L/O/S GR RVR			
B,E	L1	T 2 N	R 24 E	13	VRM RESTRICTIONS			X
B,E	L1	T 2 N	R 25 E	18	VRM RESTRICTIONS			X
B,E	L1	T 2 N	R 24 E	19	VRM RESTRICTIONS			X



TABLE A3-1 (Continued)  
UTILITY CORRIOR ROUTES OVERLAYING OTHER RESOURCE VALUES

ALT	PLANNING LEVEL	TWP	RGE	SEC	RESTRICTIONS	SEASON	CLOSED	NSO
B,E	L1	T 2 N	R 25 E	29	VRM RESTRICTIONS			X
B,E	L1	T 2 N	R 25 E	30	VRM RESTRICTIONS			X
B,E	L1	T 1 N	R 25 E	31	BROWN PARK, GREEN RIVER FLOODPLAIN			X
B,E	L1	T 1 N	R 25 E	6	BROWN PARK, GREEN RIVER FLOOPLAIN			X
B,E	L1	T 1 N	R 25 E	7	BROWN PARK, GREEN RIVER FLOOPLAIN			X
B,E	L2	T 1 N	R 25 E	19	SEMI PRIMITIVE NON-MOTORIZED			X
B,E	L2	T 1 N	R 25 E	30	SEMI PRIMITIVE NON-MOTORIZED			X
C	L2	T 2 N	R 25 E	29	POTENTIAL NATIONAL REGISTER SITE 200 FOOT BUFFER		X	
C	L2	T 1 N	R 25 E	31	PRECLUDE SURFACE OISTURBING ACTIVITIES WHEN SOILS SATURATED	SPRING & FALL		X
C	L2	T 1 N	R 25 E	6	PRECLUDE SURFACE OISTURBING ACTIVITIES WHEN SOILS SATURATED	SPRING & FALL		X
C	L2	T 1 N	R 25 E	7	PRECLUOE SURFACE OISTURBING ACTIVITIES WHEN SOILS SATURATED	SPRING & FALL		X
C,O	L3	T 2 N	R 24 E	1	PRECLUOE SURFACE OISTURBING ACTIVITIES WHEN SOILS SATURATED	SPRING & FALL		
C,O	L3	T 2 N	R 25 E	6	PRECLUOE SURFACE OISTURBING ACTIVITIES WHEN SOILS SATURATED	SPRING & FALL		
C,O	L3	T 2 N	R 25 E	7	PRECLUDE SURFACE OISTURBING ACTIVITIES WHEN SOILS SATURATED	SPRING & FALL		
C,O	L3	T 2 N	R 25 E	29	NO SO ACTIVITY WITHIN 1/4 MI ACTIVE EAGLE NEST	FEB 15 - JUN 15		
C,D	L3	T 4 S	R 23 E	6	NO SD ACTIVITIES W/I 1/4M OF ALL ACTIVE EAGLE NEST	FEB 15 - JUN 15		
C,O	L3	T 4 S	R 23 E	6	NO SO ACT WITHIN 1/4 MI ACTIVE EAGLE NEST	FEB 15 - JUN 15		
C,O	L3	T 4 S	R 23 E	7	NO SO ACT WITHIN 1/4 MI ACTIVE EAGLE NEST	FEB 15 - JUN 15		
C,O	L3	T 4 S	R 23 E	18	NO SO ACT WITHIN 1/4 MI ACTIVE EAGLE NEST	FEB 15 - JUN 15		
C,O	L3	T 4 S	R 23 E	7	NO SO ACT WITHIN 1/4M ACTIVE EAGLE NEST	MAR 1 - JUN 15		
C,O,E	L3	T 3 N	R 24 E	26	PRECLUOE SURFACE DISTURBING ACTIVITIES WHEN SOILS SATURATED	SPRING & FALL		
C,O,E	L3	T 3 N	R 24 E	27	PRECLUDE SURFACE DISTURBING ACTIVITIES WHEN SOILS SATURATED	SPRING & FALL		
C,O,E	L3	T 3 N	R 24 E	28	PRECLUOE SURFACE OISTURBING ACTIVITIES WHEN SOILS SATURATED	SPRING & FALL		
C,D,E	L3	T 2 N	R 25 E	19	PRECLUOE SURFACE DISTURBING ACTIVITIES WHEN SOIL SATURATED	SPRING & FALL		
C,O,E	L3	T 3 N	R 24 E	17	CRITICAL ANTELOPE NO SPECIFIC RESTRICTION			
C,D,E	L3	T 3 N	R 24 E	20	CRITICAL ANTELOPE NO SPECIFIC RESTRICTION			
C,O,E	L3	T 3 N	R 24 E	21	CRITICAL ANTELOPE NO SPECIFIC RESTRICTION			
C,O,E	L3	T 3 N	R 24 E	25	CRITICAL ANTELOPE NO SPECIFIC RESTRICTION			
C,O,E	L3	T 3 N	R 24 E	26	CRITICAL ANTELOPE NO SPECIFIC RESTRICTION			
C,D,E	L3	T 3 N	R 24 E	27	CRITICAL ANTELOPE NO SPECIFIC RESTRICTION			
C,D,E	L3	T 3 N	R 24 E	28	CRITICAL ANTELOPE NO SPECIFIC RESTRICTION			
C,O,E	L3	T 3 N	R 24 E	17	NO SD ACTIVITIES RESULTING IN ADVERSE IMPACTS TO BIG GAME	OEC 1 - APR 30		
C,O,E	L3	T 3 N	R 24 E	21	NO SO ACTIVITIES RESULTING IN ADVERSE IMPACTS TO BIG GAME	OEC 1 - APR 30		
C,O,E	L3	T 3 N	R 24 E	25	NO SD ACTIVITIES RESULTING IN AOVERSE IMPACTS TO BIG GAME	OEC 1 - APR 30		
C,O,E	L3	T 3 N	R 24 E	26	NO SO ACTIVITIES RESULTING IN ADVERSE IMPACTS TO BIG GAME	OEC 1 - APR 30		
C,D,E	L3	T 3 N	R 24 E	27	NO SD ACTIVITIES RESULTING IN ADVERSE IMPACTS TO BIG GAME	DEC 1 - APR 30		
C,O,E	L3	T 3 N	R 24 E	28	NO SO ACTIVITIES RESULTING IN AOVERSE IMPACTS TO BIG GAME	DEC 1 - APR 30		
C,D,E	L3	T 2 N	R 24 E	13	NO SO ACTIVITIES RESULTING IN ADVERSE IMPACTS TO BIG GAME	DEC 1 - APR 30		
C,D,E	L3	T 2 N	R 25 E	7	NO SO ACTIVITIES RESULTING IN AOVERSE IMPACTS TO BIG GAME	DEC 1 - APR 30		
C,O,E	L3	T 2 N	R 25 E	18	NO SO ACTIVITIES RESULTING IN AOVERSE IMPACTS TO BIG GAME	DEC 1 - APR 30		
C,O,E	L3	T 2 N	R 25 E	19	NO SO ACTIVITIES RESULTING IN AOVERSE IMPACTS TO BIG GAME	OEC 1 - APR 30		
C,O,E	L3	T 2 N	R 24 E	30	NO SO ACTIVITIES RESULTING IN ADVERSE IMPACTS TO BIG GAME	OEC 1 - APR 30		
C,D,E	L3	T 2 N	R 25 E	30	NO SO ACTIVITIES RESULTING IN AOVERSE IMPACTS TO BIG GAME	DEC 1 - APR 30		
C,D,E	L3	T 1 N	R 25 E	6	NO SO ACTIVITIES RESULTING IN AOVERSE IMPACTS TO BIG GAME	DEC 1 - APR 30		
C,O,E	L3	T 1 N	R 25 E	7	NO SD ACTIVITIES RESULTING IN ADVERSE IMPACTS TO BIG GAME	DEC 1 - APR 30		
C,O,E	L3	T 3 N	R 24 E	21	ONLY SO ACTIVITY 300' OF RIPARIAN, NO OTHER ALT, ENHANCE RIP			
C,O,E	L3	T 3 N	R 24 E	25	ONLY SD ACTIVITY 300' OF RIPARIAN, NO OTHER ALT, ENHANCE RIP			
C,D,E	L3	T 3 N	R 24 E	26	ONLY SO ACTIVITY 300' OF RIPARIAN, NO OTHER ALT, ENHANCE RIP			
C,D,E	L3	T 3 N	R 24 E	27	ONLY SO ACTIVITY 300' OF RIPARIAN, NO OTHER ALT, ENHANCE RIP			



TABLE A3-1 (Continued)  
UTILITY CORRIDOR ROUTES OVERLAYING OTHER RESOURCE VALUES

ALT	PLANNING LEVEL	TWP	RGE	SEC	RESTRICTIONS	SEASON	CLOSED	NSO
C,D,E	L3	T 3 N	R 24 E	28	ONLY SD ACTIVITY 300' DF RIPARIAN, NO OTHER ALT, ENHANCE RIP			
C,D,E	L3	T 2 N	R 25 E	1	ONLY SD ACTIVITY 300' DF RIPARIAN, NO OTHER ALT, ENHANCE RIP			
C,D,E	L3	T 2 N	R 25 E	6	ONLY SD ACTIVITY 300' OF RIPARIAN, NO OTHER ALT, ENHANCE RIP			
C,D,E	L3	T 2 N	R 25 E	7	ONLY SD ACTIVITY 300' OF RIPARIAN, NO OTHER ALT, ENHANCE RIP			
C,D,E	L3	T 2 N	R 25 E	31	ONLY SD ACTIVITY 300' DF RIPARIAN, NO OTHER ALT, ENHANCE RIP			
C,D,E	L3	T 1 N	R 25 E	6	ONLY SD ACTIVITY 300' DF RIPARIAN, NO OTHER ALT, ENHANCE RIP			
C,D,E	L3	T 1 N	R 25 E	7	ONLY SD ACTIVITY 300' DF RIPARIAN, NO OTHER ALT, ENHANCE RIP			
C,D,E	L3	T 2 S	R 23 E	34	NO SD ACTIVITIES RESULTING IN ADVERSE IMPACTS TO BIG GAME	DEC 1 - APR 30		
C,D,E	L3	T 2 S	R 23 E	35	NO SD ACTIVITIES RESULTING IN ADVERSE IMPACTS TO BIG GAME	DEC 1 - APR 30		
C,D,E	L3	T 3 S	R 23 E	3	NO SD ACTIVITIES RESULTING IN ADVERSE IMPACTS TO BIG GAME	DEC 1 - APR 30		
C,D,E	L3	T 3 S	R 23 E	10	NO SD ACTIVITIES RESULTING IN ADVERSE IMPACTS TO BIG GAME	DEC 1 - APR 30		
C,D,E	L3	T 2 S	R 23 E	35	PRECLUDE SURFACE DISTURBING ACTIVITIES WHEN SOIL SATURATED	SPRING & FALL		
C,D,E	L3	T 2 S	R 23 E	3	PRECLUDE SURFACE DISTURBING ACTIVITIES WHEN SOIL SATURATED	SPRING & FALL		
C,D,E	L3	T 2 S	R 23 E	9	PRECLUDE SURFACE DISTURBING ACTIVITIES WHEN SOIL SATURATED	SPRING & FALL		
C,D,E	L3	T 2 S	R 23 E	10	PRECLUDE SURFACE DISTURBING ACTIVITIES WHEN SOIL SATURATED	SPRING & FALL		
C,D,E	L3	T 2 S	R 23 E	20	PRECLUDE SURFACE DISTURBING ACTIVITIES WHEN SOIL SATURATED	SPRING & FALL		
C,D,E	L3	T 2 S	R 23 E	29	PRECLUDE SURFACE DISTURBING ACTIVITIES WHEN SOIL SATURATED	SPRING & FALL		
C,D,E	L3	T 2 S	R 23 E	31	PRECLUDE SURFACE DISTURBING ACTIVITIES WHEN SDIL SATURATED	SPRING & FALL		
C,D,E	L3	T 3 S	R 23 E	3	ONLY SD ACTIVITY 300' DF RIPARIAN, NO OTHER ALT, ENHANCE RIP			
C,D,E	L3	T 3 S	R 23 E	10	ONLY SD ACTIVITY 300' DF RIPARIAN, NO OTHER ALT, ENHANCE RIP			
C,D,E	L3	T 3 S	R 20 E	17	NO SD ACTIVITIES RESULTING IN ADVERSE IMPACTS TO BIG GAME	DEC 1 - APR 30		
C,D,E	L3	T 3 S	R 20 E	20	NO SD ACTIVITIES RESULTING IN ADVERSE IMPACTS TO BIG GAME	DEC 1 - APR 30		
C,D,E	L3	T 3 S	R 20 E	29	NO SD ACTIVITIES RESULTING IN ADVERSE IMPACTS TO BIG GAME	DEC 1 - APR 30		
C,D,E	L3	T 3 S	R 20 E	33	NO SD ACTIVITIES RESULTING IN ADVERSE IMPACTS TO BIG GAME	DEC 1 - APR 30		
C,D,E	L3	T 4 S	R 23 E	29	PRECLUDE SURFACE DISTURBING ACTIVITIES WHEN SDILS SATURATED	SPRING & FALL		
C,D,E	L3	T 4 S	R 23 E	33	PRECLUDE SURFACE DISTURBING ACTIVITIES WHEN SOILS SATURATED	SPRING & FALL		
C,D,E	L3	T 4 S	R 23 E	7	PRECLUDE SURFACE DISTURBING ACTIVITIES WHEN SDIL SATURATED	SPRING & FALL		
C,D,E	L3	T 6 S	R 19 E	25	ANTELOPE HABITAT NO SPECIAL RESTRICTIONS			
C,D,E	L3	T 6 S	R 19 E	26	ANTELOPE HABITAT NO SPECIAL RESTRICTIONS			
C,D,E	L3	T 6 S	R 19 E	27	ANTELOPE HABITAT NO SPECIAL RESTRICTIONS			
C,D,E	L3	T 6 S	R 19 E	28	ANTELOPE HABITAT NO SPECIAL RESTRICTIONS			
C,D,E	L3	T 6 S	R 19 E	29	ANTELOPE HABITAT NO SPECIAL RESTRICTIONS			
C,D,E	L3	T 6 S	R 19 E	30	ANTELOPE HABITAT NO SPECIAL RESTRICTIONS			
C,D,E	L3	T 6 S	R 19 E	33	ANTELOPE HABITAT NO SPECIAL RESTRICTIONS			
C,D,E	L3	T 6 S	R 19 E	34	ANTELOPE HABITAT NO SPECIAL RESTRICTIONS			
C,D,E	L3	T 6 S	R 19 E	35	ANTELOPE HABITAT NO SPECIAL RESTRICTIONS			
C,D,E	L3	T 6 S	R 19 E	26	ANTELOPE HABITAT NO SPECIAL RESTRICTIONS			
C,D,E	L3	T 6 S	R 19 E	27	ANTELOPE HABITAT NO SPECIAL RESTRICTIONS			
C,D,E	L3	T 6 S	R 19 E	27	ANTELOPE HABITAT NO SPECIAL RESTRICTIONS			
C,D,E	L3	T 7 S	R 21 E	6	ONLY SD ACTIVITY 300' DF RIPARIAN, NO OTHER ALT, ENHANCE RIP			
C,D,E	L3	T 9 S	R 16 E	1	ANTELOPE HABITAT NO SPECIAL RESTRICTIONS			
C,D,E	L3	T 9 S	R 16 E	12	ANTELOPE HABITAT NO SPECIAL RESTRICTIONS			
C,D,E	L3	T 9 S	R 16 E	13	ANTELOPE HABITAT NO SPECIAL RESTRICTIONS			
C,D,E	L3	T 9 S	R 16 E	24	ANTELOPE HABITAT NO SPECIAL RESTRICTIONS			
C,D,E	L3	T 9 S	R 16 E	25	ANTELOPE HABITAT NO SPECIAL RESTRICTIONS			
C,D,E	L3	T 9 S	R 16 E	7	ANTELOPE HABITAT NO SPECIAL RESTRICTIONS			
C,D,E	L3	T 9 S	R 16 E	18	ANTELOPE HABITAT NO SPECIAL RESTRICTIONS			
C,D,E	L3	T 9 S	R 16 E	19	ANTELOPE HABITAT NO SPECIAL RESTRICTIONS			
C,D,E	L3	T 9 S	R 16 E	30	ANTELOPE HABITAT NO SPECIAL RESTRICTIONS			



TABLE A3-1 (Continued)  
UTILITY CORRIDOR ROUTES OVERLAYING OTHER RESOURCE VALUES

ALT	PLANNING LEVEL	TWP	RGE	SEC	RESTRICTIONS	SEASON	CLOSED	NSO
C,E	L3	T 2 N	R 25 E	29	NO SD ACTIVITIES RESULTING IN AOVERSE IMPACTS TO BIG GAME	DEC 1 -APR 30		
C,E	L3	T 3 N	R 24 E	17	NO PROTECTION BUFFERS ESTABLISHEO AROUND CULTURAL/PALEO SITE			
C,E	L3	T 3 N	R 24 E	20	NO PROTECTION BUFFERS ESTABLISHEO AROUND CULTURAL/PALEO SITE			
C,E	L3	T 3 N	R 24 E	21	NO PROTECTION BUFFERS ESTABLISHED AROUND CULTURAL/PALEO SITE			
C,E	L3	T 2 N	R 24 E	13	NO PROTECTION BUFFERS ESTABLISHED AROUND CULTURAL/PALEO SITE			
C,E	L3	T 1 N	R 25 E	20	NO PROTECTIVE BUFFERS ESTABLISHEO AROUND CULTURAL/PALEO SITE			
C,E	L2	T 1 N	R 25 E	7	POTENTIAL NATIONAL REGISTER SITE			X
C,E	L2	T 1 N	R 25 E	18	POTENTIAL NATIONAL REGISTER SITE			X
C,E	L3	T 1 N	R 25 E	6	RECREATION SITES SPECIAL RESTRICTIONS - REHAB			X
C,E	L3	T 1 N	R 25 E	7	RECREATION SITES SPECIAL RESTRICTIONS - REHAB			X
C,E	L3	T 1 N	R 25 E	31	RECREATION SITES SPECIAL RESTRICTIONS - REHAB			X
C,E	L3	T 1 N	R 25 E	19	NO PROTECTIVE BUFFER ESTABLISHEO AROUND CULTURAL/PALEO SITES			
C,E	L3	T 1 N	R 25 E	30	NO PROTECTIVE BUFFER ESTABLISHEO AROUND CULTURAL/PALEO SITES			
C,E	L3	T 2 S	R 23 E	26	BRUSH CREEK, NEW SO ACTIVITIES IF WATERSHEO VALUE MAINTAIN			
C,E	L3	T 2 S	R 23 E	34	BRUSH CREEK, NEW SO ACTIVITIES IF WATERSHED VALUE MAINTAIN			
C,E	L3	T 2 S	R 23 E	35	BRUSH CREEK, NEW SO ACTIVITIES IF WATERSHEO VALUE MAINTAIN			
C,E	L3	T 3 S	R 23 E	3	BRUSH CREEK, NEW SO ACTIVITIES IF WATERSHEO VALUE MAINTAIN			
C,E	L3	T 3 S	R 23 E	9	BRUSH CREEK, NEW SO ACTIVITIES IF WATERSHEO VALUE MAINTAIN			
C,E	L3	T 3 S	R 23 E	10	BRUSH CREEK, NEW SD ACTIVITIES IF WATERSHEO VALUE MAINTAIN			
C,E	L3	T 3 S	R 23 E	20	BRUSH CREEK, NEW SO ACTIVITIES IF WATERSHEO VALUE MAINTAIN			
C,E	L3	T 3 S	R 23 E	21	BRUSH CREEK, NEW SD ACTIVITIES IF WATERSHED VALUE MAINTAIN			
C,E	L3	T 3 S	R 23 E	29	BRUSH CREEK, NEW SO ACTIVITIES IF WATERSHED VALUE MAINTAIN			
C,E	L3	T 3 S	R 23 E	31	BRUSH CREEK, NEW SO ACTIVITIES IF WATERSHEO VALUE MAINTAIN			
C,E	L3	T 4 S	R 23 E	5	BRUSH CREEK, NEW SO ACTIVITIES IF WATERSHEO VALUE MAINTAIN			
C,E	L3	T 4 S	R 23 E	6	BRUSH CREEK, NEW SO ACTIVITIES IF WATERSHEO VALUE MAINTAIN			
C,E	L3	T 3 S	R 20 E	17	NO PROTECTIVE BUFFER ESTABLISHEO AROUND CULTURAL/PALEO SITE			
C,E	L3	T 3 S	R 20 E	20	NO PROTECTIVE BUFFER ESTABLISHEO AROUND CULTURAL/PALEO SITE			
C,E	L3	T 3 S	R 20 E	29	NO PROTECTIVE BUFFER ESTABLISHEO AROUND CULTURAL/PALEO SITE			
C,E	L3	T 3 S	R 20 E	33	NO PROTECTIVE BUFFER ESTABLISHEO AROUND CULTURAL/PALEO SITE			
C,E	L3	T 3 S	R 20 E	17	NO PROTECTION BUFFERS ESTABLISHED AROUND CULTURAL/PALEO SITE			
C,E	L3	T 3 S	R 20 E	20	NO PROTECTION BUFFERS ESTABLISHEO AROUND CULTURAL/PALEO SITE			
C,E	L3	T 3 S	R 20 E	29	NO PROTECTION BUFFERS ESTABLISHED AROUND CULTURAL/PALEO SITE			
C,E	L3	T 3 S	R 20 E	33	NO PROTECTION BUFFERS ESTABLISHED AROUND CULTURAL/PALEO SITE			
C,E	L3	T 4 S	R 23 E	6	NO PROTECTION BUFFERS ESTABLISHEO AROUND CULTURAL/PALEO SITE			
C,E	L3	T 4 S	R 23 E	7	NO PROTECTION BUFFERS ESTABLISHEO AROUND CULTURAL/PALEO SITE			
C,E	L3	T 4 S	R 23 E	18	NO PROTECTION BUFFERS ESTABLISHED AROUND CULTURAL/PALEO SITE			
C,E	L3	T 4 S	R 23 E	19	NO PROTECTION BUFFERS ESTABLISHED AROUND CULTURAL/PALEO SITE			
C,E	L3	T 4 S	R 23 E	29	NO PROTECTION BUFFERS ESTABLISHEO AROUND CULTURAL/PALEO SITE			
C,E	L3	T 4 S	R 23 E	6	BRUSH CREEK, NEW SO ACT. IF WATERSHEO VALUE MAINTAINEO			
C,E	L3	T 4 S	R 23 E	7	BRUSH CREEK, NEW SO ACT. IF WATERSHEO VALUE MAINTAINED			
C,E	L3	T 4 S	R 23 E	18	BRUSH CREEK, NEW SO ACT. IF WATERSHED VALUE MAINTAINED			
C,E	L3	T 4 S	R 23 E	19	BRUSH CREEK, NEW SO ACT. IF WATERSHED VALUE MAINTAINEO			
C,E	L3	T 4 S	R 23 E	29	BRUSH CREEK, NEW SO ACT. IF WATERSHEO VALUE MAINTAINEO			
C,E	L3	T 4 S	R 23 E	33	BRUSH CREEK, NEW SD ACT. IF WATERSHED VALUE MAINTAINED			
C,E	L3	T 4 S	R 23 E	29	BRUSH CREEK, NEW SD ACT. IF WATERSHED VALUE MAINTAINED			
C,E	L3	T 6 S	R 20 E	31	NO PROTECTION BUFFERS ESTABLISHEO AROUND CULTURAL/PALEO ZONE			
C,E	L3	T 7 S	R 20 E	6	NO PROTECTION BUFFERS ESTABLISHEO AROUND CULTURAL/PALEO ZONE			
C,E	L3	T 8 S	R 16 E	13	BIG WASH, NEW SO ACTIVITIES IF WATERSHEO VALUE MAINTAINEO			
C,E	L3	T 8 S	R 16 E	24	BIG WASH, NEW SD ACTIVITIES IF WATERSHEO VALUE MAINTAINED			



TABLE A3-1 (Continued)  
UTILITY CORRIDOR ROUTES OVERLAYING OTHER RESOURCE VALUES

ALT	PLANNING LEVEL	TWP	RGE	SEC	RESTRICTIONS	SEASON	CLOSED	NSO
C,E	L3	T 8 S	R 16 E	25	BIG WASH, NEW SD ACTIVITIES IF WATERSHED VALUE MAINTAINED			
C,E	L3	T 9 S	R 16 E	1	BIG WASH, NEW SD ACTIVITIES IF WATERSHED VALUE MAINTAINED			
C,E	L3	T 9 S	R 16 E	12	BIG WASH, NEW SD ACTIVITIES IF WATERSHED VALUE MAINTAINED			
C,E	L3	T 9 S	R 16 E	13	BIG WASH, NEW SD ACTIVITIES IF WATERSHED VALUE MAINTAINED			
C,E	L3	T 9 S	R 16 E	24	BIG WASH, NEW SD ACTIVITIES IF WATERSHED VALUE MAINTAINED			
C,E	L3	T 9 S	R 17 E	7	BIG WASH, NEW SD ACTIVITIES IF WATERSHED VALUE MAINTAINED			
C,E	L3	T 9 S	R 17 E	18	BIG WASH, NEW SD ACTIVITIES IF WATERSHED VALUE MAINTAINED			
C,E	L3	T 8 S	R 16 E	19	BIG WASH, NEW SD ACTIVITIES IF WATERSHED VALUE MAINTAINED			
C,E	L3	T 8 S	R 16 E	13	NO PROTECTION BUFFERS ESTABLISHED AROUND CULTURAL/PALEO SITE			
C,E	L3	T 8 S	R 16 E	14	NO PROTECTION BUFFERS ESTABLISHED AROUND CULTURAL/PALEO SITE			
C,E	L3	T 8 S	R 16 E	24	NO PROTECTION BUFFERS ESTABLISHED AROUND CULTURAL/PALEO SITE			
C,E	L3	T 8 S	R 16 E	25	NO PROTECTION BUFFERS ESTABLISHED AROUND CULTURAL/PALEO SITE			
C,E	L3	T 8 S	R 16 E	1	NO PROTECTION BUFFERS ESTABLISHED AROUND CULTURAL/PALEO SITE			
C,E	L3	T 8 S	R 16 E	12	NO PROTECTION BUFFERS ESTABLISHED AROUND CULTURAL/PALEO SITE			
C,E	L3	T 8 S	R 16 E	13	NO PROTECTION BUFFERS ESTABLISHED AROUND CULTURAL/PALEO SITE			
C,E	L3	T 8 S	R 16 E	7	NO PROTECTION BUFFERS ESTABLISHED AROUND CULTURAL/PALEO SITE			
C,E	L3	T 8 S	R 16 E	18	NO PROTECTION BUFFERS ESTABLISHED AROUND CULTURAL/PALEO SITE			
D	L3	T 2 N	R 25 E	29	POTENTIAL NATIONAL REGISTER SITE			X
D	L3	T 2 N	R 24 E	13	VRM RESTRICTIONS			
D	L3	T 2 N	R 25 E	18	VRM RESTRICTIONS			
D	L3	T 2 N	R 24 E	19	VRM RESTRICTIONS			
D	L3	T 2 N	R 25 E	29	VRM RESTRICTIONS			
D	L3	T 2 N	R 25 E	30	VRM RESTRICTIONS			
D	L3	T 1 N	R 25 E	31	PRECLUDE SURFACE DISTURBING ACTIVITIES WHEN SOILS SATURATED SPRING & FALL			
D	L3	T 1 N	R 25 E	6	PRECLUDE SURFACE DISTURBING ACTIVITIES WHEN SOILS SATURATED SPRING & FALL			
D	L3	T 1 N	R 25 E	7	PRECLUDE SURFACE DISTURBING ACTIVITIES WHEN SOILS SATURATED SPRING & FALL			
D	L3	T 2 N	R 25 E	30	VRM RESTRICTIONS			
D	L3	T 1 N	R 25 E	6	VRM RESTRICTIONS			
D	L3	T 1 N	R 25 E	7	VRM RESTRICTIONS			
D	L3	T 1 N	R 25 E	7	MITIGATE - GO AROUND OR SALVAGE			
D	L3	T 1 N	R 25 E	18	MITIGATE - GO AROUND OR SALVAGE			
D,E	L3	T 1 N	R 25 E	6	NO SD ACTIVITIES RESULTING IN ADVERSE IMPACTS TO BIG GAME			
D,E	L3	T 1 N	R 25 E	7	NO SD ACTIVITIES RESULTING IN ADVERSE IMPACTS TO BIG GAME			
D,E	L3	T 1 N	R 25 E	18	NO SD ACTIVITIES RESULTING IN ADVERSE IMPACTS TO BIG GAME			
D,E	L3	T 1 N	R 25 E	19	NO SD ACTIVITIES RESULTING IN ADVERSE IMPACTS TO BIG GAME			
D,E	L3	T 1 N	R 25 E	30	NO SD ACTIVITIES RESULTING IN ADVERSE IMPACTS TO BIG GAME			
D,E	L3	T 1 N	R 24 E	25	NO SD ACTIVITIES RESULTING IN ADVERSE IMPACTS TO BIG GAME			
D,E	L3	T 1 N	R 24 E	35	NO SD ACTIVITIES RESULTING IN ADVERSE IMPACTS TO BIG GAME			
D,E	L3	T 1 N	R 24 E	36	NO SD ACTIVITIES RESULTING IN ADVERSE IMPACTS TO BIG GAME			
D,E	L3	T 1 N	R 24 E	25	NO SD ACTIVITIES RESULTING IN ADVERSE IMPACTS TO BIG GAME			
E	L2	T 2 N	R 25 E	29	POTENTIAL NATIONAL REGISTER SITE			X
E	L2	T 2 N	R 25 E	29	WILDLIFE & VRM2 RESTRICTIONS			X
E	L3	T 2 N	R 25 E	29	VRM RESTRICTIONS			
E	L2	T 2 N	R 24 E	13	WILDLIFE & VRM RESTRICTIONS			X
E	L2	T 2 N	R 25 E	19	WILDLIFE & VRM RESTRICTIONS			X
E	L2	T 2 N	R 25 E	30	WILDLIFE & VRM RESTRICTIONS			X
E	L3	T 2 N	R 24 E	1	VRM RESTRICTIONS			
E	L3	T 2 N	R 24 E	13	VRM RESTRICTIONS			
E	L3	T 2 N	R 25 E	19	VRM RESTRICTIONS			



TABLE A3-1 (Continued)  
 UTILITY CORRIDOR ROUTES OVERLAYING OTHER RESOURCE VALUES

ALT	PLANNING LEVEL	TWP	RGE	SEC	RESTRICTIONS	SEASON	CLOSED	NSO
E	L3	T 2 N	R 25 E	30	VRM RESTRICTIONS			
E	L3	T 2 N	R 25 E	6	ONLY SHORT TERM/MITIGABLE INTRUSION W/I 1/2M L/O/S BYWAYS			
E	L3	T 2 N	R 25 E	7	ONLY SHORT TERM/MITIGABLE INTRUSION W/I 1/2M L/O/S BYWAYS			
E	L3	T 2 N	R 25 E	30	ONLY SHORT TERM/MITIGABLE INTRUSION W/I 1/2M L/O/S BYWAYS			
E	L3	T 2 N	R 24 E	13	ONLY SHORT TERM/MITIGABLE INTRUSION W/I 1/2M L/O/S BYWAYS			
E	L2	T 2 N	R 25 E	30	VRM RESTRICTIONS			X
E	L2	T 1 N	R 25 E	6	VRM RESTRICTIONS			X
E	L3	T 1 N	R 25 E	6	ONLY SHORT TERM/MITIGABLE INTRUSIONS W/I 1/2M L/O/S OF BYWAY			
E	L2	T 2 N	R 25 E	30	VRM & RIPARIAN RESTRICTIONS			X
E	L2	T 2 N	R 25 E	31	VRM & RIPARIAN RESTRICTIONS			X
E	L2	T 1 N	R 25 E	6	VRM & RIPARIAN RESTRICTIONS			X
E	L2	T 1 N	R 25 E	7	VRM & RIPARIAN RESTRICTIONS			X
E	L2	T 2 N	R 25 E	30	WILDLIFE & VRM RESTRICTIONS			X
E	L2	T 1 N	R 25 E	6	WILDLIFE & VRM RESTRICTIONS			X
E	L2	T 1 N	R 25 E	7	WILDLIFE & VRM RESTRICTIONS			X
E	L3	T 2 N	R 25 E	31	NO SD ACTIVITY WITHIN 1/2 MI ACTIVE FERRUGINOUS HAWK NEST	MAR 1 - JUL 15		
E	L3	T 1 N	R 25 E	6	NO SD ACTIVITY WITHIN 1/2 MI ACTIVE FERRUGINOUS HAWK NEST	MAR 1 - JUL 15		
E	L3	T 1 N	R 25 E	7	NO SD ACTIVITY WITHIN 1/2 MI ACTIVE FERRUGINOUS HAWK NEST	MAR 1 - JUL 15		
E	L3	T 2 N	R 25 E	30	VRM RESTRICTIONS			
E	L3	T 2 N	R 25 E	31	VRM RESTRICTIONS			
E	L3	T 1 N	R 25 E	6	VRM RESTRICTIONS			
E	L3	T 1 N	R 25 E	7	VRM RESTRICTIONS			
E	L3	T 1 N	R 25 E	18	VRM RESTRICTIONS			
E	L3	T 1 N	R 25 E	19	VRM RESTRICTIONS			
E	L3	T 1 N	R 25 E	30	VRM RESTRICTIONS			
E	L3	T 2 N	R 25 E	30	VRM RESTRICTIONS			
E	L3	T 4 S	R 23 E	5	NO PROTECTION BUFFERS ESTABLISHED AROUND CULTURAL/PALEO SITE			
E	L3	T 4 S	R 23 E	6	NO PROTECTION BUFFERS ESTABLISHED AROUND CULTURAL/PALEO SITE			
E	L3	T 3 S	R 23 E	9	POTENTIAL HIGH T/E ANIMALS AVOID SD SUNSHINE BENCH			
E	L3	T 3 S	R 23 E	10	POTENTIAL HIGH T/E ANIMALS AVOID SD SUNSHINE BENCH			
E	L3	T 3 S	R 23 E	20	POTENTIAL HIGH T/E ANIMALS AVOID SD SUNSHINE BENCH			
E	L3	T 3 S	R 23 E	21	POTENTIAL HIGH T/E ANIMALS AVOID SD SUNSHINE BENCH			
E	L3	T 3 S	R 23 E	29	POTENTIAL HIGH T/E ANIMALS AVOID SD SUNSHINE BENCH			
E	L3	T 3 S	R 23 E	31	POTENTIAL HIGH T/E ANIMALS AVOID SD SUNSHINE BENCH			
E	L3	T 4 S	R 23 E	5	POTENTIAL HIGH T/E ANIMALS AVOID SD SUNSHINE BENCH			
E	L3	T 4 S	R 23 E	6	POTENTIAL HIGH T/E ANIMALS AVOID SD SUNSHINE BENCH			
E	L3	T 3 S	R 23 E	9	POTENTIAL HIGH T/E ANIMALS AVOID SD SUNSHINE BENCH			
E	L3	T 4 S	R 23 E	6	NO SD ACTIVITY W/I 1/2M FER. HAWK & 1/4M ACTIVE EAGLE NEST	MAR 1 - JUL 15		
E	L3	T 3 S	R 23 E	31	NO SD ACTIVITY W/I 1/2M FER. HAWK & 1/4M ACTIVE EAGLE NEST	MAR 1 - JUL 15		
E	L3	T 3 S	R 20 E	17	ONLY SHORT TERM/MITIGABLE INTRUSION W/I 1/2M L/O/S BYWAYS			
E	L3	T 3 S	R 20 E	20	ONLY SHORT TERM/MITIGABLE INTRUSION W/I 1/2M L/O/S BYWAYS			
E	L3	T 3 S	R 20 E	29	ONLY SHORT TERM/MITIGABLE INTRUSION W/I 1/2M L/O/S BYWAYS			
E	L3	T 3 S	R 20 E	33	ONLY SHORT TERM/MITIGABLE INTRUSION W/I 1/2M L/O/S BYWAYS			
E	L3	T 4 S	R 23 E	7	POTENTIAL HIGH T/E ANIMALS AVOID SURFACE DISTURBANCE SHINER			
E	L3	T 4 S	R 23 E	6	NO SD W/I 1/2M FER. HAWK & 1/4M ACTIVE EAGLE NEST	MAR 1 - JUL 15		
E	L3	T 4 S	R 23 E	7	NO SD W/I 1/2M FER. HAWK & 1/4M ACTIVE EAGLE NEST	MAR 1 - JUL 15		
E	L3	T 4 S	R 23 E	18	NO SD W/I 1/2M FER. HAWK & 1/4M ACTIVE EAGLE NEST	MAR 1 - JUL 15		
E	L3	T 4 S	R 23 E	7	NO PROTECTION BUFFERS ESTABLISHED AROUND CULTURAL/PALEO SITE			

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ISOLATED TRACTS WHICH COULD BE CONSIDERED FOR SALE UNDER ALTERNATIVE D

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ALT	PLANNING LEVEL	TWP	RGE	SEC	ALIQUOT	ACRES	RESOURCE CONFLICTS
D	L4	T 3 N	R 20 E	22	S2SE	80	
D	L4	T 1 N	R 23 E	12	LOT 4	40	
D	L4	T 1 N	R 24 E	6	LOT 1	40	
D	L4	T 1 S	R 23 E	8	SESW	40	
D	L3	T 1 S	R 23 E	23	SESW, SWSE	80	C_WSHD
D	L3	T 1 S	R 23 E	24	NWNW	40	C.WSHD
D	L3	T 1 S	R 23 E	26	LOT 1, NENW, N2NE	160	C.WSHD, LEK2
D	L3	T 1 S	R 23 E	27	E2NE	80	C.WSHD, LEK2
D	L4	T 2 S	R 25 E	1	LOT 1, 2, 5	87	
D	L3	T 4 S	R 21 E	4	SWSE	40	ARCH, DEW, PALEO
D	L3	T 4 S	R 21 E	30	LOT3, 4NENENW, NWNE, E2SW	170	ARCH. HI. H. SALT
D	L3	T 4 S	R 21 E	31	SE	160	ARCH. HI
D	L4	T 5 S	R 19 E	1	S2SWSE	20	O/S WDL
D	L4	T 5 S	R 19 E	11	NENW	40	O/S WDL
D	L4	T 5 S	R 19 E	12	E2W2, NENE, S2NE	200	O/S WDL
D	L4	T 7 S	R 19 E	1	LOT2-4, SESW, SWSE	80	O/S WDL
D	L4	T 7 S	R 20 E	15	NWNE	40	O/S WDL
D	L3	T 7 S	R 20 E	33	SESW, NESW, NWSE	120	O/S WDL, H. SALT
D	L3	T 10 S	R 11 E	33	LOT 1	1	O/S WDL
D	L3	T 10 S	R 11 E	34	LOT 1, 2	4	O/S WDL
D	L3	T 10 S	R 11 E	35	LOT 1-5, SWNE, SESW, SE	394	O/S WDL, VRM2
D	L3	T 11 S	R 11 E	8	LOT 1, 3, 4	80	O/S WDL
D	L3	T 11 S	R 11 E	9	LOT 1-5	220	O/S WDL, VRM2
D	L3	T 11 S	R 10 E	10	LOT 1-4	50	O/S WDL
D	L3	T 11 S	R 10 E	11	LOT 4	17	O/S WDL, VRM
D	L3	T 11 S	R 10 E	20	NWNE, N2NE	120	O/S WDL
D	L3	T 11 S	R 10 E	29	W2NW, SW	240	O/S WDL, VRM2
D	L3	T 11 S	R 10 E	30	NENE, S2NE, SE	280	O/S WDL, VRM2
D	L3	T 11 S	R 10 E	31	N2NE, SWNE	120	O/S WDL
D	L3	T 11 S	R 10 E	33	N2NW, SWNW	120	O/S WDL, VRM2
D	L3	T 11 S	R 10 E	34	LOT 1	36	O/S WDL, VRM2
D	L3	T 11 S	R 11 E	11	NE	160	O/S WDL, VRM2
D	L3	T 11 S	R 11 E	12	SWNW	40	O/S WDL
D	L3	T 11 S	R 12 E	19	NWNE, NENW	80	O/S WDL, VRM
D	L3	T 11 S	R 12 E	21	NWSW	40	O/S WDL
D	L3	T 11 S	R 13 E	29	SWSW	40	O/S WDL
D	L3	T 11 S	R 13 E	30	LOT 4, SESW, SESE	120	O/S WDL
D	L3	T 11 S	R 13 E	31	LOT 4, N2NE, SESW	160	O/S WDL
D	L3	T 11 S	R 13 E	33	SW, SWSE	200	O/S WDL

TOTAL ACREAGE IN ALTERNATIVE D 4039



TABLE A3-2 (Continued)  
ISOLATED TRACTS WHICH COULD BE CONSIDERED FOR SALE UNDER ALTERNATIVE E

ALT	PLANNING LEVEL	TWP	RGE	SEC	ALIQUOT	ACRES	RESOURCE CONFLICTS
E	L4	T 3 N	R 20 E	22	S2SE	80	
E	L4	T 1 N	R 23 E	12	LOT 4	40	
E	L4	T 1 N	R 24 E	6	LOT 1	40	
E	L4	T 1 S	R 23 E	8	SESW	40	
E	L3	T 1 S	R 23 E	23	SESW, SWSE	80	C_WSHD
E	L3	T 1 S	R 23 E	24	NWNW	40	C.WSHD
E	L3	T 1 S	R 23 E	26	LOT 1, NENW, N2NE	160	C.WSHD, LEK2
E	L3	T 1 S	R 23 E	27	E2NE	80	C.WSHD, LEK2
E	L4	T 2 S	R 25 E	1	LOT 1, 2, 5	87	
E	L3	T 4 S	R 21 E	4	SWSE	40	ARCH, DEW, PALEO
E	L3	T 4 S	R 21 E	30	LOT3, 4NENENW, NWNE, E2SW	170	ARCH.HI, H. SALT
E	L3	T 4 S	R 21 E	31	SE	160	ARCH.HI
E	L3	T 5 S	R 19 E	1	S2SWSE	20	O/S WDL
E	L4	T 5 S	R 19 E	11	NENW	40	O/S WDL
E	L4	T 5 S	R 19 E	12	E2W2, NENE, S2NE	200	O/S WDL
E	L3	T 5 S	R 22 E	25	NWNWNW, NWNWNW, W2SEW	65	H. SALT
E	L3	T 5 S	R 22 E	26	NE, E2NW, NWNW	280	H. SALT
E	L3	T 5 S	R 22 E	27	NENE	40	H. SALT
E	L4	T 7 S	R 19 E	1	LOT2-4, SESW, SWSE	80	O/S WDL
E	L4	T 7 S	R 20 E	15	NWNE	40	O/S WDL
E	L3	T 7 S	R 20 E	33	SEW, NESW, NWSE	120	O/S WDL, H. SALT
E	L3	T 10 S	R 11 E	33	LOT 1	1	O/S WDL
E	L3	T 10 S	R 11 E	34	LOT 1, 2	4	O/S WDL
E	L3	T 10 S	R 11 E	35	LOT 1-5, SWNE, SESW, SE	394	O/S WDL, VRM2
E	L3	T 11 S	R 11 E	8	LOT 1, 3, 4	80	O/S WDL
E	L3	T 11 S	R 11 E	9	LOT 1-5	220	O/S WDL, VRM2
E	L3	T 11 S	R 10 E	10	LOT 1-4	50	O/S WDL
E	L3	T 11 S	R 10 E	11	LOT 4	17	O/S WDL, VRM
E	L3	T 11 S	R 10 E	20	NWNE, N2NE	120	O/S WDL, VRM2
E	L3	T 11 S	R 10 E	29	W2NW, SW	240	O/S WDL, VRM2
E	L3	T 11 S	R 10 E	30	NENE, S2NE, SE	280	O/S WDL, VRM2
E	L3	T 11 S	R 10 E	31	N2NE, SWNE	120	O/S WDL
E	L3	T 11 S	R 10 E	33	N2NW, SWNW	120	O/S WDL, VRM2
E	L3	T 11 S	R 10 E	34	LOT 1	36	O/S WDL, VRM2
E	L3	T 11 S	R 11 E	11	NE	160	O/S WDL, VRM2
E	L3	T 11 S	R 11 E	12	SWNW	40	O/S WDL
E	L3	T 11 S	R 12 E	19	NWNE, NENW	80	O/S WDL, VRM
E	L3	T 11 S	R 12 E	21	NWSW	40	O/S WDL
E	L3	T 11 S	R 13 E	29	SWSW	40	O/S WDL
E	L3	T 11 S	R 13 E	30	LOT 4, SESW, SESE	120	O/S WDL
E	L3	T 11 S	R 13 E	31	LOT 4, N2NE, SESW	160	O/S WDL
E	L3	T 11 S	R 13 E	33	SW, SWSE	200	O/S WDL

TOTAL ACREAGE IN ALTERNATIVE E 4424



COMMUNITY EXPANSION TRACTS WHICH COULD BE CONSIDERED FOR SALE UNDER ALTERNATIVE D

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ALT	PLANNING LEVEL	TWP	RGE	SEC	ALIQUOT	ACRES	RESOURCE CONFLICTS
D	L3	T 3 S	R 20 E	25	LOT 1-4, NENE, NWNW, S2NW, W2SW, E2SE	453	ARCH. HI, WSHD, DEW. CR, PALEO
D	L3	T 3 S	R 20 E	26	ALL	640	ARCH. HI, WSHD, DEW. CR, PALEO
D	L3	T 3 S	R 20 E	27	ALL	640	ARCH. HI, WSHD, DEW. CR, PALEO
D	L3	T 3 S	R 20 E	33	LOT 1-7, N2, N2SE	600	ARCH, HI, DEW. CR
D	L3	T 3 S	R 20 E	34	ALL	640	ARCH. HI, DEW. CR, PALEO
D	L3	T 3 S	R 20 E	35	ALL	640	ARCH. HI, DEW. CR, PALEO
D	L3	T 3 S	R 21 E	30	LOT 1, 4, 5, 12	80	ARCH. HI, DEW. CR, PALEO, VRM2
D	L3	T 3 S	R 21 E	31	LOT 1-4, SWNE, E2W2, W2SE, SESE	480	ARCH. HI, DEW. CR, PALEO, VRM2
D	L3	T 4 S	R 21 E	6	LOT 1-7, S2NE, SENW, E2SW, NWSE	514	ARCH. HI, DEW. CR, PALEO, VRM2
D	L3	T 4 S	R 20 E	1	LOT 1-4, S2N2, SW, N2SE, SESE	600	ARCH. HI, DEW. CR, PALEO
D	L3	T 4 S	R 20 E	4	ALL	640	ARCH. HI, DEW. CR
D	L3	T 4 S	R 20 E	8	ALL	640	ARCH. HI, DEW. CR
D	L3	T 4 S	R 20 E	9	ALL	640	ARCH. HI, DEW. CR, H. SALT
D	L3	T 4 S	R 20 E	10	ALL	640	ARCH. HI, DEW. CR, H. SALT
D	L3	T 4 S	R 20 E	11	LOT 3, 4, 5, 6 E2NE, SWNW, W2SW, SE	428	ARCH. HI, DEW. CR, H. SALT
D	L3	T 4 S	R 20 E	12	NENW, W2S2, W2E2SENW, W2E2NESW, SWSW	240	ARCH. HI, DEW. CR, PALEO
D	L3	T 4 S	R 22 E	3	ALL	640	H. SALT
D	L3	T 4 S	R 22 E	4	ALL	640	H. SALT
D	L3	T 4 S	R 22 E	5	ALL	640	H. SALT
D	L3	T 4 S	R 22 E	6	ALL	640	H. SALT
D	L3	T 4 S	R 22 E	7	LOT 1, 7 NE, NENW, NESW, N2SE	440	H. SALT
D	L3	T 4 S	R 22 E	8	ALL	640	H. SALT
D	L3	T 4 S	R 22 E	9	ALL	640	H. SALT, HI. FER
D	L3	T 4 S	R 22 E	11	ALL	640	C. WSHD, H. SALT
D	L3	T 4 S	R 22 E	14	ALL	640	C. WSHD, H. SALT
D	L3	T 4 S	R 22 E	17	E2, N2NW	440	H. SALT
D	L3	T 4 S	R 22 E	21	ALL	640	H. SALT, HI. FER
D	L3	T 4 S	R 22 E	22	ALL	640	H. SALT, HI. FER
D	L3	T 4 S	R 22 E	27	ALL	640	H. SALT, HI. FER
D	L3	T 4 S	R 22 E	28	N2, N2S2	520	H. SALT, HI. FER
D	L3	T 4 S	R 22 E	34	NE, E2NW, SE	400	H. SALT, HI. FER
D	L3	T 5 S	R 22 E	1	ALL	640	C. WSHD, HI. FER, H. SALT
D	L3	T 5 S	R 22 E	3	LOT 1, 2 S2NE, N2SE, SESE	280	H. SALT, HI. FER
D	L3	T 5 S	R 22 E	10	E2NE	80	H. SALT
D	L3	T 5 S	R 22 E	11	N2, E2SW, SE	560	H. SALT, HI. FER
D	L3	T 5 S	R 22 E	12	ALL	640	H. SALT, HI. FER

TOTAL ACREAGE IN ALTERNATIVE D 19555



TABLE A3-3 (Continued)  
COMMUNITY EXPANSION TRACTS WHICH COULD BE CONSIDERED FOR SALE UNDER ALTERNATIVE E

ALT	PLANNING LEVEL	TWP	RGE	SEC	ALIQUOT	ACRES	RESOURCE CONFLICTS
E	L3	T 3 S	R 20 E	25	LOT 1-4, NENE, NWNW, S2NW, W2SW, E2SE	453	ARCH. HI, WSHD, DEW. CR, PALEO
E	L3	T 3 S	R 20 E	26	ALL	640	ARCH. HI, WSHD, DEW. CR, PALEO
E	L3	T 3 S	R 20 E	27	ALL	640	ARCH. HI, WSHD, DEW. CR, PALEO
E	L3	T 3 S	R 20 E	33	LOT 1-7, N2, N2SE	600	ARCH. HI, DEW. CR
E	L3	T 3 S	R 20 E	34	ALL	640	ARCH. HI, DEW. CR, PALEO
E	L3	T 3 S	R 20 E	35	ALL	640	ARCH. HI, DEW. CR, PALEO
E	L3	T 3 S	R 21 E	30	LOT 1, 4, 5, 12	80	ARCH. HI, DEW. CR, PALEO, VRM2
E	L3	T 3 S	R 21 E	31	LOT 1-4, SWNE, E2W2, W2SE, SESE	480	ARCH. HI, DEW. CR, PALEO, VRM2
E	L3	T 4 S	R 21 E	6	LOT 1-7, S2NE, SENW, E2SW, NWSE	514	ARCH. HI, DEW. CR, PALEO, VRM2
E	L3	T 4 S	R 20 E	1	LOT 1-4, S2N2, SW, N2SE, SESE	600	ARCH. HI, DEW. CR, PALEO
E	L3	T 4 S	R 20 E	4	ALL	640	ARCH. HI, DEW. CR
E	L3	T 4 S	R 20 E	8	ALL	640	ARCH. HI, DEW. CR
E	L3	T 4 S	R 20 E	9	ALL	640	ARCH. HI, DEW. CR, H. SALT
E	L3	T 4 S	R 20 E	10	ALL	640	ARCH. HI, DEW. CR, H. SALT
E	L3	T 4 S	R 20 E	11	LOT 3, 4, 5, 6 E2NE, SWNW, W2SW, SE	428	ARCH. HI, DEW. CR, H. SALT
E	L3	T 4 S	R 20 E	12	NENW, W2S2, W2E2SE, W2E2NESW, SWSW	240	ARCH. HI, DEW. CR, PALEO
E	L3	T 4 S	R 22 E	3	ALL	640	H. SALT
E	L3	T 4 S	R 22 E	4	ALL	640	H. SALT
E	L3	T 4 S	R 22 E	5	ALL	640	H. SALT
E	L3	T 4 S	R 22 E	6	ALL	640	H. SALT
E	L3	T 4 S	R 22 E	7	LOT 1, 7 NE, NENW, NESW, N2SE	440	H. SALT
E	L3	T 4 S	R 22 E	8	ALL	640	H. SALT
E	L3	T 4 S	R 22 E	9	ALL	640	H. SALT, HI. FER
E	L3	T 4 S	R 22 E	11	ALL	640	C. WSHD, H. SALT
E	L3	T 4 S	R 22 E	14	ALL	640	C. WSHD, H. SALT
E	L3	T 4 S	R 22 E	17	E2, N2NW	440	H. SALT
E	L3	T 4 S	R 22 E	21	ALL	640	H. SALT, HI. FER
E	L3	T 4 S	R 22 E	22	ALL	640	H. SALT, HI. FER
E	L3	T 4 S	R 22 E	27	ALL	640	H. SALT, HI. FER
E	L3	T 4 S	R 22 E	28	N2, N2S2	520	H. SALT, HI. FER
E	L3	T 4 S	R 22 E	34	NE, E2NW, SE	400	H. SALT, HI. FER
E	L3	T 5 S	R 22 E	1	ALL	640	C. WSHD, HI. FER, H. SALT
E	L3	T 5 S	R 22 E	3	LOT 1, 2 S2NE, N2SE, SESE	280	H. SALT, HI. FER
E	L3	T 5 S	R 22 E	10	E2NE	80	H. SALT
E	L3	T 5 S	R 22 E	11	N2, E2SW, SE	560	H. SALT, HI. FER
E	L3	T 5 S	R 22 E	12	ALL	640	H. SALT, HI. FER

TOTAL ACREAGE IN ALTERNATIVE E      19555



## APPENDIX 4

# MINERALS PROGRAM MANAGEMENT

### CONTENTS:

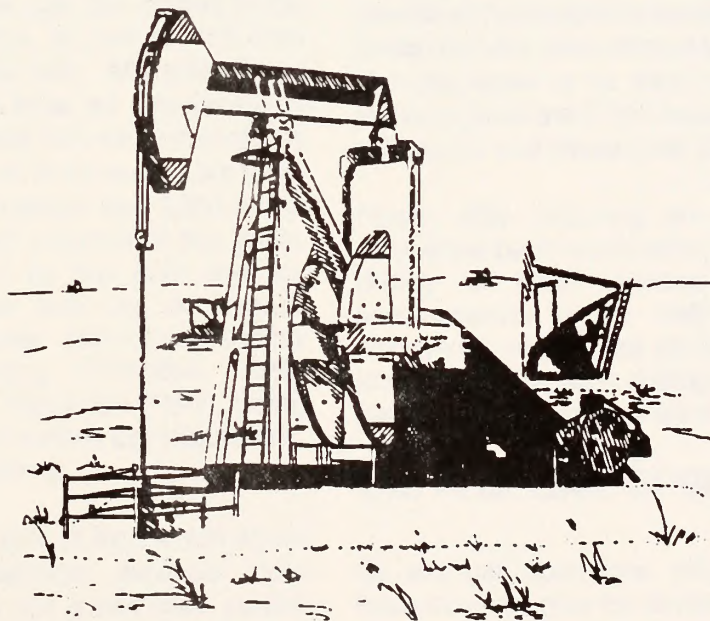
*Competitive Oil and Gas Leasing*

*Oil and Gas Operations*

*Occurrence of Oil and Gas Resources*

*Reasonable Foreseeable Development*

*Existing Leasing Stipulations and Guidance*





# THE HISTORY OF THE CITY OF BOSTON

BY  
JOHN H. COOPER

The history of the city of Boston is a story of growth and development. From its early days as a small fishing village, it has become one of the most important cities in the United States. The city's location on a natural harbor made it a center of trade and commerce. Its strategic position made it a key city in the defense of the continent. Its rich cultural life and its commitment to education and innovation have made it a city of world renown.



The city of Boston has a long and rich history. It was founded in 1630 by a group of Puritan settlers. The city grew rapidly in the 17th and 18th centuries, becoming a major center of trade and commerce. It played a key role in the American Revolution and the Civil War. Today, Boston is a city of world renown, known for its rich cultural life, its commitment to education and innovation, and its beautiful harbor.



## COMPETITIVE OIL AND GAS LEASING

The exploration for and the development of oil and gas resources is commonly accomplished through the following stages: geophysical exploration, competitive leasing, exploration or production drilling, and development. Oil and gas operations used in oil and gas exploration or production are discussed in the next section of this Appendix.

The first stage of exploration involves the use of geophysical methods to locate accumulations of oil and gas in the subsurface. Common geophysical methods used in locating hydrocarbon traps include seismic, gravity, and magnetic methods. Surface geophysical surveys, such as seismic, gravity, or magnetic surveys, may be conducted over leased or unleased Federal lands when and where permissible. Companies, prior to initiating any geophysical exploration activities on BLM administered lands, are required to submit a notice of intent to conduct such operations to the BLM Vernal District Office.

The second stage of exploration involves acquiring an oil and gas lease from the BLM. The Federal Onshore Oil and Gas Leasing Reform Act of 1987 (FOOGLRA) defines the requirements for all oil and gas lease sales. FOOGLRA requires all lands eligible for leasing to first be offered to the public through a competitive oil and gas lease sale. The BLM's Utah State Office holds such oil and gas lease sales quarterly. The tracts of land available in a quarterly oil and gas lease sale are posted in the BLM's Vernal District BLM Office, as well as, the Utah State Office 45 days prior to the sale. All tracts of land offered in the oil and gas lease sales are determined by the BLM Utah State Office. Tracts may be nominated by the public for. The tracts of land to be leased are to be as compact as possible, but no larger than 2,560 acres. Competitive leases are valid for a period of five years. Lease stipulations are defined by the BLM and are documented in the appropriate land use documents. Examples of the principle lease stipulations (Rocky Mountain Regional Coordinating Committee, 1989) include: no surface occupancy stipulation (NSO), timing limitation stipulations, controlled surface use stipulations, or special administration stipulations.

Following a lease sale, those tracts of land which were offered, but not leased become available non-competitively over the counter for a two year period. Such non-competitive leases, once acquired, are valid for a ten year period. Those lands which are not leased after this two year period shall again become available for oil and gas leasing through the quarterly competitive oil and gas leasing procedure.

A different leasing process occurs for oil and gas resources located on lands rich in tar sands. A tar sand deposit is defined as one in which the hydrocarbon is highly viscous or immobile (viscosity > 10,000 centipoise) and the API gravity is less than 10 (Kuuskraa et al., 1987). Hydrocarbons from tar sands are not recoverable by conventional means and are recovered either using conventional mining methods or steam injection methods. At the request of the U.S. Congress in the early 1980s, the Minerals Management Service designated rich tar sand areas in the United States as Special Tar Sand Areas (STSAs). The following four STSAs occur in the Diamond Mountain Resource Area: Asphalt Ridge/Whiterocks STSA, Pariette STSA, Argyle/Willow Creek STSA, and Sunnyside STSA (north portion).

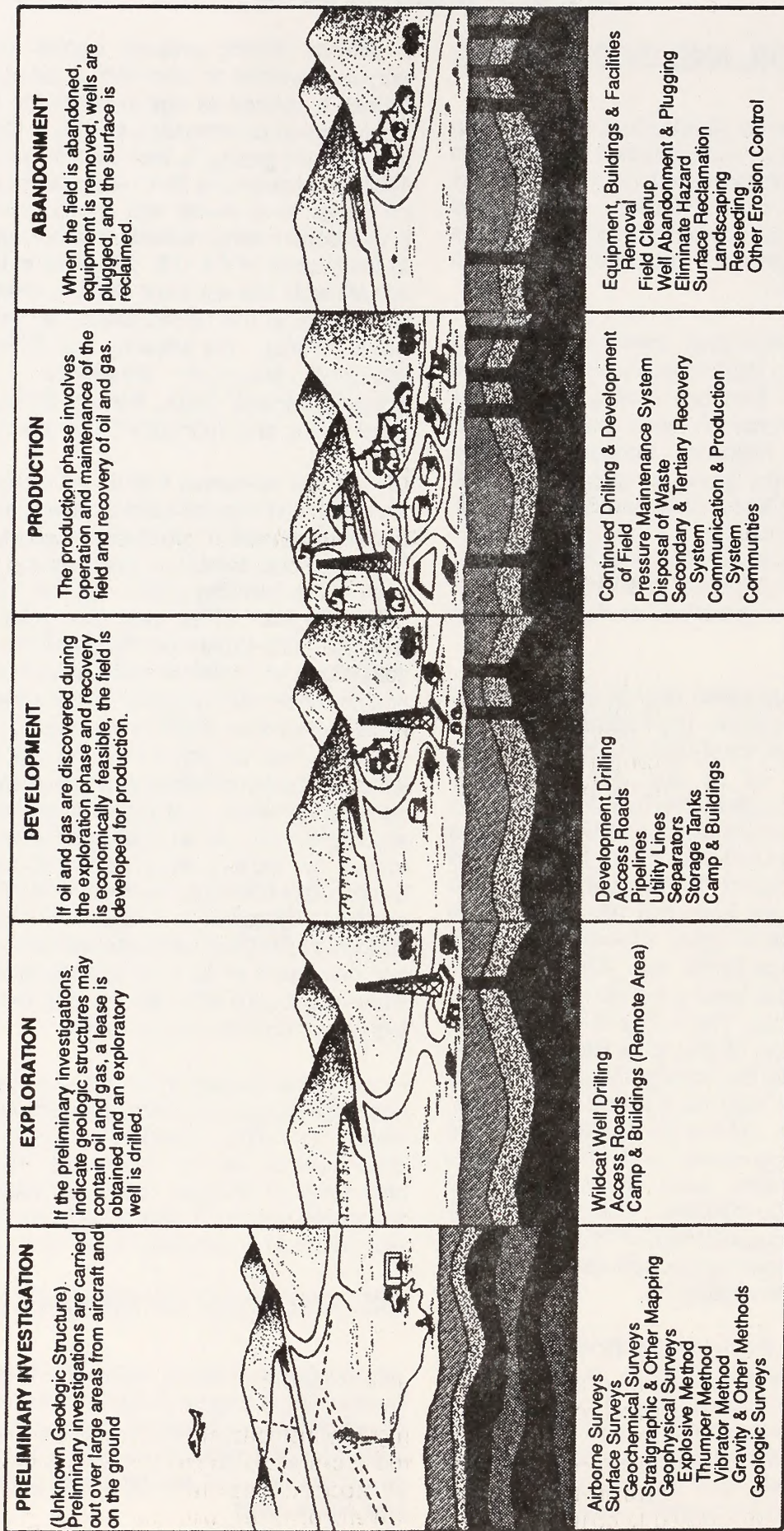
Oil and gas resources that lie within Special Tar Sand Areas (STSAs) must be leased following the requirements of the Combined Hydrocarbon Leasing Act of 1981. Presently, one combined hydrocarbon lease exists in each of the following STSAs: Asphalt Ridge/Whiterocks STSA, Pariette STSA, and Sunnyside STSA (North portion). The Combined Hydrocarbon Leasing Act of 1981 allows for combined rights for both tar sands and oil and gas under the conditions of the same lease. The Act basically has three major provisions: 1) the term "oil" in the Act refers not only to oil and gas, but also to tar sands, 2) the Act creates a new lease called a "combined hydrocarbon lease", and 3) the Act allowed for a valid tar sand mining claim or an oil and gas lease within an STSA to be converted to a combined hydrocarbon lease for up to two years following the enactment of the Act. All the combined hydrocarbon leases in the Diamond Mountain Resource have been formed by the conversion of valid oil and gas leases or tar sand mining claims. Oil and gas leases outside the STSA issued after 1981 carry rights to explore for and develop tar sands.

Finally, after acquiring an oil and gas lease, most companies begin exploration, production or development drilling to either explore for new oil and gas accumulations or to define the limits of already discovered oil and gas pools. Oil and gas operations associated with such drilling and production of oil and gas resources is discussed in the next section.

## OIL AND GAS OPERATIONS

Oil and gas operations within the Diamond Mountain Resource Area may be divided into four different phases: (1) preliminary investigations/geophysical exploration, (2) exploration and development drilling, (3) production of the oil and gas resource, and (4) plugging and abandonment (see Figure A4-1).





**FIGURE A4-1**  
**PHASES OF OIL AND GAS OPERATIONS**  
(SOURCE: BLM, 1988b)



The minimum requirements for the permitting, drilling, and production of oil and gas wells on Federal mineral estate administered by the Bureau of Land Management (BLM) are outlined in Onshore Oil and Gas Orders (OGOO) issued by the BLM.

The BLM, in conjunction with the U.S. Forest Service, outlines oil and gas surface operating standards in the following brochure: "Oil and Gas Surface Operating Standards for Oil and Gas Exploration and Development, (1989)".

An "Operator Packet" is available to all oil and gas operators in the Vernal District. The packet contains information and forms needed to complete submissions for permitting, drilling, completion, production, and/or plugging of an oil or gas well. Also, included are copies of the Onshore Oil and Gas Orders and BLM/USFS oil and gas operating brochure.

## **GEOPHYSICAL EXPLORATION AND OPERATIONS PHASE**

Upon approval of a permit, geophysical operations may be conducted by bonded geophysical operators on BLM surface lands regardless of whether the mineral estate is leased or unleased. Prior to conducting any operations on BLM administered surface estate, the operator must contact the BLM.

A Notice to conduct geophysical operations on surface lands administered by the BLM in the Diamond Mountain Resource Area is submitted to the Resource Area Office. The minimization of any adverse impacts to the lands administered by the BLM is accomplished by close cooperation and coordination between the geophysical operator and the BLM.

A Notice of intent to conduct oil and gas exploration operations is required to be filed by an operator for all geophysical activities on surface lands administered by the BLM. The Notice of Intent should include, but is not limited to: maps showing geophysical seismic line locations, access routes, anticipated surface damages, proposed time frames for the operations, and ancillary facilities. The geophysical operator must be bonded.

Special clearances for cultural resources, threatened and endangered species, or other critical environmental concerns are required when determined to be necessary by the BLM prior to initiating geophysical activities.

Written approval for the proposed operations is required from the BLM prior to any surface disturbing activities. The operator is additionally required to comply with any

written instructions and orders given by the BLM Authorized Officer at prework field conferences, site inspections, and subsequent field inspections. Periodic checks during and upon completion of the operation are conducted to ensure the compliance with the terms of the approved Notice of Intent.

A Notice of completion of oil and gas exploration operations is required upon completion of the geophysical operations following any required rehabilitation of surface lands.

State or local requirements may also exist for geophysical operations. It is the operator's responsibility to be aware of all such requirements.

## **TYPES OF GEOPHYSICAL EXPLORATION**

There are numerous types of geophysical exploration surveys. Some typical surveys are: seismic reflection, seismic refraction, gravity, magnetic, and electrical surveys. Generally, the most common types of geophysical surveys run are seismic reflection and gravity methods.

### **Seismic Methods (Reflection)**

This method, the most widely used geophysical survey, is used to discover the geologic structure (faults, folds, etc.) of subsurface formations. Many of these geologic structures may be associated with oil and/or gas accumulations. The reflection method best provides a structural picture of the subsurface geology comparable to that of drilling numerous, closely spaced wells.

The seismic reflection method begins by measuring the times required for seismic waves (or pulses), generated in the earth by a near-surface explosion of dynamite, mechanical impact, or vibration, to return to the surface after reflection from interfaces between rock formations having different properties. The reflections are recorded by detection instruments (geophones) responsive to ground motion. The geophones are laid along the ground, usually in a straight line, at distances from the shot point from which the seismic wave was generated. The geophones are connected by wiring to a recording truck where the seismic data is stored digitally on magnetic tape for later processing.

### **Gravity Methods**

In gravity methods, minute variations in the pull of gravity from rocks within the first few miles of the earth's surface are recorded/measured. Different types of rocks have different densities with the denser rocks having the



greater gravitational attraction. Such minute variations are measured by an instrument called a gravimeter. For a surface gravity survey, numerous measurements are taken along a straight line with the gravimeter. The gravimeter may be transported by backpack, helicopter, or off highway vehicle (OHV). Gravity surveys may also be conducted from the air. Surface disturbance associated with gravity methods is minimal. Disturbance may occur if OHV use is permitted for the purpose of conducting the gravity survey.

The Reasonable Foreseeable Development section of this Appendix outlines the amount of geophysical activity in the Diamond Mountain Resource Area over the next 15 years.

## **DRILLING PHASE**

### **Permitting Process**

An operator must have an approval from the BLM prior to drilling a well on Federal mineral estate regardless of the surface ownership (See Onshore Oil & Gas Order #1 "Approval of Operations on Onshore Federal and Indian Oil and Gas Leases). The BLM also approves wells drilled on leased Indian tribal or allotted mineral land, except Osage, but does not issue the Indian leases. It is the responsibility of the lessee or operator to obtain an agreement for access and damages with the owner of privately owned surface lands.

Upon acquisition of a Federal oil and gas lease, the lessee or operator selects a drill site based on several factors which may include: spacing requirements, subsurface geology, geophysics, topography, and/or economic factors. To the extent permitted by the targeted geologic formation, the location selected (for the well site, tank battery, pits, pumping stations, etc.) should be planned so as to minimize any adverse impacts, if possible, to other surface resources. Design and construction techniques and other practices should be employed that would minimize the surface disturbance and subsequent effects on other resources.

After a drill site has been selected, two procedural options are available to the lessee or operator for securing the approval to drill: (1) Notice of Staking (NOS) or (2) Application for Permit to Drill (APD).

#### **Notice of Staking (NOS)**

Prior to filing a complete Application for Permit to Drill (APD), the lessee or operator may file a NOS with the authorized officer of the BLM. The information within the NOS will aid in identifying any need for associated rights-

of-way and special use permits. The NOS system, if properly coordinated from the beginning, may expedite a final permit approval. Upon receipt of the NOS, the BLM has 15 days to schedule an on-site predrill conference. After the onsite predrill conference, the operator must submit an APD that contains the surface mitigation measures discussed and accepted at the predrill conference. Upon receipt of the APD, the BLM is mandated by Onshore Oil & Gas Order #1 and the Federal regulations to process the APD within 10 days.

#### **Application for Permit to Drill (APD)**

Whether or not an NOS is filed, the lessee or operator must file an APD. Within 7 days of receipt of the APD, the BLM shall advise the lessee or operator of its receipt and its completeness. If an operator uses the APD option, the BLM is mandated by Onshore Oil & Gas Order #1 and the Federal regulations to process the APD within 30 days of receipt of the APD provided that the APD is technically and administratively complete.

An APD consists of two main parts: (1) a 13-point surface plan which outlines all proposed surface disturbance and use, and (2) an 8-point drilling plan which outlines the proposed drilling program. Both the 13- and 8-point plans are reviewed by BLM specialists for their adequacy. The 13-point surface plan is reviewed by BLM resource specialists, while the 8-point plan is reviewed by BLM petroleum engineers, geologists, and hydrologists for technical adequacy.

Special clearances for cultural resources, threatened and endangered species, or other critical environmental concerns are required when determined to be necessary by the BLM.

An onsite predrill conference is scheduled and conducted by the appropriate BLM office within 15 days of receipt of the APD. The purpose of the onsite conference is to identify any problems and potential environmental impacts associated with the proposal by the lessee or operator and acceptable mitigation measures.

Prior to the predrill conference, the well location and proposed access roads to be constructed should be staked and flagged. Staking includes the well location, two 200 foot directional reference stakes, the exterior dimensions of the drill pad, reserve pit, other areas of surface disturbance, cuts and fills, and centerline flagging of new roads with road stakes being visible from one to the next.

Access roads and pipelines located on BLM managed surface outside of the leasehold, unitized, or communitized area require a right-of-way. The NOS or



APD is acceptable as a right-of-way application for these offlease facilities if the application details the entire development proposal.

Bonding is required for oil and gas lease operations in order to protect the United States government against any losses associated with a failure to meet royalty obligations, abandon boreholes, and/or surface restoration and cleanup of abandoned boreholes.

## **Drilling Procedures**

### **Surface Procedures**

Upon receipt of an approved APD from the BLM, the lessee or operator may begin construction activities, such as, construction of the access road, well site (drilling pad and mud pits) and other authorized surface actions. All construction must conform to the surface use plan of operations in the APD. Typically, the construction phase can last up to four days in length.

Minimum guidelines have been developed for the construction of access roads and well sites ("Oil and Gas Surface Operating Standards for Oil and Gas Exploration and Development", 1989; Onshore Oil and Gas Order #1: "Approval of Operations on Onshore Federal and Indian Oil and Gas Leases").

If the well site is carefully chosen in relation to pre-existing roads and trails, a minimum amount of access road construction would be necessary. The shortest feasible route, in conjunction with existing roads and trails, is usually chosen to minimize construction costs, as well as, hauling distances. If authorized in the APD, the lessee or operator may improve existing roads and/or trails (with dozers, scrapers, and graders), as well as, install culverts or cattle guards during construction of the access road.

Following the construction of the access road, the construction of the wellsite usually begins. The construction of the well site includes the construction of the well pad and drilling mud reserve pits. Generally, all the surface soil materials are removed from the entire cut and fill area and stockpiled. The area of the well pad that supports the drilling rig substructure should be level and capable of supporting the rig. The drilling rig, tanks, heater-treater, or other exploration/production equipment should not be placed on uncompacted fill material.

The drilling mud reserve pits are used for the drilling mud, cuttings, and the storage or disposal of produced water which are associated with drilling and completion operations. It may be necessary to line the drilling mud

reserve pits to prevent the contamination of the surface and ground water. Bentonite, plastic, or other types of synthetic liners are most commonly used as lining material. In some environmentally sensitive areas, a self-contained drilling mud circulation system may be required. The fencing of reserve pits is required to prevent access by persons, wildlife, or livestock once drilling operation have ceased.

Water used during drilling operations is either hauled or piped from rivers, streams, reservoirs or private sources to the storage tanks or drilling mud reserve pits. Less commonly, water wells are drilled adjacent to the oil and gas exploratory or development well.

Drilling commences upon completion of the construction of the access road and drill site. Drilling and abandonment operations of dry holes on Federal and Indian lands must meet the minimum national standards devised by the BLM in Onshore Oil & Gas Order #2: "Onshore Oil and Gas Operations; Federal and Indian Oil and Gas Leases; Drilling Operations".

Drilling operations are continuous operations, 24 hours a day, 7 days a week. Crews working onsite usually work either 8 or 12 hour shifts. The time needed for drilling depends upon the depth of the well. For shallow wells in the Myton Bench region, a well may be drilled in 8 to 10 days, while a deep well drilled in the Altamont area could take up to 60 days to drill. During drilling operations, the drill hole, or wellbore, must be stabilized to prevent contamination to fresh water aquifers, lost circulation, and hole sloughing. This is accomplished through the use of an appropriate drilling mud and casing strings (or pipe). Typically, two or more strings of casing are set in the wellbore, sometimes starting with conductor pipe. Thereafter, successively smaller diameter casing is set in the wellbore. The casing must be designed to meet the physical demands imposed upon the pipe by the formation.

During the course of the drilling operations, the BLM Petroleum Engineering Technicians (PETs) will conduct inspections of the drilling rig and general operations to ensure compliance with the Federal Onshore Orders, BLM policy guidelines, and approved plans of operation in the approved APD.

When the total depth of the drill hole is reached, geophysical logs are run to determine primarily: (1) the depth to potential productive horizons, (2) oil and/or gas indications from the logs, (3) the presence of water and/or other valuable minerals which are required by the BLM to be isolated and protected, and (4) the physical characteristics of the drilled hole (shape). The importance of obtaining good quality logs cannot be overstated. Such



logs are important, not only in successfully completing a well, but also in successfully plugging and abandoning a well. After running logs, a lessee or operator may run tests, such as drill stem tests, on the productive formation objective to determine whether or not it has the potential to yield commercial quantities of oil and/or gas. If oil and/or gas is found in commercial quantities, the well is completed either as an oil or gas "producing well".

## PRODUCTION PHASE

### Primary Recovery

Once a well has been determined to be capable of a "producing oil or gas well", it may be prepared to be able to produce in several different ways. The most common type of completion consists of setting a "long or production string" of casing through the productive formation and cementing it into place. A perforating gun then fires "shots" creating perforations through the casing and cement sheath into the productive formation.

Wells may also be treated to improve the recovery of oil and/or gas resources from the reservoir. Such processes are known as well stimulation treatments and include fracturing, acidizing, and other chemical treatments.

Fracturing is a process that uses high pressure pumps to develop fluid pressure at the perforations in the well sufficient enough to actually break down or separate the rock formation. This makes it possible to introduce fluids carrying various materials to keep open newly created fractures. Typically, these materials are either sand granules or glass beads.

Acidizing is a process of cleaning the formation face to better allow fluids to enter into the wellbore. A lessee or operator does not need authorization to conduct routine well stimulation treatments on an active Federal oil and gas lease.

Each oil or gas well has a wellhead (the equipment used to maintain control of the well at the surface). Wells expected to have high pressures are equipped with a group of special valves which control the flow of oil and/or gas from the well. Because of its shape, it is called a Christmas tree. Low pressure wells are equipped with less elaborate types of wellheads.

Oil producing wells normally require the following equipment: pumpjack or other type of lifting device, separators, stock tanks, crude oil sales lines, heat treating facilities, produced water facilities, and/or emergency pit.

Gas producing wells normally require the following equipment: separator (if oil or condensate is recovered with the produced gas), meter house, and gathering line or marketing (sales) line to transport the gas to their markets. In some cases a compressor station is required so as to be able to compress the produced gas into a pipeline.

Any off-lease production equipment located on BLM managed surface estate would require a right-of-way. An APD is acceptable as a right-of-way application for offlease production equipment or facilities.

Special problems that may occur during the production of oil and/or gas resources include the following: corrosion, water disposal, paraffin/wax problems, and sour crude.

### Enhanced or Secondary Recovery

While gas recovery is fairly high from gas reservoirs (85-90%), significant quantities of oil may remain in the producing formation in oil reservoirs once primary recovery is complete.

Enhanced or secondary recovery describes all efforts to increase the production of oil and/or gas from a reservoir and includes such techniques as water injection, gas injection, and thermal processes. Typically these types of operations are associated with secondary recovery units formed and approved prior to initiating any enhanced or secondary recovery operations or through the normal development of an exploration unit.

- \* Water injection is the most widely applied enhanced recovery technique and involves the injection of water into the oil producing reservoir. Based on reservoir engineering studies, wells are chosen as injection wells, or if necessary drilled. Water injected into these wells pushes any remaining oil to the producing wells.
- \* Gas injection has been an important part of oil producing operations. Gas injection involves returning part or all of the produced gas back into the oil producing reservoir.
- \* Thermal recovery techniques involve the injection of heated water or steam into the oil producing reservoir. The processes are designed to improve the flow characteristics of the oil.



## **PLUGGING AND ABANDONMENT PHASE**

When a well is no longer capable of producing oil and/or gas resources in commercial quantities the well is normally plugged and abandoned. Approval needs to be obtained prior to the commencement of abandonment. All formations bearing usable-quality water (total dissolved solids < 10,000 parts per liter), oil, gas, and/or other prospectively valuable deposits of minerals are isolated and/or protected. Protection means that cement plugs are placed in the wellbore at least 50 feet below the bottom to 50 feet above the top of the zone to be isolated and/or protected. Such plugs are designed to (1) prevent fluid migration between zones, (2) isolate oil and/or gas producing horizons, and (3) protect other mineral resources from damage. The plugging and abandonment operations normally take several days to accomplish by the lessee or operator.

Following the plugging of the well, the lessee or operator reclaims the surface as specified by the APD or surface owner's agreement. Upon completion of all lease-hold abandonment and reclamation activities, the operator is to notify the authorized officer with the BLM.

## **ASSOCIATED HAZARDS/IMPACTS**

Hazards imposed by the "drilling environment" or impacts which occur to the environment may occur anytime during the drilling phase, the production phase, or the plugging and abandonment phase of a well in the DMRA. Such impacts to the environment may include, but are not limited to: 1) contamination of groundwater or subsurface mineral resources; 2) contamination of air resources by atmospheric venting or flaring of natural gases; or 3) contamination of surface and/or subsurface resources due to a well blowout.

The 8-point plan (discussed under Application for Permit to Drill) requires an operator to identify any expected abnormal pressures, temperatures, or potential hazards, such as hydrogen sulphide, expected to be encountered during drilling along with contingency plans for mitigating such identified hazards. Even if not identified in a submitted APD, BLM petroleum engineers, geologists, and hydrologists review the proposal for any anticipated hazards based upon data collected from other wells drilled in the vicinity. If BLM specialists feel that one or more of the hazards identified above may be encountered while drilling the well, appropriate mitigating measures are developed and proposed to be incorporated as conditions of approval.

## **Groundwater and Subsurface Mineral Contamination**

Groundwater and subsurface mineral resource contamination may occur by the introduction of drilling fluids, produced water (saline), or oil and gas under the following conditions:

### **Loss of Circulation**

Most wells are drilled with a drilling fluid (mainly bentonitic clay mixed with water) in order to: cool the bit, reduce the drag of the drill pipe on the sides of the bore hole, seal off any porous zones in the formation, aid in preventing an uncontrolled release of formation fluids, and carry the cuttings to the surface. Drilling muds may not contain any hazardous materials.

Should fractures or caverns be encountered in formations while drilling, it is possible that all or part of the drilling fluids in the wellbore may be lost into such permeable zones. The operator generally must halt the loss of the drilling fluids (usually by the introduction of lost circulation materials, such as walnut hulls) and restore circulation before drilling is resumed. Although hydrologic characteristics vary from site to site, the impacts will depend on such factors as hydraulic gradients in the aquifer, grain size of the aquifer, and volume of flow of drilling fluids. Generally, impacts will be minor.

### **Fracturing/Rupturing of Casing Strings and Production Tubing**

Fresh groundwater may be subject to contamination by hydrocarbons and produced water if a discovery is made that both the 9 5/8 inch, 5 1/2 inch diameter steel casing strings, and enclosing cement have ruptured at some point in the aquifer. The probability of such an occurrence is believed to be very remote and not pose significant impacts to the environment. However, the possibility of leakage of hydrocarbons from a producing well or under a production test cannot be totally ruled out and the impact of such an occurrence could be significant.

### **Cementing or Casing Inadequate**

If casing strings are not set and cemented properly to protect groundwater or subsurface mineral resources, any one of the following may occur:

- \* contamination of groundwater resources
- \* contamination of subsurface mineral resources
- \* fluid migration between zones
- \* producing zones would not be isolated



Casing and cementing programs are outlined to the BLM in Applications for Permit to Drill (APD). BLM petroleum engineers, geologists, and hydrologists review all such cementing and casing programs for their adequacy to protect groundwater aquifers and subsurface mineral resources. Should it come to the attention of BLM that casing strings and cementing programs are inadequate to protect and/or isolate either the groundwater aquifers or mineral resources, BLM will require the operator to correct the situation through conditions of approval.

Similarly, upon depletion of a producing well, the operator submits a proposed plugging and abandonment procedure to BLM for approval. BLM petroleum engineers, geologists, and hydrologists review the proposal for its adequacy to protect and/or isolate groundwater aquifers and subsurface mineral resources. Should it come to the attention of BLM that the proposal is inadequate, BLM will require the operator to correct the situation through conditions of approval.

#### **Groundwater Contamination Due to Underground Injection/Disposal**

A producing well in the DMRA typically produces gas, oil, and water. The water associated with the production of hydrocarbons is typically saline. Such waters must be disposed of either in on-site disposal pits, state approved surface disposal pits, or underground disposal wells. In areas where secondary recovery processes are in place, the produced water is injected into the formation it came from.

Groundwater contamination may occur by the introduction of saline or produced water during injection of produced saline water into a designated formation. The potential for inadvertent leakage from the injection well into fresh groundwater aquifers through a break in the casing is a possibility; however, unlikely. The leakage of small quantities of saline water would be quickly diluted under normal hydrodynamic conditions and impacts would be minor and short to long term. The leakage of large quantities of saline water could have significant negative impacts to fresh groundwater aquifers. If such a situation should be discovered, the BLM would work with the State of Utah as well as the Environmental Protection Agency to correct the situation to minimize the impacts to the environment.

#### **Blowouts**

Over the past 10 years, there have been 2 blowouts from wells adjacent to the Federal mineral estate within the DMRA. One occurred during drilling operations and the other occurred several years after the well had been

placed on production and from another geologic horizon. Studies were completed in these areas and mitigating measures were developed to be incorporated with approved APD's.

Should a well blow out while drilling, this could either be a subsurface or surface blowout. Impacts associated with a subsurface blowout would be possible contamination of fresh water aquifers and/or other mineral resources dependent upon the depth at which the blowout would occur. Impacts from a surface blowout would vary, but could possibly impact air quality, perennial water, property, or any other site specific surface resources.

Given the number of blowouts within or adjacent to the resource area within the past 10 years, it is determined that the impacts due to blowouts would be minimal or non-existent throughout the life of this plan.

#### **Venting/Flaring**

During initial well evaluation testing, the operator has the authority to vent or flare gas for a period not exceeding 30 days or 50 MMCF, whichever occurs first, unless a longer test period has been approved by the authorized officer. To continue venting or flaring gas from oil wells, the operator must submit an application for approval to vent or flare gas beyond the initial testing period. This application must be supported with engineering, geologic, and economic data which shows that the gas is uneconomic to gather and would result in the premature abandonment of recoverable oil reserves. This application could also be in the form of a plan that would eliminate the venting or flaring of gas within 1 year from the date of application.

For gas wells, venting or flaring may not occur except during initial well tests, well purging or evaluation tests, routine or special well tests, emergencies, or in cases of unavoidably lost production.

Impacts from venting or flaring the produced natural gas would be to air quality and, in the event of flaring, possibly being able to see the flare at night. In most cases, the wells are not flared except where large amounts of gas are being produced during well tests. Therefore, it is determined that the impacts due to flaring at night is minimal or non-existent throughout the life of this plan. The impact to air quality will be monitored by the State of Utah throughout the life of this plan.



## **OCCURRENCE OF OIL AND GAS RESOURCES**

The occurrence of oil and gas resources in the Diamond Mountain Resource Area may be described by:

1. The presence of reservoir rocks, oil and gas traps, and source rocks and
2. The grouping of fields and prospects into "plays" having similar reservoirs, traps, source rocks, and geologic histories.

Known oil and gas fields which occur in the DMRA are outlined in Table A4-1.

### **RESERVOIR ROCKS, OIL & GAS TRAPS, AND SOURCE ROCKS**

Elements which are common to all oil and gas fields are the presence of reservoir rocks, oil/gas traps, and source rocks.

A reservoir rock is any porous and permeable rock that yields oil and gas (Bates and Jackson, 1988). Sandstone, limestone, and dolomite are the most common reservoir rocks. The types of reservoir rocks occurring in the Diamond Mountain Resource Area as summarized by Clem (1985) and are shown in Table A4-2. The stratigraphic position of both reservoir rocks and source rocks is illustrated in Figure 3-1.

A second element common to oil and gas accumulations is the trap. An oil and gas trap is any barrier to the movement of oil or gas allowing either or both to accumulate. The elements of a hydrocarbon trap include a reservoir rock and an overlying or impermeable roof rock through which fluids can not easily migrate. There are three basic types of oil and gas traps: structural traps,

stratigraphic traps, and combination traps (Bates and Jackson, 1988). Structural traps are traps formed by folding, faulting, or other structural deformation of rock layers. Stratigraphic traps are oil and gas traps resulting from lateral changes in porosity and permeability in reservoir rocks, rather than structural deformation. Combination traps are oil and gas traps that have both structural and stratigraphic elements.

The types of oil and gas traps identified in the Diamond Mountain Resource Area are summarized by Clem (1985) and are listed in Table A4-2.

Finally, the last element common to oil and gas accumulations is the source rock. Source rocks are sedimentary rocks (such as shales, limestones or dolomites) containing organic material which were transformed over time (by heat and pressure) to oil and gas (Bates and Johnson 1988). Source rocks generate oil and gas resources. The primary source rocks within the Diamond Mountain Resource Area are described by Spencer and Wilson (1988) and are listed in Table A4-2.

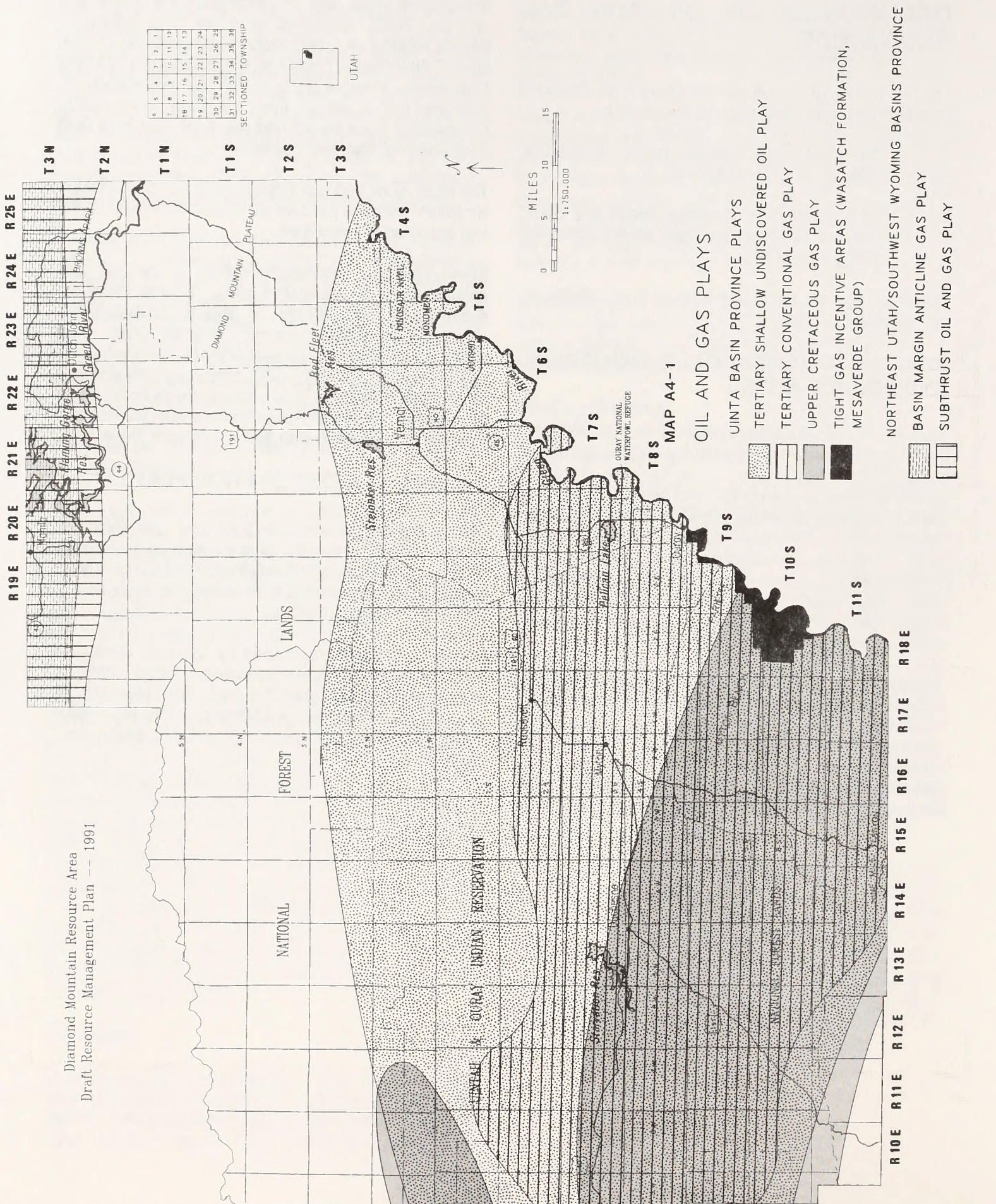
### **OIL AND GAS EXPLORATION PLAYS**

Discovered and undiscovered oil and gas fields are grouped into "plays". A play is a group of geologically related known oil and/or gas fields or undiscovered fields and/or prospects having similar reservoirs, traps, source rocks, and geologic histories.

Oil and gas plays are defined by the U.S. Geological Survey for the Uinta Basin (Spencer and Wilson, 1988) for Southwestern Wyoming Basins (Law, 1988) (see Map A4-1). These defined plays represent only the major plays being pursued in the Diamond Mountain Resource Area.



Diamond Mountain Resource Area  
Draft Resource Management Plan -- 1991



6	5	4	3	2	1
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36

SECTIONED TOWNSHIP



UTAH



OIL AND GAS PLAYS

- UNTA BASIN PROVINCE PLAYS
  - TERTIARY SHALLOW UNDISCOVERED OIL PLAY
  - TERTIARY CONVENTIONAL GAS PLAY
  - UPPER CRETACEOUS GAS PLAY
- TIGHT GAS INCENTIVE AREAS (WASATCH FORMATION, MESAVERDE GROUP)
- NORTHEAST UTAH/SOUTHWEST WYOMING BASINS PROVINCE
  - BASIN MARGIN ANTICLINE GAS PLAY
  - SUBTHRUST OIL AND GAS PLAY

MAP A4-1



**TABLE A4-1:  
TOTAL OIL AND GAS FIELD PRODUCTION -DIAMOND MOUNTAIN RESOURCE AREA**

FIELD DESIGNATION	LOCATION	COUNTY	1989 PRODUCTION		CUMULATIVE PRODUCTION THRU 1989		ACTIVE WELLS	DISCOVERY DATE
			Oil (Bbls)	Gas (MCF)	Oil (Bbls)	Gas (MCF)		
Clay Basin	T3N, R23 & 24E, SLBM	Daggett	3,031	2,024,593	330,580	154,014,769	19	1927
Altamont/Bluebell	T1N-4S, R2E-6W, USM	Duchesne (Uintah)	6,122,535	12,731,212	202,853,783	272,739,543	655	1970/1955
Antelope Creek	T5S, R3W, USM	Duchesne	103,764	623,222	961,335	3,612,714	46	1983
Bridgeland	T4S, R3W, USM	Duchesne	0	0	73,137	25,797	0	1983
Brundage Canyon	T5S, R4 & 5W, USM	Duchesne	97,565	195,681	905,658	1,519,525	23	1951
Castle Peak	T9S, R15 & 16E, SLBM	Duchesne	41,371	209,138	569,949	1,309,110	19	1962
Cedar Rim	T3S, R6 & 7W, USM	Duchesne	296,634	655,708	11,120,605	21,924,482	30	1969
Chokecherry Canyon	T7S, R4W, USM	Duchesne	0	0	7,340	6,224	9	1959
Duchesne	T4S, R4W, USM	Duchesne	81,594	702,611	883,282	1,121,101	28	1951
East Pleasant Valley	T7S, R4W, USM	Duchesne	1,959	0	14,924	39,249	1	1986
Eight Mile Flat	T10S, R17E, SLBM T4S, R1E, USM T8 & 9S, R17 & 18E, SLBM	Duchesne (Uintah)	110,335	220,133	1,393,004	2,369,338	45	1962
Monument Butte	T8 & 9S, R16 & 17E, SLBM	Duchesne	363,318	1,359,063	4,644,377	11,966,195	136	1964
Pleasant Valley	T8S, R16E, SLBM	Duchesne	0	0	16,576	0	3	1952
South Myton Bench	T4S, R2 & 3W, USM	Duchesne	3,576	7,254	49,054	164,041	2	1984
Sowers Canyon	T6S, R5W, USM	Duchesne	0	0	334	0	1	1987
Starr Flat	T1N, R2W, USM	Duchesne	0	0	10,975	4,842	0	1958
Treaty Boundary	T4S, R1W, USM T8S, R17E, SLBM	Duchesne	1,911	15,536	146,711	493,097	7	1963
Unnamed Fields		Duchesne	9,371	19,889	151,996	259,065	9	1987
Ashley Valley	T5S, R22E, SLBM	Uintah	89,752	0	8,785,903	530	30	1925
Brennan Bottom	T7S, R20 & 21E, SLBM	Uintah	32,231	48,557	1,161,692	1,223,636	7	1953
East/West Gusher	T5 & 6S, R19 & 20E, SLBM	Uintah	1,209	0	43,536	0	1	1980
Halfway Hollow	T6S, R21E, SLBM	Uintah	0	0	54,643	2,558	1	1967
Horseshoe Bend	T6 & 7S, R21 & 22E, SLBM	Uintah	172,516	829,456	883,062	11,904,963	56	1964
Moffat Canal	T5S, R19E, SLBM	Uintah	9,249	3,550	188,850	53,296	3	1987
Pariette Bench	T8 & 9S, R19E, SLBM	Uintah	29,779	36,894	869,433	367,356	17	1962
Twelve Mile Wash	T5S, R20E, SLBM	Uintah	0	0	5,092	1,198	1	1967
Uteland Butte	T10S, R18E, SLBM	Uintah	42,311	10,032	505,175	192,064	19	1987
Unnamed Fields		Uintah	87,281	96,929	352,635	238,961	9	1987-1988
DAGGETTCOUNTY			3,031	2,024,593	330,580	154,014,769	19	
DUCHESNE COUNTY			7,233,933	16,739,447	223,803,040	317,554,357	1,008	
UINTAH COUNTY			464,328	1,025,418	12,850,021	13,984,567	147	
TOTAL			7,701,292	19,789,458	236,983,641	485,553,693	1,174	
STATE OF UTAH			28,415,680	277,811,296	834,448,265	3,355,587,045	4,115	
PERCENT OF STATE			27%	7%	28%	14%	28%	

Source: Utah Division of Oil, Gas, and Mining, 1989



**TABLE A4-2:  
DIAMOND MOUNTAIN RESOURCE AREA RESERVOIRS, OIL/GAS TRAPS, AND SOURCE ROCKS**

**Reservoir Rocks**

<u>Age</u>	<u>Sandstone Reservoirs</u>	<u>Fractured Sandstone/ Limestone Reservoirs</u>	<u>Hydrocarbon Type</u>
T	Duchesne River Fm		gas
T	Uinta Fm		gas
T	Green River Fm	Green River Fm.	oil, gas
T	Wasatch Fm		oil, gas
K	Mesaverde Group		gas
K	Frontier Fm		gas
K	Dakota Sandstone		gas
J	Morrison Fm		oil
P		Park City Fm	oil, gas
P	Weber Sandstone		oil, gas

Fm= formation

T=Tertiary age, K=Cretaceous age, J= Jurassic age, P=Permian age

**Oil and Gas Traps**Oil and Gas FieldsStructural traps:

Ashley Valley, Clay Basin .

Stratigraphic traps:

Castle Peak, Chokecherry Canyon, Eight Mile Flat, Starvation, Halfway Hollow, Monument Butte, Nine Mile Canyon, Nutter Canyon, Pariette Bench, Sowers Canyon, Twelve Mile Wash, Uteland Butte.

Combination traps:

Altamont, Bluebell, Blue Bench, Brennan Bottom, Cedar Rim, County Pool, Duchesne, Eight Mile Flat, East Pleasant Valley, Flat Mesa, Gusher, Horseshoe Bend, Roosevelt, Randlett, Starr Flatt.

**Source Rocks**

<u>Age</u>	<u>Source Rocks</u>	<u>Rock type</u>
Tertiary	Green River Fm	oil shale, limestone, dolomite
Tertiary	Flagstaff Limestone	limestone
Cretaceous	Mesaverde Group	shale, coal
Cretaceous	Mowry Shale	shale
Permian	Park City	dolomite



## Uinta Basin Province Plays

### Wasatch-Green River Formation, Shallow Uinta Basin, Oil Play.

The Tertiary Wasatch and Green River Formations produce major amounts of oil with associated gas in the Uinta basin. This play is moderately explored. Depths of occurrence range from 5,000 to over 10,000 feet. Fields with such oil production include the Altamont-Bluebell, Duchesne, Pleasant Valley, Monument Butte, and Pariette Bench fields. The reservoir rocks for this play are sandstones in the Green River and Wasatch Formations. Most traps are stratigraphic traps. Fracturing of the reservoir rock is very important to production regionally. Source rocks for this play are primarily carbonate rich Marly Shales of the Green River Formation.

### Uinta Basin Tertiary Conventional Gas Play.

The Uinta Basin Tertiary Conventional Gas Play is located in the southern portion of the Uinta Basin and the Diamond Mountain Resource Area. The play is moderately explored. Accumulations lie at depths less than 3,000 feet to more than 7,000 feet. Fields with such production include the Horseshoe Bend, Brennan Bottom, Uteland Butte, and Sowers Canyon fields. Reservoir rocks for these accumulations of gas occur within the Uinta, Green River, and Wasatch Formations. Most traps are stratigraphic traps. Source rocks for this play are primarily Marly Shales of the Green River Formation.

### Uinta Basin Upper Cretaceous Gas Play.

The Uinta Basin produces significant volumes of gas from sandstones of the Upper Cretaceous Mesaverde Group. This play is less explored than previous plays discussed. Gas accumulations occur at depths ranging from 2,000 to 5,000 feet. Reservoirs at greater depths are often unconventional tight gas reservoirs. Fields for this play include reservoir rocks for these accumulations include rocks within the North Horn Formation and the Mesaverde Group. Most hydrocarbon traps are stratigraphic in nature. Source rocks for this play are most likely coals from the Mesaverde Group.

## Northeast Utah/Southwest Wyoming Basins

### Basin Margin Anticline Gas Play.

The Basin Margin Anticline Play occurs in a narrow tract 5 to 20 miles wide paralleling the thrust northern flank of the Uinta Mountains. Large areas of this play remain unexplored. A field with such production for this play is from the Clay Basin anticline. Gas accumulations lie at

depths ranging from 5,300 to 5,800 feet. Reservoir rocks defined to date are sandstones in the Frontier and Dakota Formations. The traps are structural in nature and are broad anticlines most likely genetically related to the thrusting along the north flank of the Uinta Mountains. The source rocks for this play are believed to be the Mowry Shale (Law and Clayton, 1987).

### Subthrust Oil and Gas Play.

The Subthrust Oil and Gas Play, located along the northern flank of the Uinta Mountains, is highly speculative. Three wells, described by Gries (1983), have partially tested the potential of subthrust plays both on the northern and on the southern flank of the Uinta Mountains. To date all wells testing the Subthrust Play in DMRA have been dry and abandoned. Reservoir rocks occurring in this play would most likely be the Frontier and the Dakota Formations. Oil and gas accumulations occur in reservoirs below a thrust fault surface. Like the Basin Margin Anticline Play, the source rocks are believed to be the Mowry Shale (Law and Clayton, 1987).

## REASONABLE FORSEEABLE DEVELOPMENT OF OIL AND GAS RESOURCES

The Diamond Mountain Resource Area has a long history of oil and gas exploration and development. What follows is an analysis of historical and reasonable foreseeable development of oil and gas resources in the following five regions in the Diamond Mountain Resource area (See Map 3-13):

- Myton Bench-Nine Mile Region
- Horseshoe Bend-Ashley Valley Region
- Diamond Mountain Plateau Region
- Clay Basin-Manila Region
- Indian Reservation Region

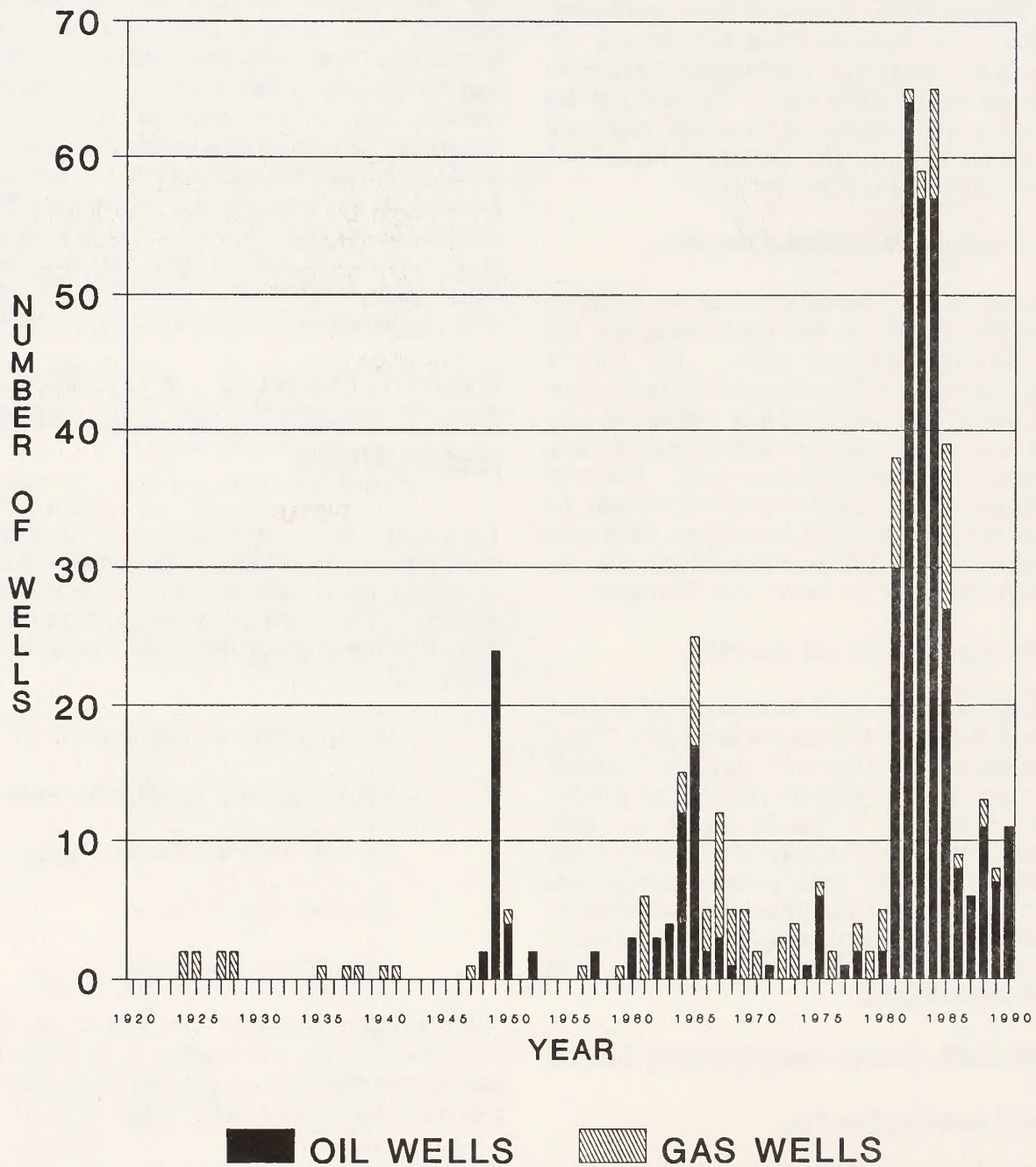
The reasonable foreseeable development of oil and gas resources over the next 15 years in the above regions is based upon the following analysis of the historical and present development in each region.

Oil and gas development which has occurred since 1920 in the Diamond Mountain Resource Area is listed in Table A4-1 and illustrated in Figure A4-2. Three periods in which maximum development has occurred are: 1948-1951, 1964-1969, and 1981-1985. The principal producing oil



FIGURE A4-2

# DIAMOND MOUNTAIN RESOURCE AREA OIL AND GAS DEVELOPMENT 1920-1990

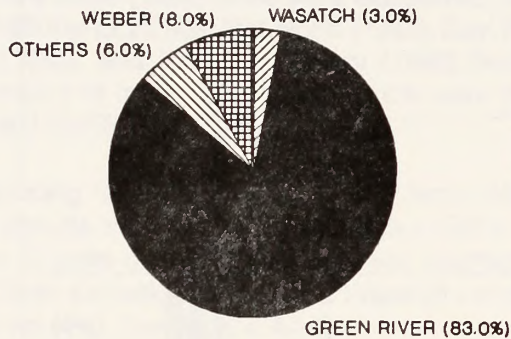




and gas formations in the Diamond Mountain Resource Area are shown in Figure A4-3 and A4-4.

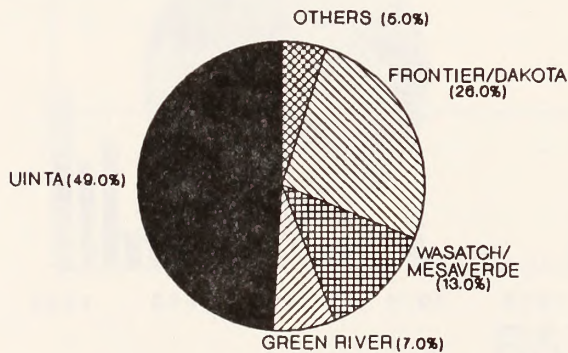
**FIGURE A4-3**

**DIAMOND MOUNTAIN RESOURCE AREA  
OIL PRODUCING FORMATIONS**



**FIGURE A4-4**

**DIAMOND MOUNTAIN RESOURCE AREA  
GAS PRODUCING FORMATIONS**



authorized officer of the Bureau of Land Management, or 2) one which is located on a lease committed to a communitized or unitized tract at a location approved by the authorized officer of the Bureau of Land Management. In the absence of special orders established drilling units well spacing is set at 40 acres per well. Although the Federal government is not bound by these spacing orders, they are generally recognized. Spacing within each of the regions will be discussed below.

Surface disturbance associated with the drilling and development of oil and gas wells occurs with the construction of the following: 1) access roads, 2) drilling pads, 3) oil and gas facilities, and 4) pipelines. The surface disturbance associated with the construction of the drilling pad and circulation pits is estimated to be 2 acres. Access roads constructed to the drilling pad will vary in length, but will be 30 feet wide. It will be assumed that road disturbance will vary in disturbance from 2-4 acres. Oil and gas facilities, such as tank batteries, where they occur will disturb 2-6 acres. Pipelines may occur above ground or below ground and may involve 1-2 acres of disturbance for roads which the pipeline. See Table A4-3.

**TABLE A4-3:  
REASONABLE FORESEEABLE OIL AND GAS  
DEVELOPMENT AND ASSOCIATED SURFACE  
DISTURBANCE (IN ACRES)**

PLAY AREA	FORECASTED WELLS Producing Dry	WELL PADS*	ACCESS ROADS*	PIPE- LINES*	ANCILLRY FACIL- ITIES*	
MYTON BENCH- NINE MILE CANYON	188	57	490	490	94	50
HORSESHOE BEND-ASHLEY VALLEY	96	30	360	360	42	15
DIAMOND MOUNTAIN PLATEAU	0	10	20	20	0	0
CLAY BASIN- MANILA	8	7	30	30	4	15
INDIAN RESERVATION	15	5	40	40	8	0
<b>TOTAL</b>	<b>307</b>	<b>163</b>	<b>940</b>	<b>940</b>	<b>148</b>	<b>80</b>

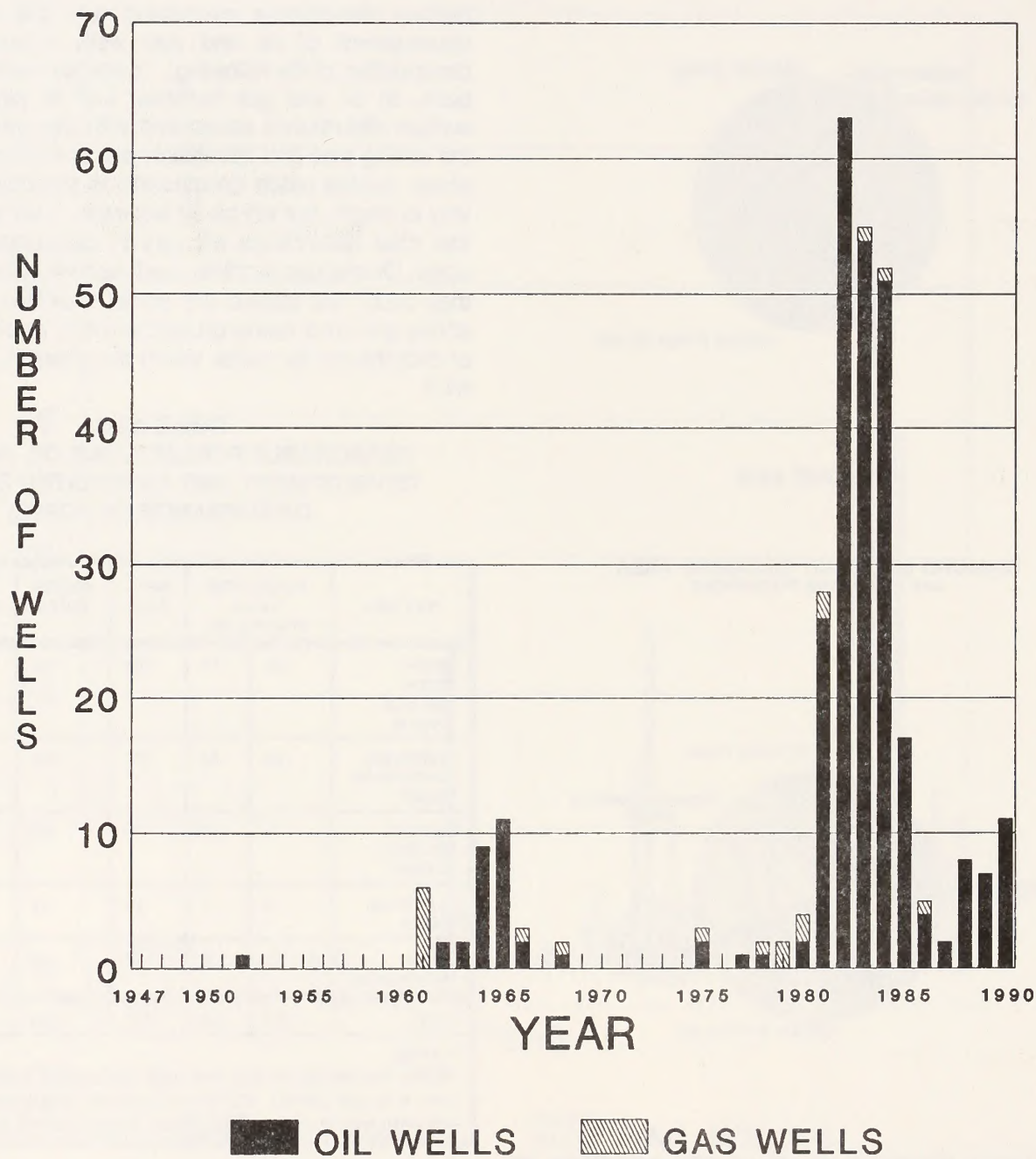
\*- ACRES  
NOTE: Forecasted oil and gas wells and related surface disturbance is over a 15 year period. Surface disturbance due to geophysical activities will be minimal for all play areas outlined above.

Well spacing programs for oil or gas exploration or development wells (Federal or Indian mineral estate) in the Diamond Mountain Resource Area may be either: 1) one which conforms with a spacing order or field rule issued by the Utah State Board of Oil, Gas and Mining (Department of Natural Resources) and accepted by the



FIGURE A4-5

# MYTON BENCH-NINE MILE REGION OIL AND GAS DEVELOPMENT 1947-1990





**MYTON BENCH-NINE MILE REGION**

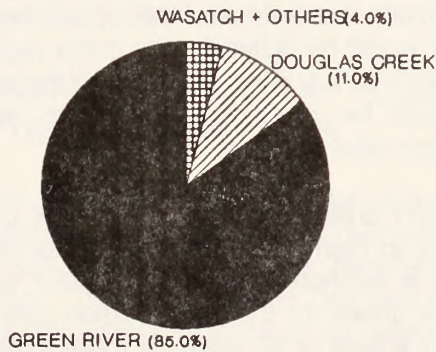
**Historical Activity**

Oil and gas activity began in the Myton Bench-Nine Mile region with the discovery of the Pleasant Valley oil field in 1952. Numerous oil and gas wells have been drilled since this time (See Figure A4-5). The two main periods of activity have been: 1961-1966 and 1981-1985. Between 1961 and 1966 the Uteland Butte (1961), Castle Peak (1962), Pariette Bench (1962), Eight Mile Flat (1962), and Monument Butte (1964) fields were discovered. Between 1981-1985 the Eight Mile Flat-North (1983), East Pleasant Valley (1986), and Treaty Boundary (1982) fields were discovered and many development wells were drilled in previously discovered fields.

Oil producing formations in the Myton Bench-Nine Mile region include the Green River formation (85% of total number of wells drilled), Douglas Creek member of the Green River formation (11%), and Wasatch+other older formations (4%) (See Figure A4-6).

**FIGURE A4-6**

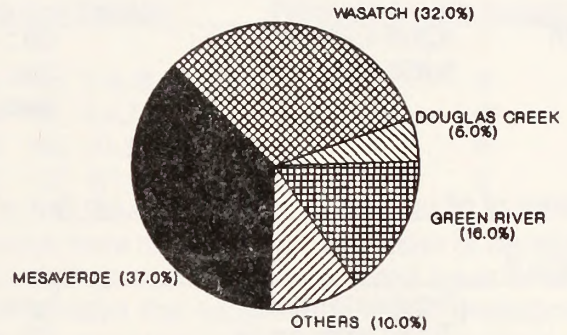
**MYTON BENCH-NINE MILE CANYON REGION  
OIL PRODUCING FORMATIONS**



Gas producing formations in the Myton Bench-Nine Mile region include the Mesaverde Group (37%), Wasatch formation (32%), Green River formation (16%), Douglas Creek member of the Green River formation (5%), and other older formations (10%) (See Figure A4-7).

**FIGURE A4-7**

**MYTON BENCH-NINE MILE REGION  
GAS PRODUCING FORMATIONS**



The initial production (IP) for an average oil or gas well in the Myton Bench-Nine Mile Canyon region is given in Table A4-4.



**TABLE A4-4:  
OIL AND GAS PRODUCTION DATA  
MYTON BENCH-NINE MILE CANYON REGION**

**OIL WELLS**

Fm.	Producing zone/ Total Depth range	Initial Production (IP) range	Average well IP and total depth
Green River	3,600-5,900' / 4,800-10,800'	Oil : 9-350 BOPD <sup>1</sup> Gas : 0-300 MCFPD <sup>2</sup> Water: 0-295 BWPD <sup>3</sup>	Oil : 106 BOPD Gas : 66 MCFPD Water: 26 BWPD Depth: 6,000'
Wasatch	4,300-4,400' / 5,850-6,034'	Oil : 45-230 BOPD Gas : 0- 15 MCFPD Water: 0- 15 BWPD	Oil : 24 BOPD Gas : 7 MCFPD Water: 10 BWPD Depth: 5,940'

1 = barrels of oil per day, 2 = thousand cubic feet of gas per day, 3 = barrels of water per day.

**GAS WELLS**

Fm.	Producing zone/ Total Depth range	Initial Production (IP) range	Average well IP and total depth
Green River	1,970-5,400' / 5,400-6,400'	Gas : 60-229 MCFPD*	Gas : 215 MCFPD Depth: 6,350'
Wasatch	5,600-7,400' / 6,700-8,100'	Gas : 315-2300 MCFPD	Gas : 830 MCFPD Depth: 7,660'
Mesaverde	6,400-10,300' / 9,100-11,400'	Gas : 260-780 MCFPD	Gas : 520 MCFPD Depth: 10,250'

\* Thousand cubic feet of gas per day

The total number of wells drilled through 1990 in the Myton Bench-Nine Mile region is 375. Of this total, 277 are oil wells, 19 are gas wells, 76 were dry and abandoned, and 3 have suspended operations. Of the total number of wells producing oil and/or gas, 93% are oil wells, while 7% are gas wells. A success ratio (producing oil or gas wells/total number of wells) of 79% occurs in this region.

### **Reasonable Forseeable Development Activity**

#### **Oil Production**

The Myton Bench-Nine Mile Canyon region over the next 15 years will continue to have the most oil and gas exploration and development in the Diamond Mountain Resource Area. Oil will be the primary type of hydrocarbon explored for and developed from the Green River and Wasatch formations.

Development drilling will continue for oil on lands with high occurrence potential, especially within and adjacent to the following fields: Pleasant Valley, Castle Peak, Pariette Bench, Monument Butte, Eight Mile Flat-North,

East Pleasant Valley and Treaty Boundary (see Table A4-1). Also, development drilling will continue in the Island Unit and River Bend Unit. Based upon past cycles of development, it is estimated that approximately 11 wells per year would be drilled for the entire region over a 15 year period, for a total of 165 wells. Of these wells drilled, 130 would be producing wells with average initial production rates shown in Table-A4-3.

Exploration drilling will continue for oil on lands with moderate to high oil and gas potential of occurrence lands. It is estimated that 4 exploration wells per year would be drilled for the entire region over the next 15 years, for a total of 60 wells. Of these exploratory wells drilled, 47 would be producing wells with average initial production rates shown in Table-A4-3. The number of exploratory wells drilled would increase with an increase in the price of oil. The success ratio of this region for drilling a successful oil and/or gas exploration or development well as discussed above is 79%.

Within the Myton Bench-Nine Mile region, all oil and gas wells in the identified fields have been drilled on a 40 acre spacing pattern. An oil or gas field 640 acres in size would require 16 wells to be drilled in order to be fully developed. Development would take 5-8 years if diligently



pursued. If the wells were producing wells, they would have a life expectancy between 5 and 20 years depending upon the rates of production. If secondary recovery methods were employed, additional wells would be drilled for a secondary recovery process involving either water or CO<sub>2</sub> injection. Such secondary methods may extend the life of the well an additional 5 to 20 years.

**Gas Production**

Exploration and development levels for conventional gas resources in this region will remain low. Compared to oil production, present gas production is minor in the Myton Bench-Nine Mile Canyon region (7% of total production). Exploration and development of gas resources will be from the Wasatch and Mesaverde formations. It is estimated that 11 gas exploratory or development wells would be drilled over the next 15 years, 9 of which would be successful. The recovery for a typical gas reservoir would be 80-95%. The gas wells would have a similar spacing pattern (40 acres) and life expectancy (5-20 years) as those oil wells described above in the Myton Bench-Nine Mile Canyon region.

Producing oil and gas wells from fields discovered prior to 1970 will continue to decline and many will be plugged and abandoned during the next 15 years. Following the plugging and abandonment of the well, the access road and well site would be reclaimed. BLM may assume the plugging and liability for the well and reclamation of the access road if an opportunity exists to convert the abandoned oil or gas well to a water well for livestock or wildlife watering purposes and if it is the surface managing agency.

**Unconventional Reservoirs: Coal Bed Methane/Tight Gas Reservoirs**

The potential exists for the development of two unconventional gas reservoirs (coal bed methane gas and tight gas reservoirs) in the Myton Bench-Nine Mile Canyon region. Coal bed methane gas and tight gas reservoirs are discussed fully in the oil and gas section of Chapter 3 (Affected Environment).

Present drilling for coal bed methane gas recovery is south of the Diamond Mountain Resource Area boundary. No wells have been drilled for coal bed methane gas in the Myton Bench-Nine Mile Canyon region. However, the trend of the principle coal beds within the Book Cliffs Coal Field extend into the southern Diamond Mountain Resource Area in the area of: Township 11 South, Ranges 10 East-18 East. Currently, Section 29 tax credits for nonconventional fuels will expire December 31, 1992.

Assuming this tax credit is not renewed, it is estimated that 10 wells would be drilled over the next 15 years.

Tight gas sandstone reservoirs of the Wasatch and Mesaverde Group have been designated by the State of Utah, the U.S. Geological Survey, and the Bureau of Land Management with the concurrence of the Federal Energy Regulatory Commission (FERC) in the following areas in the Diamond Mountain Resource Area:

<u>Tshp Rge Section</u>	<u>Productive Wells through 1990</u>
10S 18E 1-4, 9-16, 22-27	5
10S 19E 5,6,7,8	0
9S 18E 34,35,36	0
9S 19E W1/2 28,29,31,32	0

Although there has been little exploration or development in the tight gas sandstone designated areas in the past, it is estimated that exploration for and development of tight gas sandstone resources with conventional drilling methods will increase in the future. Much exploration and development of tight gas sandstone resources has taken place east of this region in the Book Cliffs Resource Area within the Natural Buttes gas field. It is estimated that 10 exploration or development wells would be drilled before the Section 29 tax credit runs out December 31, 1992.

The minimum amount of on-site surface disturbance for all forecast conventional and unconventional oil and gas wells in this region is outlined in Table A4-3.

**HORSESHOE BEND-ASHLEY VALLEY REGION**

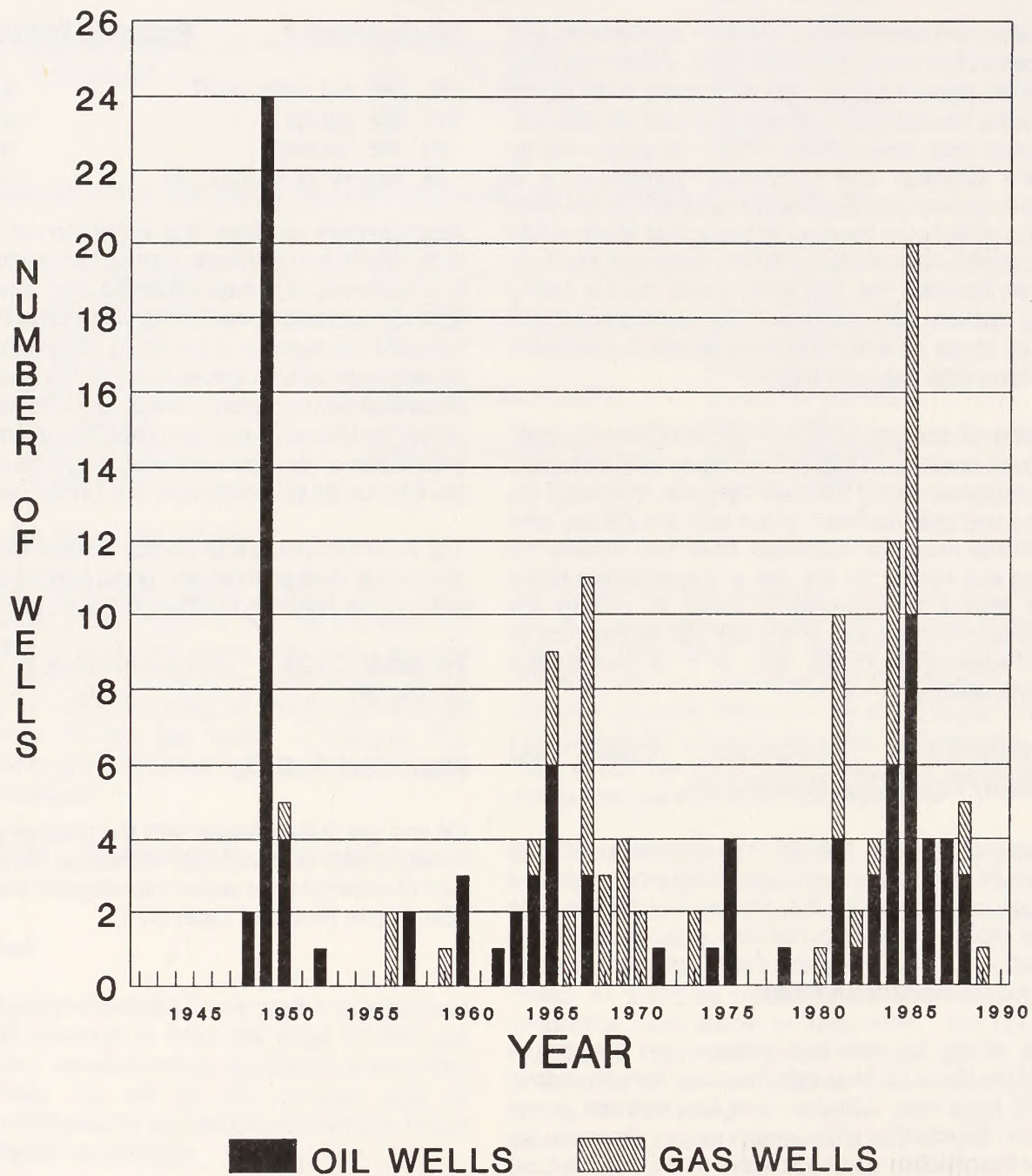
**Historical Activity**

Oil and gas activity began with the discovery of oil in the Ashley Valley field in 1948. Numerous new oil and gas field discoveries were drilled following this initial discovery (See Figure A4-8 and Table A4-1).



FIGURE A4-8

### HORSESHOE BEND-ASHLEY VALLEY REGION OIL AND GAS DEVELOPMENT 1942-1990





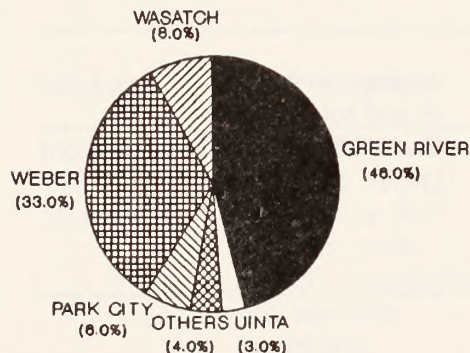
Three major periods of exploration and development have occurred: 1948-1950, 1964-1970, and 1981-1988.

Between 1948 and 1950, the Ashley Valley field was discovered and developed. Between 1964 and 1970, the Horseshoe Bend (1964), Halfway Hollow (1967), and Twelve Mile Wash (1967) fields were discovered and developed. The oil and gas activity during the period between 1981 and 1988 may be accounted by the development drilling in the Brennan Bottom and Horseshoe Bend fields.

Of those oil and gas exploration wells drilled in the Horseshoe Bend-Ashley Valley region, 61% of the producing wells drilled are oil wells, while the remaining 39% are gas wells. The oil producing formations in the Horseshoe Bend-Ashley Valley region are: Green River (46% of the total number of wells drilled), Weber (33%), Wasatch (8%), Park City (6%), Uinta (3%), and older formations (4%) (See Figure A4-9).

FIGURE A4-9

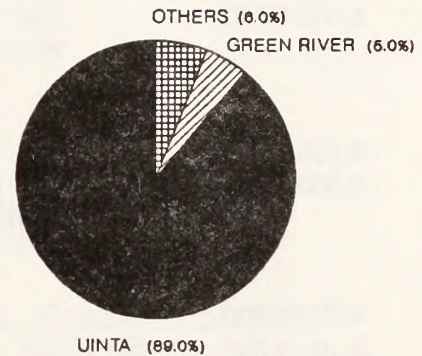
HORSESHOE BEND-ASHLEY VALLEY REGION  
OIL PRODUCING FORMATIONS



Gas producing formations in this region are: Uinta formation (89% of total number of wells), Green River formation (5%), and other older formations (6%) (See Figure A4-10).

FIGURE A4-10

HORSESHOE BEND-ASHLEY VALLEY  
GAS PRODUCING FORMATIONS



The Initial production (IP) for an average oil and gas well in the Horseshoe Bend-Ashley Valley region is given in Table A4-5.



**TABLE A4-5:  
OIL AND GAS PRODUCTION DATA  
HORSESHOE BEND-ASHLEY VALLEY REGION**

**OIL WELLS**

Fm.	Producing zone/ Total Depth range	Initial Production (IP) range	Average well IP and total depth
Uinta	2,700-2,900' / 4,025-4,400'	Oil : 48-206 BOPD <sup>1</sup> Gas : 0-1990 MCFPD <sup>2</sup> Water: 0-7 BWPD <sup>3</sup>	Oil : 127 BOPD Gas : 995 MCFPD Water: 2 BWPD Depth: 4,213'
Green River	5,100-9,100' / 5,600-9,100'	Oil : 17-450 BOPD Gas : 0-750 MCFPD Water: 0-60 BWPD	Oil : 180 BOPD Gas : 56 MCFPD Water: 25 BWPD Depth: 7,400'
Wasatch	6,400-12,000' / 6,900-13,000'	Oil : 17-120 BOPD Gas : 0-150 MCFPD Water: 25-157 BWPD	Oil : 68 BOPD Gas : 71 MCFPD Water: 53 BWPD Depth: 11,000'
Weber	4,000-4,300' / 4,100-4,300'	Oil : 97-960 BOPD Gas : 0 MCFPD Water: 0-3739 BWPD	Oil : 300 BOPD Gas : 0 MCFPD Water: 380 BWPD Depth: 4,130'

1 = barrels of oil per day, 2 = thousand cubic feet of gas per day, 3 = barrels of water per day.

**GAS WELLS**

Fm.	Producing zone/ Total Depth range	Initial Production (IP) range	Average well IP and total depth
Uinta	2,300-3,800' / 2,800-4,400'	Gas : 375-6,287 MCFPD*	Gas : 1,800 MCFPD Depth: 3,800'

\* Thousand cubic feet of gas per day

The total number of wells drilled through 1990 in the Horseshoe Bend-Ashley Valley region is 287. Of this total, 93 are oil wells, 60 are gas wells, 125 were dry and abandoned, and 9 have suspended operations. Of the total number of producing oil and gas wells, 61% are oil wells and 39% are gas wells. A success ratio (producing oil or gas wells/total number of wells) of 53% occurs in this region.

**Reasonable Forseeable Development****Oil Production**

The Horseshoe Bend-Ashley region over the next 15 years will continue to have the second largest level of oil and gas exploration and development (after the Myton Bench-Nine Mile Canyon region) in the Diamond Mountain Resource Area. Oil will be the primary type of hydrocarbon explored for from the Green River, Wasatch, and the Weber formations. However, gas exploration and development will continue and may increase. Of the presently producing oil and gas wells in this region, 61% are oil wells and 39% are gas wells.



Development drilling will continue on high potential of occurrence lands, especially within and adjacent to the following fields: Horseshoe Bend, Brennan Bottoms, and Gusher (see Table A4-1). Minor development drilling may occur in Halfway Hollow and Twelve Mile Wash fields. Based upon past cycles of development, it is estimated that approximately 8 wells per year will be drilled for the entire region over a 15 year period, for a total of 120 wells. Of these wells, 64 would be producing wells with an average oil and gas initial production as given in Table A4-5.

years, for a total of 30 wells. Of these wells, 16 wells would be producing with an average oil and gas initial production as given Table A4-5. The success ratio as discussed above of drilling such wells is 53%.

The spacing for oil and gas wells in the Horseshoe Bend-Ashley Valley region is outlined below in Table A4-6.

Exploration drilling will continue mainly on lands of moderate potential of occurrence lands. It is estimated that 2 exploration wells will be drilled per year over the next 15

**TABLE A4-6:  
SPACING FOR OIL AND GAS WELLS  
HORSESHOE BEND-ASHLEY VALLEY REGION**

Spacing	Formation	Field	Location	Wells/Sec
640 acres	Lower Green River/ Wasatch formations	Moffat Canal	5S/19E	2
		Gusher	6S/19E	2
		Horseshoe Bend	6S&7S/21E&22E	2
320 acres	Uinta formation		6S/21E&22E	2
160 acres	Uinta formation	Gusher	5S&6S/19E&20E	4
		Horseshoe Bend	6S&7S/21&22E	4
		12 Mile Wash	5S/20E	4
			7S/20E	4
160 acres	Green River Fm		5S/20E	4
			6S/20E	4
160 acres	Morrison Fm		5S/21E	4
80 acres	Green River and transition zone between Green River and Wasatch formations	Halfway Hollow	6S/21E	8
		Horseshoe Bend	6S/21E	8
			6S/20E	8

An oil or gas field 640 acres in size would require 8 wells (80 acre spacing) or 4 wells (160 acre spacing) or 2 wells (320 acre spacing) to be drilled to be fully developed. Development would take 5-8 years if diligently pursued. If the wells were producing wells they would have a life expectancy between 5 and 20 years depending upon the rates of production. If secondary recovery methods were employed, additional wells would be drilled for a secondary recovery process involving either water or CO<sub>2</sub> injection. Such secondary methods may extend the life of the well an additional 5 to 20 years.

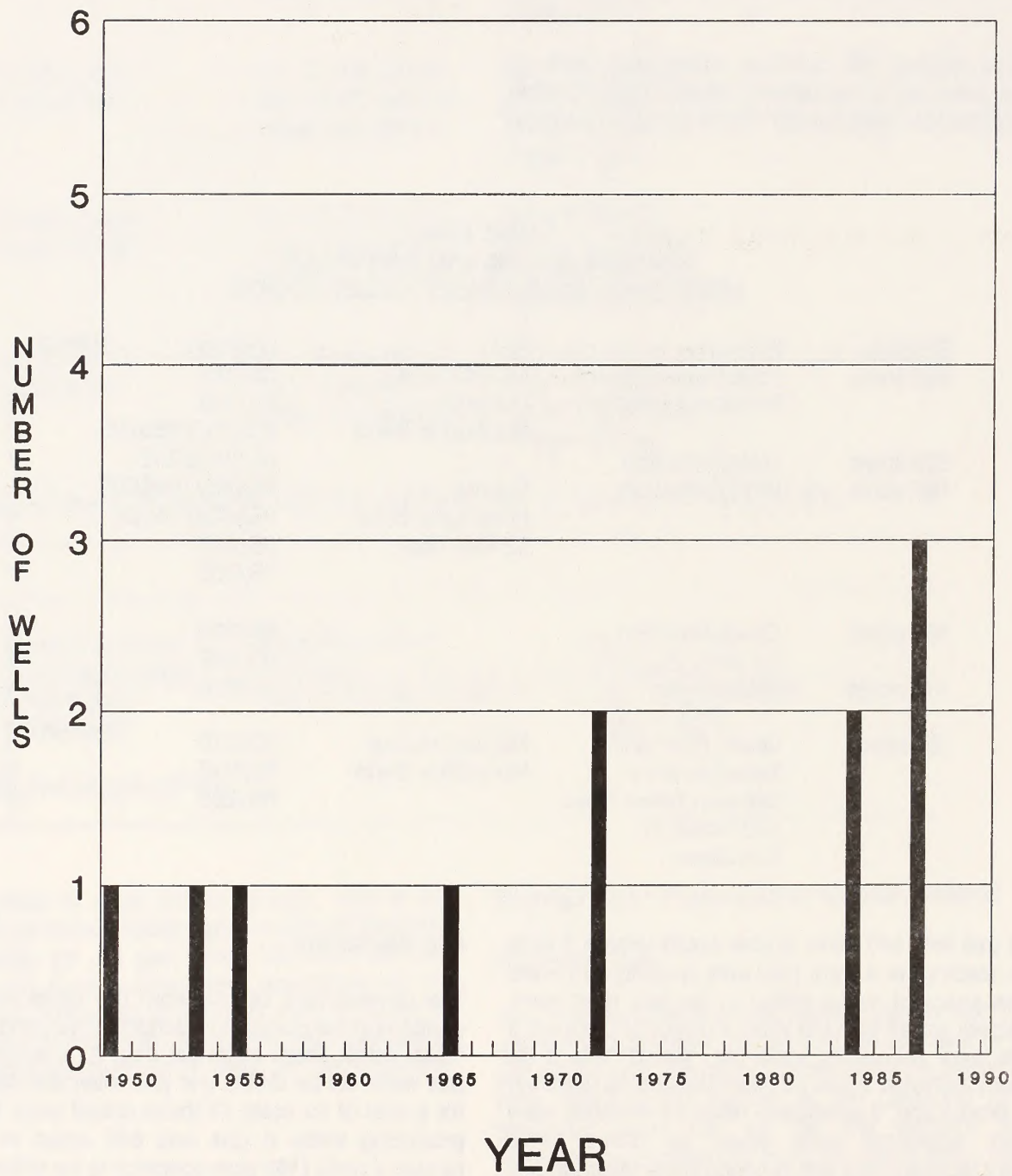
**Gas Production**

The development of gas from the Uinta formation will continue in the Horseshoe Bend, Gusher, and Twelve Mile Wash fields. From historical data it is estimated that 2 gas wells will be drilled per year over the next 15 years, for a total of 30 wells. Of these drilled wells 16 would be producing wells. A gas field 640 acres in size would require 4 wells (160 acre spacing) to be drilled to be fully developed. Development would take 5 to 20 years. The recovery for a typical gas reservoir will be 80-95%. Further



FIGURE A4-11

# DIAMOND MOUNTAIN PLATEAU REGION OIL AND GAS DEVELOPMENT 1949-1990





exploration will be along the margins of existing gas fields.

Producing oil and gas wells from fields discovered prior to 1970 will continue to decline and many will become plugged and abandoned during the next 15 years. Following the plugging and abandonment of the well the access road and well site will be reclaimed. BLM may assume the plugging liability of the well and reclamation of the access road if an opportunity exists to convert an abandoned oil or gas well to a water well for livestock or wildlife watering purposes and if it is the surface managing agency.

The minimum amount of on-site surface disturbance for all forecast conventional oil and gas wells in this region is outlined in Table A4-3.

### **DIAMOND MOUNTAIN PLATEAU REGION**

#### **HISTORICAL ACTIVITY**

The Diamond Mountain Plateau region is the least explored region for oil and gas resources in the Diamond Mountain Resource Area. All the wells to have not produced oil or gas. The first oil and gas exploration well was drilled in 1949, whereas, the most recent exploration wells were drilled in 1987 (See Figure A4-11). The total number of wells drilled through 1990 in the Diamond Mountain Plateau region is 11. Of these wells, 8 are dry and abandoned and 3 have been converted to water wells. A success ratio (producing oil or gas wells/total number of wells) of 0% occurs in this region.

#### **REASONABLE FORSEEABLE DEVELOPMENT**

Based upon present and historical activity, the Diamond Mountain Plateau will experience the least amount of oil and gas exploration and development of any region in the Diamond Mountain Resource area. It is anticipated that 10 exploratory wells will be drilled in this region over the next 15 years.

The minimum amount of on-site surface disturbance for all forecast wells in this region is outlined in Table A4-3.

### **CLAY BASIN-MANILA REGION**

#### **HISTORICAL ACTIVITY**

The earliest well drilled in the Clay Basin-Manila region was in 1924. Gas was first discovered in the Clay Basin field in 1927.

Since discovery of the Clay Basin gas field numerous development wells have been drilled (See Figure A4-12).

Of the gas produced in this region, 68% of it is recovered from the Frontier formation and 32% from the Dakota formation (See Figure A4-13). Table A4-7 provides gas production characteristics for gas wells drilled in the Clay Basin-Manila region.

Gas is stored by injecting it into the subsurface formations in the Clay Basin Storage Unit. The unit was formed June 1, 1976.

**FIGURE A4-13**

**CLAY BASIN-MANILA REGION  
GAS PRODUCING FORMATIONS**

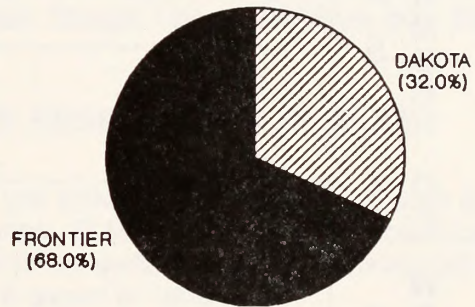
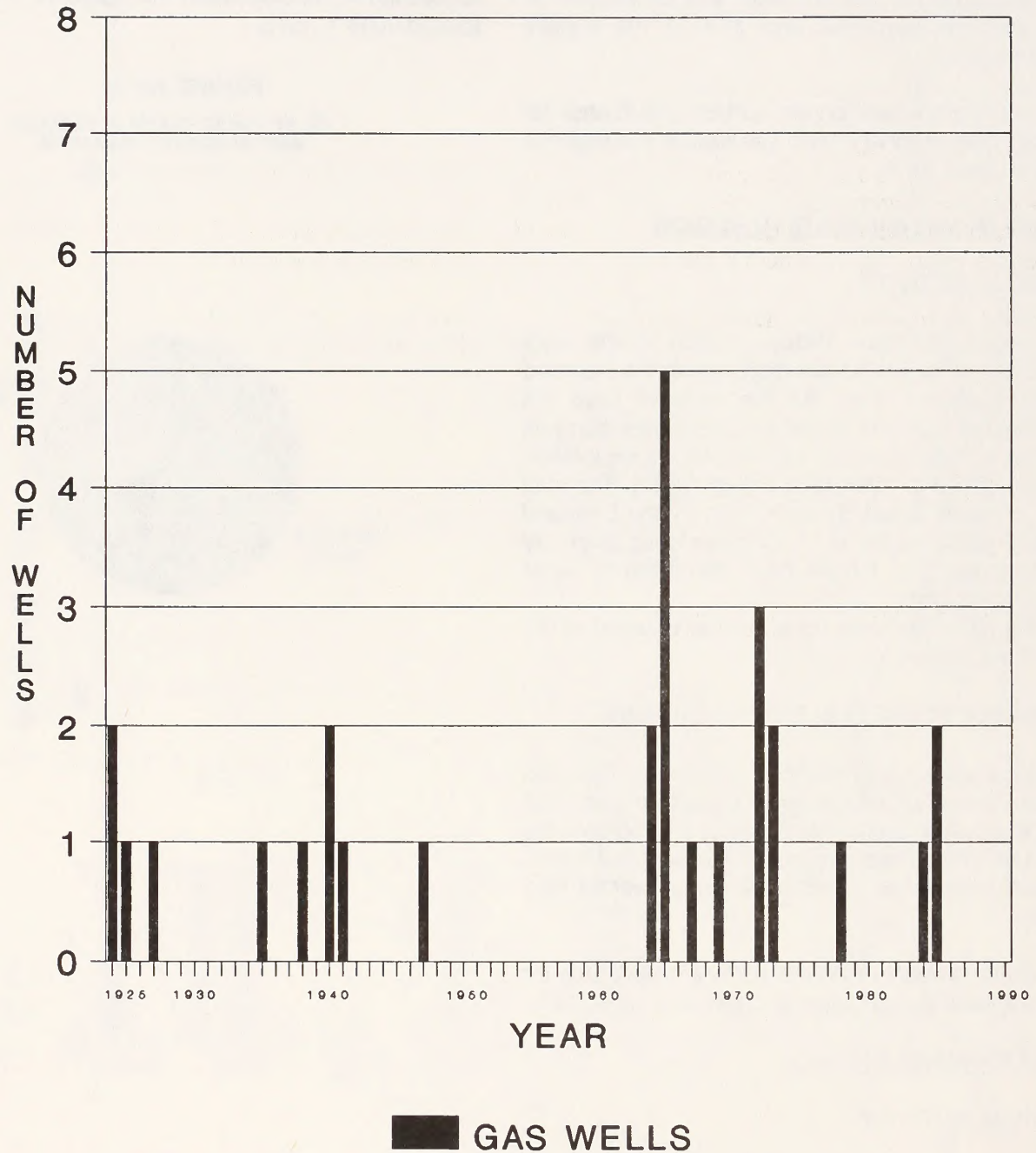




FIGURE A4-12

# CLAY BASIN-MANILA REGION OIL AND GAS DEVELOPMENT 1924-1990





**TABLE A4-7:  
GAS PRODUCTION DATA  
CLAY BASIN-MANILA REGION**

Fm.	Producing zone/ Total Depth range	Initial Production (IP) range	Average well IP and total depth
Frontier	5,200-6,300' / 5,400-6,400'	Gas : 910-6,400 MCFPD*	Gas : 2,750 MCFPD Depth: 5,780'
Dakota	5,600-6,400	Gas : 32-21,800 MCFPD	Gas : 8,900 MCFPD Depth: 6,310'

\* = Thousand cubic feet of gas per day

The total number of wells drilled through 1990 in the Clay Basin-Manila region is 73. Of this total, 28 are gas wells, 27 were dry and abandoned, and 18 are service wells. A success ratio (producing oil or gas wells/total number of wells-service wells) of 51% occurs in this region.

## Reasonable Forseeable Development

### Gas Production

The Clay Basin-Manila region will continue to be primarily a gas producing region. Exploration and development wells will be drilled primarily for gas from the Frontier and Dakota formations. Based on historical information, it is estimated that 15 gas wells will be drilled over the next 15 years. Of those 15 wells drilled, 8 will be producing wells having an average initial production as shown in Table A4-7.

Within the Clay Basin-Manila region, all gas wells have been drilled on a 40 acre spacing units (Clay Basin Field). A gas field 640 acres in size would require 16 wells to be drilled to be fully developed. Development would take 5 to 20 years.

The recovery for a typical gas reservoir will be 80-95%. Further exploration for gas will be along the margin of the

existing Clay Basin gas field and along the thrust margin of the northern Uinta mountains.

The minimum amount of on-site surface disturbance for all forecast gas wells is outlined in Table A4-3.

Clay Basin will continue as a gas storage area. Also the Clay Basin Storage Unit will continue over the next 15 years.

## INDIAN RESERVATION REGION

Oil and gas activity in this region occurs on split estate lands where BLM administers the subsurface mineral estate while the surface lands are administered by the fee owners is shown in Table A4-8.

Currently, the primary exploration and development in this region is for oil from the Lower Green River and Wasatch formations.

Wells in the same sections as the parcels exhibit the following ranges in total depth, depth of producing intervals, and initial production (Table A4-8):

**TABLE A4-8:  
OIL PRODUCTION DATA  
INDIAN RESERVATION REGION: SPLIT ESTATE PARCELS**

Fm.	Producing zone/ Total Depth range	Initial Production (IP) range	Average well IP and total depth
Wasatch	11,500-16,500' / 9,300-16,200'	Oil : 200-2500 BOPD <sup>1</sup> Gas : 0-1900 MCFPD <sup>2</sup> Water: 0-150 BWPD <sup>3</sup>	Oil : 800 BOPD Gas : 640 MCFPD Water: 40 BWPD Depth: 15,000'

1 = barrels of oil per day, 2 = thousand cubic feet of gas per day, 3 = barrels of water per day.



## Reasonable Forseeable Development

The Indian Reservation region over the next 10 to 15 years will continue to have significant oil and gas exploration and development. Oil will be the predominant type of hydrocarbon explored for from the Green River and Wasatch formations. Of the present producing oil and gas wells from the split estate parcels all are classified as oil wells.

### Oil Production

A successful oil well drilled into the Green River-Wasatch formations will be an average of 15,000 feet deep and will have an initial production of 800 barrels of oil per day (BOPD), 640 thousand cubic feet of gas per day (MCFPD), and 40 barrels of water per day (BWPD).

The predominant type of wells drilled will be development wells adjacent to and within present producing fields (such as Altamont and Bluebell fields; see Table A4-1). The number of wells drilled on each split estate parcel will be controlled by spacing rules.

Based upon past spacing in this region it is assumed that wells would be drilled on 640 acre spacing with two wells per spacing unit. Based upon present spacing orders in each split estate parcel, a maximum of 83 wells could be drilled for all parcels. It is estimated that 15 wells will be drilled within these parcels over the next 15 years, with an average production as shown in Table A4-8.

### Gas Production

Although associated gas is recovered from most oil wells in this region, exploration and development levels specifically for conventional gas resources in this region will remain low in most areas. However, interest is locally high in T1S, R2W, Sections 1-4 and 9-12 where the area has 640 acre spacing for gas from the Upper Green River formation. Overall, compared to oil production, present gas production is secondary in the Indian Reservation region. It is estimated that 5 wells specifically for gas will be drilled over the next 15 years.

The spacing for oil and gas wells in the Indian Reservation region is outlined below in Table A4-9.

The minimum amount of on-site surface disturbance for all forecast oil and gas wells in this region is outlined in Table A4-3.



**TABLE A4-9:  
BLM SPLIT ESTATE PARCELS ON THE UTE INDIAN RESERVATION  
LOCATION, SPACING, AND WELLS PER SECTION**

<u>Location</u>	<u>Field</u>	<u>Spacing</u>	<u># producing wells/section*</u>	<u># additional Wells allowed</u>
T1N,R1E, Sec 5	No prod.	40 acre	0	16
T1S,R4W, Sec 32	Altamont	640 acre	2(P)	0
T1S,R3W, Sec 8	Altamont	640 acre	2(P)	0
Sec 17	Altamont	640 acre	2(P)	0
Sec 27	Altamont	640 acre	2(P)	0
T1S,R2W, Sec 14	Bluebell	640 acre	1(P)	1
Sec 21	Bluebell	640 acre	2(P)	0
Sec 25	Bluebell	640 acre	2(P)	0
T1S,R1W, Sec 4	Bluebell	640 acre	1(P)	1
Sec 30	Bluebell	640 acre	1(P)	1
T1S,R1E, Sec 1	Bluebell	640 acre	0	2
Sec 11	Bluebell	640 acre	0	2
Sec 36	Bluebell	640 acre	1(D)	2
T1S,R2E, Sec 6	No prod.	640 acre	1(D)	2
Sec 7	No prod.	640 acre	0	2
T2S,R4W, Sec 5	Altamont	640 acre	1(P)	1
T2S,R3W, Sec 28	Altamont	640 acre	1(P)	1
T2S,R2W, Sec 31		640 acre	0	2
Sec 36		640 acre	0	2
T2S,R1W, Sec 2		640 acre	1(P)	1
Sec 13		640 acre	1(P)	1
Sec 24		640 acre	1(P)	1
Sec 26		640 acre	0	2
T2S,R2E, Sec 19	Bluebell	640 acre	0	2
T3S,R2W, Sec 6	No prod.	40 acre	0	16
T3S,R1W, Sec 5	No prod.	640 acre	0	2
Sec 6	No prod.	640 acre	0	2
Sec 20	No prod.	40 acre	0	16
T3S,R1E, Sec 14	No prod.	40 acre	0	16
Total			22	94

\* P=producing well, D=dry well.



## EXISTING OIL AND GAS/COMBINED HYDROCARBON LEASE STIPULATIONS

Present oil and gas stipulations, as well as Combined Hydrocarbon Lease stipulations (Alternative A) are listed below. The present oil and gas stipulations, as listed below, are derived from the Vernal District Oil and Gas EA (1976) and the Utah Combined Hydrocarbon Leasing EIS (1984).

### CAT2 CAT2.11.3

A lease for the above parcel will be subject to special stipulations on Form USO 3100-79a.

### Archaeology TAR.2012

The Federal surface management agency is responsible for determining the presence of cultural resources and specifying mitigation measures required to protect them. Prior to under-taking any surface-disturbing activity on the lands covered by this lease, the lessee/operator, unless notified to the contrary by the authorized officer of the surface management agency shall:

Engage the services of a qualified cultural resource specialist acceptable to the surface management agency to conduct an intensive inventory for evidence of cultural values;

Submit a report acceptable to the authorized officer of the surface management agency; and

Implement such mitigation measures as required by the authorized officer of the surface management agency to preserve or avoid destruction of inventoried cultural resource values. Mitigation may include relocation of proposed facilities, testing and salvage, or other protective measures deemed necessary. All costs of the inventory and mitigation shall be borne by the lessee/operator and all data and materials salvaged shall remain under the jurisdiction of the U.S. Government.

The lessee/operator shall immediately bring to the attention of the authorized officer of the Federal surface management agency any cultural and paleontological resources, or other objects of scientific interest, discovered by surface or subsurface operations under this lease and shall leave such discoveries intact until directed to proceed by the authorized officer.

### Fish and Wildlife CAT2.7.19

In order to protect big game seasonal fish and wildlife habitat, exploration, drilling, and other development activity will be allowed only during the period from April 30 to November 01. This limitation does not apply to maintenance and operation of producing wells. Exceptions to this limitation in any year may be specifically approved in writing by the authorized officer of the Bureau of Land Management.

### Fish and Wildlife CAT2.7.118

In order to protect seasonal fish and wildlife habitat, exploration, drilling, and other development activity will be allowed only during the period from June 15 to December 1. This limitation does not apply to maintenance and operation of producing wells. Exceptions to this limitation in any year may be specifically approved in writing by the authorized officer of the Bureau of Land Management.

### Fish and Wildlife CAT2.7.121

In order to protect seasonal fish and wildlife habitat, exploration, drilling, and other development activity will be allowed only during the period from July 16 to March 31. This limitation does not apply to maintenance and operation of producing wells. Exceptions to this limitation in any year may be specifically approved in writing by the authorized officer of the Bureau of Land Management.

### Fish and Wildlife CAT2.7.122

In order to protect seasonal fish and wildlife habitat, exploration, drilling, and other development activity will be allowed only during the period from July 20 to May 15. This limitation does not apply to maintenance and operation of producing wells. Exceptions to this limitation in any year may be specifically approved in writing by the authorized officer of the Bureau of Land Management.

### Fish and Wildlife TAR.2008A

No occupancy or other surface disturbance will be allowed on slopes in excess of 40 percent without written permission from the authorized officer of the Federal surface management agency.

No more than 25 percent of the surface area of this lease may be disturbed from surface mining at any given time. Reclamation must be completed and revegetation substantially advanced to the approval of the authorized officer of BLM before additional areas can be disturbed by mining. Exceptions to this requirement may be specifically authorized in writing by the authorized officer of BLM.



To protect important elk and deer winter range, exploration, drilling, and other development activities will be allowed only from April 1 through October 31. This limitation does not apply to maintenance and operation of producing wells or mines. Exceptions to this limitation in any year may be specifically authorized in writing by the authorized officer of BLM.

Fish and Wildlife TAR.2008B

To protect important elk and deer summer range and mule deer fawning areas, exploration, drilling, and other development activities will be allowed only from July 16 through May 17. This limitation does not apply to maintenance and operation of producing wells or mines. Exceptions to this limitation in any year may be specifically authorized in writing by the authorized officer of BLM.

Fish and Wildlife, Antelope CAT2.12.2

NOTICE: The lessee/operator is given notice that the area has been identified as crucial pronghorn (antelope) habitat. Modifications may be required in the surface use plan to protect the pronghorn during the kidding period of May 15 to June 20.

Fish and Wildlife, Mining Method TAR.2003

To protect seasonal fish and wildlife habitat, surface-disturbing activities will be allowed only from June 15 to November 1. This does not apply to maintenance and operation of producing wells and facilities.

Oil and gas resources may be extracted by conventional methods only, no in-situ or surface-mining methods will be employed. Secondary recovery methods of liquid hydrocarbons may be employed only upon the authorized officer of the Federal surface management agency.

Fish and Wildlife, Mining Method TAR.2004

To protect seasonal fish and wildlife habitat, surface-disturbing activities will only be allowed during periods from June 15 to February 15. This does not apply to maintenance and operation of producing wells and facilities.

Access roads will be placed no closer than 0.25 mile of an active nest or a nest known to be active in one of the previous 3 years.

Oil and gas resources may be extracted by conventional methods only, no in-situ or surface mining methods will

be employed. Secondary recovery methods of liquid hydrocarbons may be employed only upon approval by the authorized officer of the Federal surface management agency.

Floodplain CAT2.4.17

No occupancy or other surface disturbance will be allowed within 100-year floodplains. This distance may be modified when specifically approved in writing by the authorized officer of the Bureau of Land Management.

No Surface Occupancy CAT3.0.1

No occupancy or other activity on the surface is allowed under this lease.

Raptor CAT2.7.79

In order to protect raptor habitat/nesting area, exploration, drilling, and other development activity will be allowed only during the period from June 16 to February 14. This limitation does not apply to maintenance and operation of producing wells. Exceptions to this limitation in any year may be specifically approved in writing by the authorized officer of the Bureau of Land Management.

Sage Grouse CAT2.4.5

No occupancy or other surface disturbance will be allowed within 1,000 feet of sage grouse strutting grounds. This distance may be modified when specifically approved in writing by the authorized officer of the Bureau of Land Management.

Sage Grouse CAT2.7.108

In order to protect sage grouse strutting/nesting areas, exploration, drilling, and other development activity will be allowed only during the period from June 30 to April 01. This limitation does not apply to maintenance and operation of producing wells. Exceptions to this limitation in any year may be specifically approved in writing by the authorized officer of the Bureau of Land Management.

Sage Grouse CAT2.7.109

In order to protect sage grouse strutting/nesting areas, exploration, drilling, and other development activity allowed only during the period from July 01 to March 31. This limitation does not apply to maintenance and operation of producing wells. Exceptions to this limitation in any year may be specifically approved in writing by the authorized officer of the Bureau of Land Management.



Sage Grouse Nesting TAR.2015

To protect important seasonal fish and wildlife habitat, exploration, drilling, and other development activity will be allowed only from July 15 to February 15. 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 authorized officer of the surface management agency.

Oil and gas resources may be extracted by conventional methods only. Secondary recovery methods of liquid hydrocarbons may be employed only upon approval by the authorized officer of BLM.

Sage Grouse Strutting Grounds TAR.3001

The area described as Township 5 South, Range 21 East, Sec. 28, NE1/4SE1/4 would contain the no surface occupancy stipulation.

Scenic CAT2.4.9

No occupancy or other surface disturbance will be allowed within 1,300 feet of the highway. This distance may be modified when specifically approved in writing by the authorized officer of the Bureau of Land Management.

Scenic CAT2.4.10

No occupancy or other surface disturbance will be allowed within 1,300 feet of Rainbow Park road. This distance may be modified when specifically approved in writing by the authorized officer of the Bureau of Land Management.

Scenic CAT2.4.18

No occupancy or other surface disturbance will be allowed within 2,500 feet north of the highway. This distance may be modified when specifically approved in writing by the authorized officer of the Bureau of Land Management.

Scenic CAT2.12.6

NOTICE: The lessee/operator is given notice that the area is considered part of the U.S. 40 to Blue Mountain scenic travel corridor. Modifications may be required in the surface use plan to help protect the visual qualities of the area.

Scenic, Paint CAT2.10.1

To maintain aesthetic values, all semi-permanent and permanent facilities may require painting or camouflage

to blend with the natural surroundings. The paint's election or method of camouflage will be subject to approval by the authorized officer of the Bureau of Land Management.

Scenic, VRM CAT2.12.3

NOTICE: The lessee/operator is given notice that the area has high quality visual resources. Modifications may be required in the surface use plan to help protect the visual qualities of the area.

Soil, Slope CAT2.6.4

No occupancy or other surface disturbance will be allowed on slopes in excess of 40 percent without written permission from the authorized officer of the Bureau of Land Management.

Soils TAR.2006

No occupancy or other surface disturbance will be allowed on slopes that exceed 40 percent without written permission from the authorized officer of the Federal surface management agency.

To minimize erosion, exploration, drilling, and other development activity will be allowed only from November 1 to April 1 when soils are dry or ground is frozen. 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 authorized officer of the Federal surface management agency.

Soils TAR.2009

No occupancy or other surface disturbance will be allowed on slopes in excess of 40 percent without written permission from the authorized officer of the Federal surface management agency.

To minimize soil damage, exploration, drilling, and other development activity will be allowed from November 1 to April 1 only during dry soil periods, over a snow cover, or on frozen ground. 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 authorized officer of the Federal surface management agency.

T & E Species TAR.2005

The Federal surface management agency will assure that the area to be disturbed is examined prior to undertaking any surface-disturbing activities on lands covered by this lease. This examination will determine effects on any



plant or animal species listed or proposed for listing as endangered or threatened or their habitats. If the findings of this examination determine that the operation may detrimentally affect an endangered or threatened species, some restrictions to the operator's plan of operations or disallowances of use may result.

The lessee/operator may, at his discretion and cost, conduct the examination on the lands to be disturbed. This examination must be done by or under the supervision of a qualified resource specialist approved by surface management agency. An acceptable report must be provided to the surface management agency identifying the anticipated effects of the proposed action on threatened or endangered species or their habitat.

T & E Species            TAR.2013

The Federal surface management agency is responsible for assuring that the area to be disturbed is examined prior to undertaking any surface-disturbing activities on lands covered by this lease. This examination shall determine effects upon any plant or animal species listed, or proposed for listing, as endangered or threatened or their habitats. If the findings of this examination determine that the operation may detrimentally affect an endangered or threatened species, some restrictions to the operator's plans or disallowances of use may result.

The lessee/operator may, at his discretion and cost, conduct the examination on the lands to be disturbed. This examination must be done by or under the supervision of a qualified resource specialist approved by able report must be provided to the surface management agency identifying the anticipated effects of the proposed action on endangered or threatened species or their habitat.

Visual Resource Management            TAR.2014

These areas have been identified as having high aesthetic values and visual sensitivity requiring special protection. Therefore, locations of all long-term permanent facilities should be selected to conform to natural surroundings and color tones on all permanent and semi-permanent structures and facilities must blend with natural surroundings. Both requirements will be subject to final approval by the authorizing officer of the Federal surface management agency.

Watershed    CAT2.4.7

No occupancy or other surface disturbance will be allowed within 1,200 feet of Owl Springs. This distance may be modified when specifically approved in writing by the authorized officer.

Watershed            CAT2.4.33

No occupancy or other surface disturbance will be allowed within 600 feet of live water. This distance may be modified when specifically approved in writing by the authorized officer of the Bureau of Land Management.

Watershed            CAT2.7.7

In order to minimize watershed damage, exploration, drilling, and other development activity will be allowed only during the period from June 01 to November 01. This limitation does not apply to maintenance and operation of producing wells. Exceptions to this limitation in any year may be specifically approved in writing by the authorized officer of the Bureau of Land Management.

Watershed            TAR.2001

No occupancy or other surface disturbance will be allowed within 600 feet of wetland and floodplain environments. This distance may be modified when specifically approved in writing by the authorized officer of the Federal surface management agency.

Watershed            TAR.2002

No occupancy or other surface disturbance will be allowed within 600 feet of live water. This distance may be modified when specifically approved in writing by the authorized officer of the Federal surface management agency.

Watershed            TAR.2007

No occupancy or other surface disturbance will be allowed within 600 feet of wetland and floodplain environments. This distance may be modified when specifically approved in writing by the authorized officer of the Federal surface management agency.

Watershed            TAR.2010

No occupancy or other surface disturbance will be allowed within 600 feet of wetland and floodplain environments. This distance may be modified when specifically approved in writing by the authorized officer of the Federal surface management agency.

Watershed            TAR.2011

No occupancy or other surface disturbance will be allowed within 600 feet of live water. This distance may be modified when specifically approved in writing by the authorized officer of the Federal surface management agency.



Watershed, Soil      CAT2.7.3

In order to minimize watershed damage, exploration, drilling, and other development activity will be allowed only during the period from April 30 to June 01. This limitation does not apply to maintenance and operation of producing wells. Exceptions to this limitation in any year may be specifically approved in writing by the authorized officer of the Bureau of Land Management.

Watershed, Soil      CAT2.7.6

In order to minimize watershed damage, exploration, drilling, and other development activity will be allowed only during the period from May 01 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 approved in writing by the authorized officer of the Bureau of Land Management.

Watershed, Soil      CAT2.12.1

NOTICE: The area has been identified as having critical to severe soil erosion conditions. In order to minimize watershed damage during muddy and wet periods, the authorized officer of the Bureau of Land Management may prohibit surface disturbing activities. This limitation does not apply to maintenance and operation of producing wells.

Wetland, Floodplain      CAT2.4.41

No occupancy or other surface disturbance will be allowed within 600 feet of wetland and floodplain environments. This distance may be modified when specifically approved in writing by the authorized officer of the Bureau of Land Management.

**CURRENT GUIDANCE ON OIL AND GAS AND COMBINED HYDROCARBON LEASE STIPULATIONS**

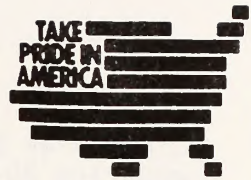
Utah BLM policy (IM UT 90-157 states that new oil and gas lease stipulations will follow the format developed by the Rocky Mountain Regional Coordinating Committee (RMRCC) in 1989. The Utah BLM instruction memorandum (IM UT 90-157) and the RMRCC "Uniform Format for Oil and Gas Lease Stipulations" follow.





# United States Department of the Interior

BUREAU OF LAND MANAGEMENT  
UTAH STATE OFFICE  
324 SOUTH STATE, SUITE 301  
SALT LAKE CITY, UTAH 84111-2303



IN REPLY REFER TO:  
1624/1790/  
3100  
(U-922)

January 24, 1990

Instruction Memorandum No. UT 90-157  
Expires 9/30/91

To: District Managers

From: State Director

Subject: Uniform Format for Oil and Gas Lease Stipulations DD: 3/31/90

A uniform format for oil and gas lease stipulations (Attachment 2) was developed by the Rocky Mountain Regional Coordinating Committee (RMRCC) in 1989. The stipulation formats were designed for use throughout the Rocky Mountain region and provide a consistent approach for development of oil and gas leasing stipulations. Most State Offices have already incorporated use of these formats.

The RMRCC uniform stipulation formats and guidelines shall be utilized in all new resource management plans (RMPs)/environmental impact statements (EISs), and oil and gas plan amendments/EISs/EAs. Additionally, the new formats will be incorporated into all such documents in progress where stipulations have not been developed or finalized. The use of the formats requires the RMP/EISs or amendments to contain site-specific and detailed analysis of the oil and gas leasing and operational programs, and their interactions with other resources in order to determine mitigations (lease stipulations and conditions of approval).

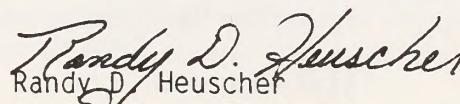
Since Utah's ten standard lease stipulations and District variations generally fit into the new standard format, we are requesting you provide us information regarding the replacement of stipulations contained in existing RMPs/EISs with the new format. The level of documentation needed (e.g., administrative/no amendment necessary, or formal amendment of some type required) should be considered. Your views on whether the substitution would change the intent of existing stipulations and your input on the level of documentation required are requested (to U-922) by March 31, 1990. The anticipated effort required to make the substitutions should also be reported. Based upon your responses, we will determine if the new format should be substituted for existing stipulations on all new leases issued.

You are reminded that RMPs/EISs or amendments are to contain detailed criteria for future changes such as waivers, modifications, and/or exceptions to lease stipulations as prescribed in the Supplemental Program Guidance for Energy and Mineral Resources (BM 1624). The RMP/EIS or amendment should define whether



stipulation changes will be considered significant/substantial, therefore requiring 30-day posting pursuant to the Federal Onshore Oil and Gas Leasing Reform Act, or are minor requiring no posting (see 43 CFR 3101.1-4). By presenting any possibilities of waiver, modifications, and/or exceptions, and describing the circumstances that would lead to such actions in a pre-lease planning/NEPA document that was subject to public review, potential delays in lease issuance/APD approval could be avoided. The RMRCC uniform stipulation formats include clauses in the stipulations to establish circumstances for waivers, modifications, and/or exceptions.

Any questions on this matter should be directed to U-922.

  
Randy D. Heuscher  
Acting State Director

2 Attachments (one set only to each District)

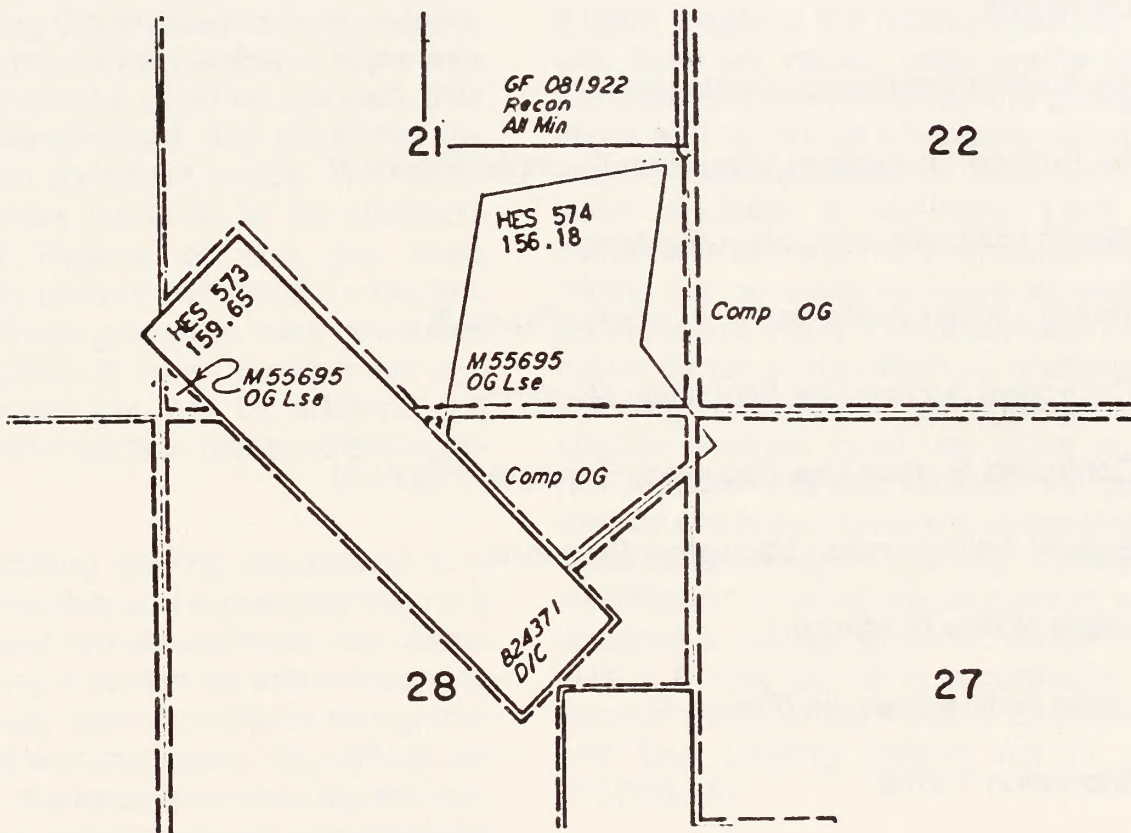
1. RMRCC Brochure (1p)
2. Uniform Format for Oil and Gas Stipulations (14p)

Distribution

Director, 600, 5627 MIB (1)  
SCD, SC-100 (1)



# UNIFORM FORMAT FOR OIL AND GAS LEASE STIPULATIONS



Final Recommendations Prepared By:  
Rocky Mountain Regional Coordinating Committee  
March 1989



**ROCKY MOUNTAIN REGIONAL COORDINATING COMMITTEE  
STIPULATION SUBCOMMITTEE  
STANDARDIZATION OF STIPULATION FORMAT**

**March 1989**

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## GENERAL GUIDANCE

### Introduction

Federal land managers and the oil and gas industry have noted inconsistency and variation in the application of lease stipulations and notices between the various offices of Federal land management agencies throughout the Rocky Mountain States. The Coordinating Committee has been requested to determine if the number of apparently similar stipulations could be reduced, their wording standardized, and guidelines developed for consistent usage. This document provides guidance for the standardization of Federal oil and gas lease stipulations, uniform definitions, format, and wording. These guidelines were developed by the Bureau of Land Management and Forest Service but may be adopted and used by other surface management agencies.

In consolidating existing stipulations to a minimum number and expressing them in a standardized format, emphasis was placed on providing a system for accommodating all necessary lease conditions recognized by Federal land managers. Stipulations are to be part of a lease only when the environmental and planning record demonstrates the necessity for the stipulations. Stipulations, as such, are neither "standard" nor "special" but rather a necessary modification of the terms of the lease.

These forms, given on Pages 14-16, provide for standardized structure, wording, and usage. In order to accommodate the variety of resources encountered on Federal lands, these stipulations are categorized as to how the stipulation modifies the lease

rights, not by the resource(s) to be protected. What, why, and how this mitigation/protection is to be accomplished is determined by the land manager through the land use planning and National Environmental Policy Act (NEPA) analysis.

### Implementation

If upon weighing the relative resource values, there are values, uses, and/or users identified that conflict with oil and gas operations and cannot be adequately managed and/or accommodated on other lands, a lease stipulation is necessary. Land use plans serve as the primary vehicle for determining the necessity for lease stipulations (BLM Manual 1624). Documentation of the necessity for a stipulation is disclosed in planning documents or through site-specific analysis. Land use plans and/or NEPA documents also establish the guidelines by which future waivers, exceptions, or modifications may be granted. Substantial modification or waiver subsequent to lease issuance is subject to public review for at least a 30-day period in accordance with Section 5102.f of the Federal Onshore Oil and Gas Leasing Reform Act of 1987 (FOOGLRA).

Stipulations may be necessary if the authority to control the activity on the lease does not already exist under laws, regulations, or orders. It is important to recognize that the authorized officer has the authority to modify the siting and design of facilities, control the rate of development and timing of activities as well as require other mitigation under Sections 2 and 6 of the standard lease terms (BLM Form 3100-11) and 43 CFR 3101.1-2.



The necessity for individual lease stipulations is documented in the lease-file record with reference to the appropriate land use plan or other leasing analysis document. The necessity for exceptions, waivers, or modifications will also be documented in the lease-file record through reference to the appropriate plan or other analysis. The uniform format for stipulations should be implemented when amendments or revisions of land use plans are prepared or by other appropriate means.

The uniform format for stipulations is designed to accommodate most existing stipulations by providing space to record the local mitigation objectives. The stipulations

have been developed for the categories of: (1) no surface occupancy, (2) timing or seasonal restriction, and (3) controlled surface use. This guidance also includes the use of lease notices. There is also provision for special or unique stipulations, such as those required by prior agreements between agencies when the standardized forms are not appropriate. In all cases, use of the uniform forms for stipulations will require identification of specific resource values to be protected and description of the specific geographical area covered. Stipulations attached to noncompetitive leases will require the applicant's acceptance and signature.

## DEFINITIONS

**Condition of Approval (COA):** Conditions or provisions (requirements) under which an Application for a Permit to Drill or a Sundry Notice is approved.

**Controlled Surface Use (CSU):** Use and occupancy is allowed (unless restricted by another stipulation), but identified resource values require special operational constraints that may modify the lease rights. CSU is used for operating guidance, not as a substitute for the NSO or Timing stipulations.

**Exception:** Case-by-case exemption from a lease stipulation. The stipulation continues to apply to all other sites within the leasehold to which the restrictive criteria applies.

**Lease Notice:** Provides more detailed information concerning limitations that already exist in law, lease terms, regulations, or operational orders. A Lease Notice also addresses special items the lessee should

consider when planning operations, but does not impose new or additional restrictions. Lease Notices attached to leases should not be confused with NTLs--Notices to Lessees. (See 43 CFR 3160.0-5)

**Modification:** Fundamental change to the provisions of a lease stipulation, either temporarily or for the term of the lease. A modification may, therefore, include an exemption from or alteration to a stipulated requirement. Depending on the specific modification, the stipulation may or may not apply to all other sites within the leasehold to which the restrictive criteria applied.

**No Surface Occupancy (NSO):** Use or occupancy of the land surface for fluid mineral exploration or development is prohibited to protect identified resource values. The NSO stipulation includes stipulations which may have been worded as "No Surface Use/Occupancy," "No Surface Disturbance," "Conditional NSO," and "Surface Disturb-



ance or Surface Occupancy Restriction (by location)."

**Notice to Lessees (NTL):** The NTL is a written notice issued by the authorized officer. NTLs implement regulations and operating orders, and serve as instructions on specific item(s) of importance within a State, District, or Area.

**Stipulation:** A provision that modifies standard lease rights and is attached to and made a part of the lease.

**Timing Limitation (Seasonal Restriction):** Prohibits surface use during specified time periods to protect identified resource values. This stipulation does not apply to the operation and maintenance of production facilities unless the findings of analysis demonstrate the continued need for such mitigation and that less stringent, project-specific mitigation measures would be insufficient.

**Waiver:** Permanent exemption from a lease stipulation. The stipulation no longer applies anywhere within the leasehold.



## NO SURFACE OCCUPANCY STIPULATION GUIDANCE

The No Surface Occupancy (NSO) stipulation is intended for use only when other stipulations are determined insufficient to adequately protect the public interest. The land use plan/NEPA document prepared for leasing must show that less restrictive stipulations were considered and determined by the authorized officer to be insufficient. The planning/NEPA record must also show that consideration was given to a no-lease alternative when applying a NSO stipulation. A No Surface Occupancy Stipulation is not needed if the desired protection would not require relocation of proposed operations by more than 200 meters (43 CFR 3101.1-2).

The legal subdivision, distance, location, or geographic feature, and resource value of concern must be identified in the stipulation and be tied to a land use plan and/or NEPA document. Land description may be stated as: the "Entire Lease", Distance from resources and facilities such as rivers, trails, campgrounds, etc.; legal description; geographic feature such as the 100-year floodplain, municipal watershed, percent of slope, etc.; Special Areas with identified boundaries--area of critical environmental concern, Wild and Scenic River, etc., or other description that specifies the boundaries of the lands affected. The estimated percent of the total lease area affected by the restriction must be given if no legal or geographic description of the location of the restriction is given. In other cases the estimated percent is optional. (See Example: Figure 1).

Land use plans and/or NEPA documents should identify the specific conditions for providing waivers, exceptions, or modifications to lease stipulations. Waivers, exceptions, or modifications must be supported by appropriate environmental analysis and documentation, and subject to the same test used to initially justify the imposition of this stipulation. Language may be added to the NSO stipulation form to provide the lessee with information or circumstances under which waivers, exceptions, or modifications would be considered. A waiver, exception, or modification may be approved if the record shows that circumstances or relative resource values have changed or that the lessee can demonstrate that operations can be conducted without causing unacceptable impacts, and that less restrictive stipulations will protect the public interest. Waivers, exceptions or modifications can only be granted by the authorized officer. If the waiver, exception, or modification is inconsistent with the land use planning document, that document must be amended as necessary, or the change disallowed.

If the authorized officer determines, prior to lease issuance, that a stipulation involves an issue of major concern, modification or waiver of the stipulation will be subject to public review (43 CFR 3101.1-4). The land use plan may also identify other cases when a public review is required for waiver, exception, or modification. In such cases, wording such as the following should be added to the stipulation form to inform the lessee of the required public review: "A 30-day public notice period is required prior to modification or waiver of this stipulation."



EXAMPLE

Serial No. \_\_\_\_\_

NO SURFACE OCCUPANCY STIPULATION

No surface occupancy or use is allowed on the lands described below (legal subdivision or other description).

- a. T. 147 N., R. 103 W., 5th P.M.  
Sec. 29: N1/2NW1/4, SW1/4NW1/4
- b. 1,320 feet from scenic and recreational segments of Flathead Wild and Scenic River.

T. 31 N., R. 17 W., PMM  
Sec. 28: E1/2SE1/4

For the purpose of:

- a. Avoidance of steep slopes exceeding 40 percent to avoid mass slope-failure (Management D, Custer Forest Plan, page 55).
- b. Protection of visual and recreational qualities as discussed in Flathead Forest Plan (p. 89) and EIS (p.171).

Any changes to this stipulation will be made in accordance with the land use plan and/or the regulatory provisions for such changes. (For guidance on the use of this stipulation, see BLM Manual 1624 and 3101 or FS Manual 1950 and 2820.)

Form #/Date

FIGURE 1



## TIMING LIMITATION STIPULATION GUIDANCE

The Timing Limitation (often called seasonal) Stipulation prohibits fluid mineral exploration and development activities for time periods less than yearlong. When using this stipulation, assure that date(s) and location(s) are as specific as possible. A timing stipulation is not necessary if the time limitation involves the prohibition of new surface disturbing operations for periods of less than 60 days (43 CFR 3101.1-2).

The land use plan/NEPA document prepared for leasing must show that less restrictive stipulations were considered and determined to be insufficient. The environmental effects of exploration, development, and production activities may differ markedly from each other in scope and intensity. If the effects of reasonably foreseeable production activities necessitate timing limitation requirements, this need should be clearly documented in the record. The record should also show that less stringent, project-specific mitigation may be insufficient. In such cases the stipulation language should be modified on a case-by-case basis to clearly document that the timing limitation applies to all stages of activity.

The legal subdivision, distance, location, or geographic feature, and resource value of concern must be identified in the stipulation and be tied to a land use planning and/or NEPA document. The timing limitations for separate purposes may be written on separate forms or as one combined stipulation. (See Example: Figure 2.) During the review and decisionmaking process for APD's and Sundry Notices, the date(s) and location(s) should be refined based on current information.

Land use plans and/or NEPA documents should identify the specific conditions for providing waivers, exceptions, or modifications to lease stipulations. Waivers, exceptions, or modifications of this stipulation such as continuing drilling operations into a

restricted time period, must be supported with appropriate environmental analysis and documentation, and will be subject to the same test used to initially justify the imposition of this stipulation. Language may be added to the stipulation form to provide the lessee with information or circumstances under which waiver, exception, or modification would be considered. The need for one-time, case-by-case exceptions of timing limitation stipulations may arise from complications or emergencies during the drilling program. The need for timely review and decisionmaking is great in such cases. For this reason, it is desirable that land use plans/NEPA documents clarify what review procedures and other requirements, if any, will apply in such cases.

A waiver, exception, or modification may be approved if the record shows that circumstances or relative resource values have changed or that the lessee can demonstrate that operations can be conducted without causing unacceptable impacts, and that less restrictive stipulations will protect the public interest. Waivers, exceptions or modifications can only be granted by the authorized officer. If the waiver, exception, or modification is inconsistent with the land use planning document, and that document does not disclose the conditions under which such changes will be allowed, the plan or NEPA document must be amended as necessary, or the change disallowed.

If the authorized officer determines, prior to lease issuance, that a stipulation involves an issue of major concern, modification or waiver of the stipulation will be subject to public review (e.g., 43 CFR 3101.1-4). The land use plan may also identify other cases when a public review is required for waiver, exception, or modification. In such cases, wording such as the following should be added to the stipulation form to inform the lessee of the required public review: "A 30-day public notice period is required prior to modification or waiver of this stipulation."



EXAMPLE

Serial No. \_\_\_\_\_

TIMING LIMITATION STIPULATION

No surface use is allowed during the following time period(s). This stipulation does not apply to operation and maintenance of production facilities.

- a. May 1 to June 15.
- b. During periods when soils are water saturated.

On the lands described below:

- a. Section 21, T. 22 N., R.12 E.
- b. Entire Lease.

For the purpose of (reasons):

- a. Protect elk calving area; North Fork Forest Plan (p. 62) and EIS (p. A-34).
- b. Prevent excessive soil erosion and stream sedimentation resulting from construction activities during periods when soils are saturated. This does not apply to operation and maintenance of production facilities; Broad Draw Resource Management Plan (p. 61).

Any changes to this stipulation will be made in accordance with the land use plan and/or the regulatory provisions for such changes. (For guidance on the use of this stipulation, see BLM Manual 1624 and 3101 or FS Manual 1950 and 2820.)

Form #/Date

FIGURE 2



## CONTROLLED SURFACE USE STIPULATION GUIDANCE

The Controlled Surface Use (CSU) Stipulation is intended to be used when fluid mineral occupancy and use are generally allowed on all or portions of the lease area year-round, but because of special values, or resource concerns, lease activities must be strictly controlled. This stipulation replaces stipulations commonly referred to as Limited Surface Use Stipulations. The CSU Stipulation is used to identify constraints on surface use or operations which may otherwise exceed the mitigation provided by Section 6 of the standard lease terms and the regulations and operating orders. The CSU Stipulation is less restrictive than the NSO (No Surface Occupancy) or Timing Limitation stipulations, which prohibit all occupancy and use on all or portions of a lease for all or portions of a year. The CSU Stipulation should not be used in lieu of an NSO or Timing Limitation Stipulation. The use of this stipulation should be limited to areas where restrictions or controls are necessary for specific types of activities rather than all activity.

The stipulation should explicitly describe what activity is to be restricted or controlled, or what operation constraints are required, and must identify the applicable area and the reason for the requirement. The record must show that less restrictive stipulations were considered and determined to be insufficient. The legal subdivision, distance, location, or geographic feature, and resource value of concern must be identified in the stipulation and be tied to a land use plan and/or NEPA document. (See Example: Figure 3)

Land use plans and/or NEPA documents should identify the specific conditions for providing waivers, exceptions, or modifications to lease stipulations. Waivers, exceptions, or modifications of this stipulation must be supported with appropriate environmental analysis and documentation, and will be subject to the same test used to initially justify the imposition of this stipulation. Language may be added to the stipulation form to provide the lessee with information or circumstances under which waiver, exception, or modification would be considered. A waiver, exception, or modification may be approved if the record shows that circumstances or relative resource values have changed or that the lessee can demonstrate that operations can be conducted without causing unacceptable impacts, and that less restrictive stipulations will protect the public interest. Waivers, exceptions or modifications can only be granted by the authorized officer. If the waiver, exception, or modification is inconsistent with the land use planning document, that document must be amended as necessary, or the change disallowed.

If the authorized officer determines, prior to lease issuance, that a stipulation involves an issue of major concern, modification, or waiver of the stipulation will be subject to public review (43 CFR 3101.1-4). The land use plan may also identify when a public review is required for waiver, exception, or modification. In such cases, wording such as the following should be added to the stipulation form to inform the lessee of the required public review: "A 30-day public notice period is required prior to modification or waiver of this stipulation."



**EXAMPLE**

Serial No. \_\_\_\_\_

**CONTROLLED SURFACE USE STIPULATION**

Surface occupancy or use is subject to the following special operating constraints.

Unless otherwise authorized, access to this leasehold will be limited to the established roadway.

On the lands described below:

Entire lease

For the purpose of:

To meet visual quality objectives and to protect semiprimitive recreation values; Grand Junction Resource Management Plan (p. 89).

Any changes to this stipulation will be made in accordance with the land use plan and/or the regulatory provisions for such changes. (For guidance on the use of this stipulation, see BLM Manual 1624 and 3101 or FS Manual 1950 and 2820.)

Form #/Date

**FIGURE 3**



## SPECIAL ADMINISTRATION STIPULATION GUIDANCE

There is no required or suggested uniform format for these stipulations. They are usually provided by another agency or organization. However, other agencies are to be encouraged to use the uniform stipulation format.

Special Administration Stipulations are used in situations where the three uniform stipulation forms or Lease Notices do not adequately address the concern. Special Administration Stipulations should be used only when special external conditions, such as pre-existing agreements with other agencies, require use of a one-of-a-kind stipulation that is not used in any other area or situation. The resource use or value, location, and specific restrictions must be clearly identified. In addition, the external agency, agreement or pre-existing use that dictates the special restrictions must be identified. The stipulation should state if and under what circumstances a waiver, exception, or modification may be allowed

### EXAMPLES OF SPECIAL ADMINISTRATION STIPULATIONS ARE:

1. Stipulation for Lands of the National Forest System Under Jurisdiction of Department of Agriculture (Bureau of Land Management IM 84-415).
2. Stipulation for leases subject to a Highway Material Site Right-of-Way (Bureau of Land Management, New Mexico; Agreement with New Mexico Highway Department).
3. New Mexico Potash Stipulation for Oil and Gas Leases (Department of Interior, Federal Register Notice, November 5, 1975).
4. Jackson Hole Area Oil and Gas Lease Stipulation (Department of the Interior, Federal Register Notice, August 30, 1947).
5. White Sands Missile Range Stipulation (Bureau of Land Management, New Mexico; Agreement with Army Corps of Engineers).
6. Lease Stipulation, Bureau of Reclamation, Form 3109-1, (Bureau of Land Management, Utah; Agreement with Bureau of Reclamation).
7. Special State of Idaho Stipulations; Bureau of Aeronautics and Public Transportation (Bureau of Land Management, Idaho; Agreement with State of Idaho).



## LEASE NOTICE GUIDANCE

Lease Notices are attached to leases to transmit information at the time of lease issuance to assist the lessee in submitting acceptable plans of operation, or to assist in administration of leases. Lease Notices are attached to leases in the same manner as stipulations, however, there is an important distinction between Lease Notices and Stipulations. Lease Notices do not involve new restrictions or requirements. Any requirements contained in a Lease Notice must be fully supported in either a law, regulations, standard lease terms, or onshore oil and gas orders. A Lease Notice is not signed by the lessee. Guidance in the use of Lease Notices is found in BLM Manual 3101 and 43 CFR 3101.1-3.

A lease notice should contain the following elements: (1) the resource/use/value; the lands affected, if applicable; (2) the

reason(s); (3) the effect on lease operations or what may be required; and (4) a reference to the lease term, regulation, law or order from which enforcement authority is derived.

If a situation or condition is known to exist that could affect lease operations, there should be full disclosure at the time of lease issuance via a Lease Notice. If a lessee may be prevented from extracting oil and gas through a prohibition mandated by a specific nondiscretionary statute, such as the Endangered Species Act, then a stipulation may be used even though a Lease Notice would be sufficient. It is at the discretion of the authorized officer whether a situation is sufficiently sensitive to warrant the use of a lease stipulation. An examples of a Lease Notice is found in Figure 4.



**EXAMPLE**

Serial No. \_\_\_\_\_

**LEASE NOTICE**

A 5-acre graveyard is located in the NW1/4NW1/4, Section 6, T. 5 N., R. 31 W., 6PM. In accordance with Section 6 of the lease terms and 43 CFR 3101.1-2, exploration and development activities must occur outside the graveyard.

Form #/Date

**Figure 4**



Serial No. \_\_\_\_\_

**NO SURFACE OCCUPANCY STIPULATION**

No surface occupancy or use is allowed on the lands described below (legal subdivision or other description).

For the purpose of:

Any changes to this stipulation will be made in accordance with the land use plan and/or the regulatory provisions for such changes. (For guidance on the use of this stipulation, see BLM Manual 1624 and 3101 or FS Manual 1950 and 2820.)

Form #/Date



Serial No. \_\_\_\_\_

**TIMING LIMITATION STIPULATION**

No surface use is allowed during the following time period(s). This stipulation does not apply to operation and maintenance of production facilities.

On the lands described below:

For the purpose of (reasons):

Any changes to this stipulation will be made in accordance with the land use plan and/or the regulatory provisions for such changes. (For guidance on the use of this stipulation, see BLM Manual 1624 and 3101 or FS Manual 1950 and 2820.)

Form #/Date



Serial No. \_\_\_\_\_

**CONTROLLED SURFACE USE STIPULATION**

Surface occupancy or use is subject to the following special operating constraints.

On the lands described below:

For the purpose of:

Any changes to this stipulation will be made in accordance with the land use plan and/or the regulatory provisions for such changes. (For guidance on the use of this stipulation, see BLM Manual 1624 and 3101 or FS Manual 1950 and 2820.)

Form #/Date





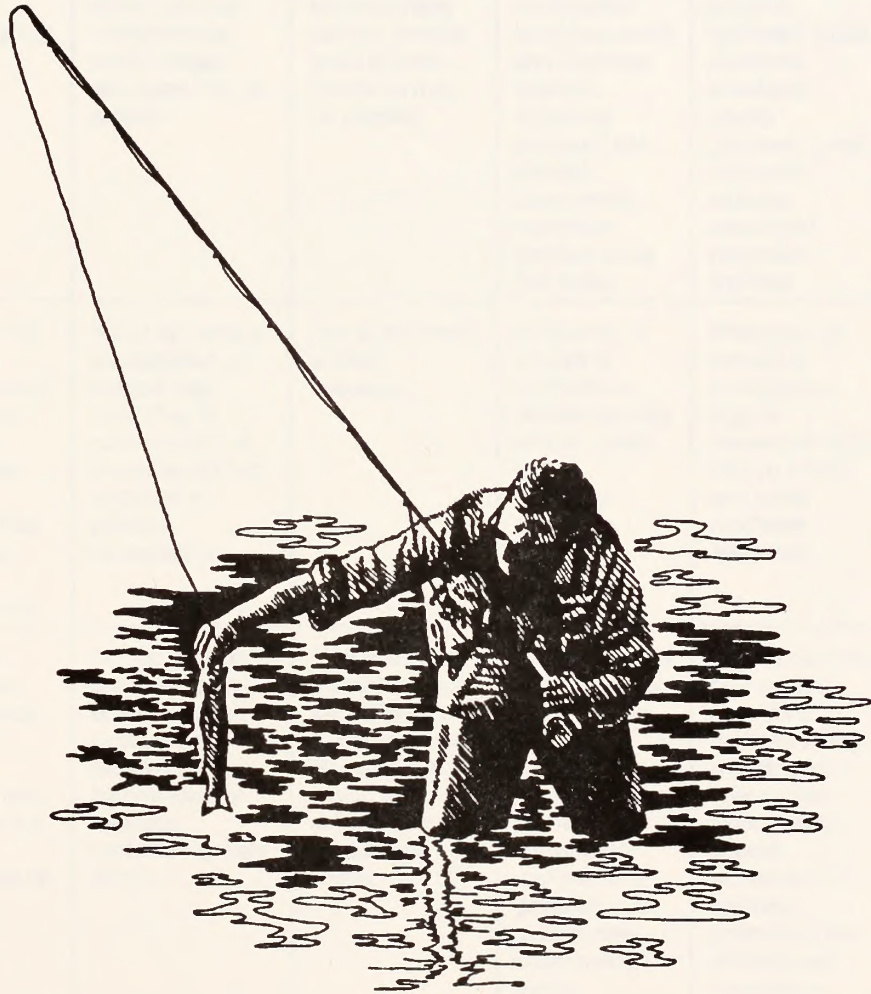


# APPENDIX 5

## RECREATION

### CONTENTS:

*Recreation Opportunity Spectrum Criteria*









**ROS SETTING FACTORS**

FACTOR	PRIMITIVE	SEMI PRIMITIVE NON MOTORIZED	SEMI PRIMITIVE MOTORIZED	ROADED NATURAL	RURAL	MODERN URBAN
Remoteness	At least 3 miles from all roads or railroads	At least 0.5 mile from all roads or railroads	Within 0.5 mile of primitive roads and at least 0.5 mile from better than primitive roads.	Within 0.5 mile of better than primitive roads.	No distance criteria	No distance criteria
Size Criteria	5,000 acres	2,500 acres	2,500 acres	No size criteria	No size criteria	No size criteria
Evidence of Human Use	Unmodified natural environment; surface disturbance rare and small; trails okay; no roads; structures small and rare.	Setting may have subtle modifications; surface disturbance limited and small, little or no evidence of primitive roads or motorized use, small isolated structures may be present.	Setting may have subtle modifications; surface disturbance limited and small, primitive roads and motorized use are present; small isolated structures may be present.	Moderate evidence of human modification harmonious with landscape; surface modification common; roads and highways present; structures scattered and visually subordinate; recreation facilities small and rustic.	Setting substantially modified; surface modifications typical; roads and highways present; cultivated lands common; structures readily apparent, small dominant clusters, developed recreation facilities.	Natural setting subordinate to culturally modified landscapes.
Social Setting	Fewer than six parties encountered on trail per day; fewer than three parties visible at campsite; little evidence of previous recreation use.	Six to ten parties encountered on trail per day; fewer than 6 parties visible at campsite; limited evidence of previous recreation use.	Low to moderate contact frequency.	Frequency of contact is moderate in developed sites and on roads; low to moderate elsewhere.	Frequency of contact is moderate to high in developed sites and on roads and trails; moderate elsewhere.	Large numbers of users on-site and in nearby areas.
Managerial Setting	No on-site controls; only off-site; on-site facilities for resource protection only; no facilities for user convenience or safety.	Off-site controls preferred, on-site controls subtle; facilities are avoided but may be provided for resource protection or user safety.	On-site controls present but subtle; facilities for resource protection and user safety, law enforcement occasionally visible.	On-site controls noticeable, but harmonious with natural environment; rustic facilities for user convenience and resource protection, law enforcement occasionally visible.	On-site controls obvious and numerous facilities widely available for user convenience, safety, special activities and resource protection; law enforcement moderately visible.	On-site controls are numerous; facilities for intensive use are provided. Law enforcement is highly visible.







# APPENDIX 6

## RIPARIAN

### CONTENTS:

*BLM Utah Riparian Policy of 1988*









## INSTRUCTION MEMORANDUM UT 89-192

### UTAH STATE OFFICE POLICY RIPARIAN AREA MANAGEMENT POLICY IM UT 87-261 REVISED FEBRUARY 28, 1988

On January 22, 1987, Director Burford signed the riparian area management policy that provides management direction in all matters that involve riparian areas.

The definition of what a riparian area is has changed from the definition found in the manual. The main differences are the need for permanent water influence and the exclusion of ephemeral streams or washes that do not exhibit the presence of riparian vegetation. Areas which have the potential to support riparian vegetation but which are no longer supporting such vegetation or remnants thereof should be managed to enhance and improve riparian values. Also by definition, most wetland areas are included in the management policy.

It must be kept in mind, however, that the absence of characteristic vegetation may be the result of land use practices and not the lack of free water. Also, some ephemeral streams have the potential for permanent flow under different or proper management practices. An analysis of each site must be made to determine if the area should be exempt from riparian management based on the definition or whether the area should be managed based on its capability to support riparian vegetation.

Management goals must be compatible with the ecological potential of the particular area. Present knowledge about this complex subject is incomplete and will be improved as we gain experience and confidence in documenting various riparian area ecological conditions. We expect this policy to be updated and guidelines integrated as needed.

The following five items are guidelines that should be adhered to unless supporting documentation indicates that proposed actions would be of greater public benefit and other alternatives would not achieve the same result without degradation of the riparian area involved:

1. Riparian areas must be maintained in a healthy (vigorous growth and reproduction) vegetal condition. Woody plants must not show signs of hedging and must be reproducing (uneven age plants) within the riparian area. Vegetation utilization limits must be tied to specific species and specific riparian sites. Many factors such as grazing systems, seasons of use, soil types, type of vegetation, water table levels, timing of precipitation, and growing season determines the timing and amount of plant utilization that can occur while still improving riparian values. Sufficient vegetation must remain in the riparian area to allow for the full function of the floodplain. This includes enough vegetation to:

- 1) Dissipate stream energies and reduce erosive forces,
- 2) Allow sediment to deposit and build banks during flood stages,
- 3) Develop root masses to stabilize stream banks,
- 4) Regulate sunlight incident on the stream surface,
- 5) Reduce heat loss and icing during cold winter months, and,
- 6) Produce cover and food for aquatic organisms and native and domestic terrestrial animals.

2. There shall be no new surface disturbing activities within 100 meters of riparian areas unless it can be shown that (1) there is no practicable alternative, (2) that all long-term impacts are fully mitigated, or (3) that the construction is an enhancement to the riparian area.

3. Riparian areas are to be enhanced at every opportunity. Enhancement will be attempted through management methods unless it is obvious that structural methods are the only feasible method of enhancement. An example of structural needs would be where headcutting through a riparian area is lowering the water table resulting in destruction of the riparian zone.



## *Appendix 6 - Riparian Resources*

4. Objectives for enhancement, protection, preservation, development, and restoration of riparian areas shall be included in all land use and/or activity plans. These objectives shall be identified on key areas and monitored on a regularly scheduled basis to assure that the objectives of planning and/or activity plan documents are being accomplished.

5. Riparian areas will not be disposed of through sale, State Indemnity Selection, Desert Land Entries, or other disposal actions unless it can be definitely shown that the areas are small, isolated, and cannot be managed through agreement with state agencies, other federal agencies, or interested conservation groups.

Exchanges with private parties will not be permitted unless it can be definitely shown that riparian areas of superior public value are being acquired, riparian areas are being enhanced, or that the areas being exchanged are small, isolated, and cannot be managed through agreement with state agencies, other federal agencies, or interested conservation groups. Exchanges with the state may be proposed where the riparian areas are part of a large upland tract. Exchanges which attempt to select only riparian areas may not be allowed.

Other laws and agreement which also affect management of riparian areas include the Fish and Wildlife Coordination Act, the Clean Water Act, Rivers and Harbors Act, E.O.'s 11990 and 11988, and the Master Memorandum of Understanding with the U.S. Fish and Wildlife Service dated December 1986. While this list is not complete, it will serv to alert managers of compliance needs.



# APPENDIX 7

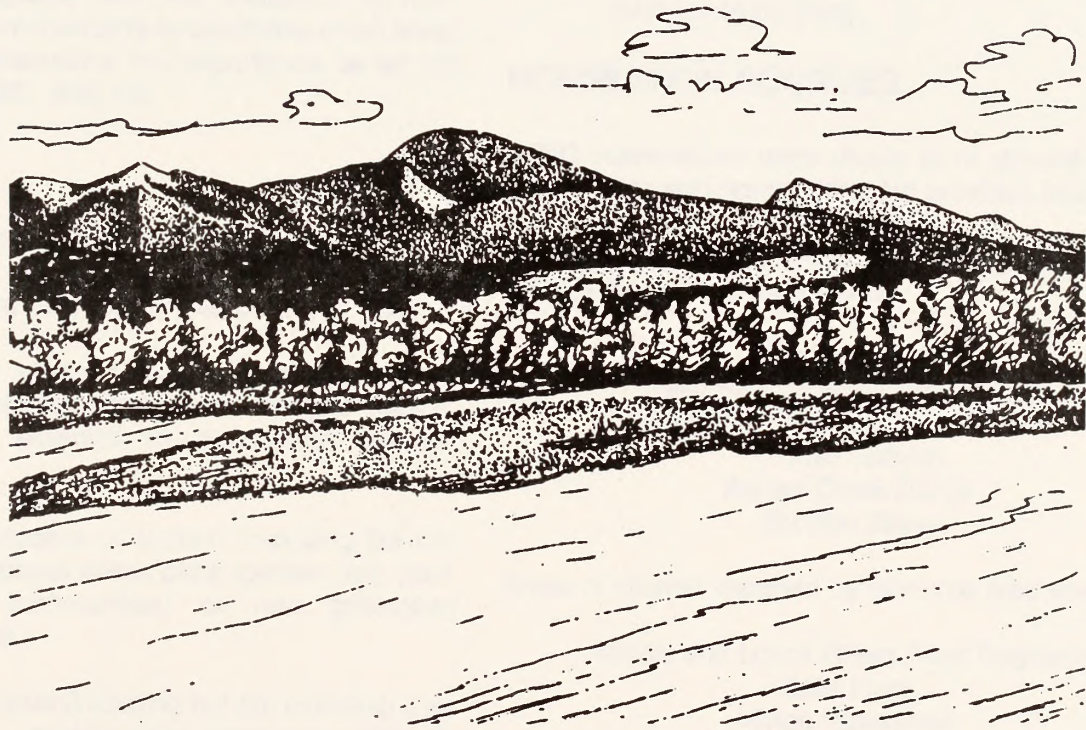
## SPECIAL EMPHASIS AREAS

### CONTENTS:

*Areas of Critical Environmental Concern (ACEC) Analysis*

*Wild and Scenic River Eligibility Analysis*

*Wild and Scenic River Suitability Analysis*









## **ANALYSIS OF THE DIAMOND MOUNTAIN RESOURCE AREA FOR AREAS OF CRITICAL ENVIRONMENTAL CONCERN**

The Federal Land Policy and Management Act requires that priority shall be given to the designation and protection of areas of critical environmental concern (ACECs). The ACECs are identified, evaluated and designated through the Bureau's resource management planning (RMP) process. An ACEC designation is the Bureau's principal designation for public lands where special management is required to protect important resource values. The objective of an ACEC designation is to highlight areas where special management attention is needed, serving as a reminder that significant resource values exist which must be accommodated when future management actions and land use proposals are considered near or within an ACEC.

### **GENERAL ACEC CRITERIA**

To be considered as a potential ACEC and analyzed in this RMP, the resource area was evaluated by RMP interdisciplinary team members to determine which areas met the criteria of relevance and importance, as set out in regulations 43 CFR 1610.7-2.

#### **Relevance**

An area must contain one or more of the following:

- A significant historic, cultural, or scenic value;
- A fish and wildlife resource (including but not limited to special status animal species' habitat, or habitat essential for maintaining species' diversity);
- A natural process or system (including but not limited to special status plant species; relic plant or plant communities; or rare geological features); or
- Natural hazards (including but not limited to area of flooding, unstable soils, dangerous cliffs). A hazard caused by human action may meet this criteria if it is determined through the RMP process that it has become part of a natural process.

#### **Importance**

The value, resource, system process, or hazard must have substantial significance and is characterized by one or more of the following:

- It has more than locally significant qualities which give it special work, meaning, distinctiveness, consequence, or cause for concern, especially compared to a similar resource value.
- It has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change.
- It has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA.
- It has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare.
- It poses a significant threat to human life and safety or to property.

### **NOMINATION SOURCES**

ACEC nominations were drawn from several sources. The sources and nominations are provided below:

Existing ACECs and areas of interest within existing Management Framework Plans:

Red Creek ACEC  
Green River Scenic Corridor ACEC  
Red Mountain ACEC Nomination  
Crouse Canyon  
Ashley Creek Gorge  
Six Mile Draw

Areas of interest identified by resource area specialists:

Middle and Lower Green River Segments  
Little Hole  
Myton Watershed  
Browns Park  
Dry Fork Canyon  
Red Fleet  
Pariette Wetlands

Areas identified from public sources as a result of the public scoping period at the outset of the DMRA RMP. DMRA did not actively solicit nominations from state or



Appendix 7 - Special Emphasis Areas

local government entities; however, the majority of the nominations from the resource area specialists and public sources are supported by state agencies. Areas identified by the public are:

<u>Nomination</u>	<u>Nominator</u>
South-facing Uinta Mountains	Uinta Mountain Club
Nine Mile Canyon Castle Cove	Utah State Archaeology Society
Lears Canyon	The Nature Conservancy
Red Mountain	The Nature Conservancy

Table A7-1 provides a summary of the initial eligibility assessment of nominations received for possible designation as Areas of Critical Environmental Concern. The remaining public lands within the resource area were determined to lack in values, resources, systems and/or processes warranting further consideration under the Bureau's ACEC criteria and guidance.

**TABLE A7-1:  
INITIAL ELIGIBILITY ASSESSMENT OF ACEC NOMINATIONS**

Nomination	Federal Acres	Eligibility Criteria				
		Human Value	Fish or Wildlife Resource	Natural System or Process	Natural Hazard	Eligible for Further Analysis
Ashley Creek Gorge <sup>2</sup>		X		X		Y
Browns Park <sup>1</sup>	89,550	X	X	X		Y
Castle Cove <sup>2</sup>	200			X		Y
Crouse Canyon <sup>1</sup>		X				Y
Dry Fork Canyon <sup>2</sup>		X				Y
Green River Scenic Corridor <sup>1</sup>	19,400	X	X			Y
Lears Canyon	1,375			X		Y
Little Hole <sup>1</sup>	8,200					Y
Middle and Lower Green River	37,500	X	X	X		Y
Myton Watershed	98,890			X	X	N <sup>3</sup>
Nine Mile Canyon	38,470	X	X			Y
Pariette Wetlands	8,590		X	X		Y
Red Creek	24,400				X	Y
Red Fleet <sup>2</sup>		X				Y
Red Mountain (BLM) <sup>2</sup>	8,950	X				Y
Red Mountain (TNC) <sup>2</sup>	1,500			X		Y
Six Mile Draw	1,500	X				N <sup>3</sup>
South-facing Uintas <sup>2</sup>	97,250	X	X	X		N <sup>3</sup>

1 The Browns Park complex contains portions of these nominations.  
 2 The Red Mountain-Dry Fork Complex contains portions of these initial nominations  
 3 The following section describes why these areas did not qualify for further analysis.



## **DISCUSSION OF NONELIGIBLE NOMINATIONS**

Three nominations, as presented, failed either to meet the ACEC criteria in whole or in part. These areas are identified in Table A7-1 above as N.

Myton Watershed was nominated to draw management attention to the considerable salts and sediments from soils within the watershed to the Green River and considerable flood potential to the Pariette Wetlands, a multi-million dollar management area of the resource area. The nomination also included a small, yet potentially significant, portion of habitat for the special status plant species Sclerocactus glaucus, federally listed as threatened.

On further review, it was determined that the small habitat for the special status plant species, extending from the Pariette Wetlands nomination would be included in that nomination. Therefore, the remaining area no longer meets either the relevance or importance criteria.

Six Mile Draw area was presented in the Ashley-Duchesne Management Framework Plan as a Class II VRM area due to its essentially roadless condition. Management decisions were made in that document to ensure the roadless condition remained unchanged. The resource values, systems, processes involved in this area are typical of the south-facing alluvial benches of the Uinta Mountains.

Therefore the Six Mile Draw area was dropped from further consideration as an ACEC because it did not meet the relevance and importance criteria. Management objectives; however, should continue to ensure the undisturbed nature of the area.

A principal concern resulting in the south-facing Uinta footslopes nomination was the need to protect and enhance winter deer range within the Uinta Basin. In the analysis of this nomination, it was determined that the winter range resource value although critical is relatively undisturbed and rather extensive, extending along the southern flank of the basin. When compared to the strategic location of critical deer winter range in Browns Park, serving as the principal wintering area for the northern Uinta mountains, this resource value was determined to not meet the importance criteria. The other resource values and processes were determined to meet the ACEC criteria. That portion of the south-facing Uinta footslopes nomination was included in the Red Mountain-Dry Fork nomination.

## **SPECIAL AREAS CARRIED FORWARD FOR FURTHER CONSIDERATION**

Following initial analysis of these nominations, it was determined that for clarification of management objectives, several of these nominations could be combined into one area, acreages refined to include the highest resource values. Table A7-2 is a compilation of nominations into their considered category and a brief statement as to its continuance.



**TABLE A7-2:  
SPECIAL AREAS CARRIED FORWARD FOR FURTHER CONSIDERATION**

Nomination	Federal Acres	Outstanding Values	Other Comments
Browns Park Complex	55,719	<p>Critical deer winter range due to strategic location on north slope of Uinta Mountains.</p> <p>Area very scenic - combining dark red canyon walls with green deciduous riparian vegetation, white-water rapids and deep, quiet fishing holes.</p> <p>Visitors come from around the world to fish at this nationally ranked Class I trout fishery.</p> <p>High cultural values associated with Little Hole area.</p> <p>Excellent habitat for special status species: bald eagle, peregrine falcon, Colorado cutthroat trout, river otter, and the plant species: Ute ladies' tresses (creamy ladies' tresses).</p>	<p>Nomination includes existing Green River Scenic Corridor, recommended for inclusion in National Wild and Scenic Rivers Systems.</p> <p>Nomination also includes initial Little Hole and Crouse Canyon.</p>
Lears Canyon	1,375	<p>Contributes significantly to the Intermountain Region's biological diversity being a very good representative of the Douglas fir-pinyon-juniper vegetation communities.</p>	
Middle and Lower Green River	12,665	<p>Provides critical habitat for 4 special status fish species: Colorado Squawfish, humpback chub, bonytail chub, and razorback sucker.</p> <p>Provides habitat for 11 special status species: bald eagle, peregrine falcon, whooping crane, western yellow-billed cuckoo, Swainson's hawk, western snowy plover, long-billed curlew, white-faced ibis, spotted bat, river otter, and Uinta Basin hookless cactus.</p> <p>Lower segment especially has scenic qualities and undeveloped natural areas producing high quality recreation opportunities.</p>	<p>Segment between Dinosaur National Monument and Ouray, Utah (the "Middle" segment) lacks clear BLM control. Private, National Wildlife Refuge, and Indian Reservation lands owns and/or manages 70% of river bank.</p> <p>Public lands on the east side both the middle and lower segments administered by Book Cliffs Resource Area of Vernal District.</p> <p>Immediately upstream of the Desolation and Grays Canyons, designated a National Historic Landmark (1969), a candidate for study in NW&amp;SR System, and included in Desolation Canyon Wilderness Study Area (recommended as WA by BLM, 1990).</p>
Nine Mile Canyon	50,784	<p>Attracts numerous visitors from outside areas for cultural and historical research and enjoyment.</p> <p>Offers exceptional opportunities for interpretation of outstanding historical and cultural properties, sight-seeing of an area rich in scenic and cultural appeal.</p> <p>Area very scenic. Presently includes VRM Class II lands due to steep, red-walled canyons, contrasting with pleasing rural and historical farmsteads.</p> <p>Includes habitat for 2 federally listed plant species - endemic to the area: Toad-flax cress and Uinta Basin hookless cactus.</p>	



**TABLE A7-2 (Continued):  
SPECIAL AREAS CARRIED FORWARD FOR FURTHER CONSIDERATION**

Nomination	Federal Acres	Outstanding Values	Other Comments
Pariette Wetlands	11,606	<p>Area contributes significantly to the area's biological diversity through the representation of plant and animal species associated with wetlands habitat.</p> <p>Includes habitat for one of the densest concentrations of the federally-listed plant species: Uinta Basin hookless cactus.</p>	<p>Offers public visitors a look at a unique wildlife management aspect for the Bureau -- wetlands management and waterfowl production.</p> <p>Nomination expanded to include 2,600 acres of the initial Myton Watershed for special status plant species habitat: Uinta Basin hook-less cactus.</p> <p>Seek interest of private landowners to possibly acquire private inholdings and water rights.</p>
Red Creek	24,400	<p>Fragile geologic and resultant soil development contributes one of the highest sediment yields directly to the Green River (111 tons annually).</p> <p>Red Creek itself has excellent potential for exhibiting riparian development and enhancement.</p>	<p>Sediment-loading of the Green River has an immediate adverse affect on the Class I trout fisheries in Browns Park.</p> <p>Majority of watershed within adjoining ACEC in Rock Springs, Wyoming.</p> <p>Red Creek channel owned by state of Utah and administered by Division of Wildlife, who is actively managing for riparian values. Support for this nomination has been expressed by UDWR.</p>
Red Mountain-Dry Fork	25,827	<p>Outstanding cultural values associated with Dry Fork Canyon.</p> <p>Includes national significant paleontological values in Red Fleet area.</p> <p>Area offers 2 outstanding examples of Intermountain Region vegetation communities - Ponderosa pine-bluegrass and sagebrush-mountain browse. Such communities add to the biodiversity of the region.</p> <p>Dry Fork and Red Mountain areas high scenic values due to dramatic sandstone outcrops and deep red mountain uplifts.</p> <p>Ashley Creek Gorge has high value as riparian and scenic area, offering high quality recreation opportunities.</p>	<p>Ashley National Forest has considered special management for Ashley Creek Gorge within forest boundaries.</p> <p>Area residents express strong support for the protection of cultural and water resources values (including riparian) contained within this nomination.</p> <p>This nomination combines the initial nominations of Dry Fork, Castle Cove, Red Fleet, and both Red Mountain areas.</p>

The areas outlined in Table A7-2 above are analyzed under each alternative in the RMP. Management prescriptions, based on the opportunities found in the Management Situation Analysis (MSA) are also developed and analyzed in this RMP.



## CRITERIA FOR WILD AND SCENIC RIVERS ELIGIBILITY

### INVENTORY LIST

The following sources were used to develop the Diamond Mountain Resource Area inventory list.

- USDI, National Park Service, Nationwide Rivers Inventory list of 1982.
- American Rivers Outstanding Rivers List of 1988.
- Vernal District list.
- Public nominations obtained during the Diamond Mountain RMP scoping public meetings.
- Professional knowledge of District and Area staff, obtained over years of field experience in the resource area.

### DETERMINATION OF ELIGIBILITY

- A river as defined must be a flowing body of water or estuary; or section, portion, or tributary thereof, including rivers, streams, creeks, and small lakes.

Dry washes which have flash flooding do not qualify and will not be considered.

Standing riparian areas do not qualify under the above definition and will not be considered.

- Free-flowing is defined as an existing or flowing body of water, or estuary, or section, in a natural condition without impoundments, diversions, straightening, rip-rapping, or other modification of the waterway. The presence of impoundments above and/or below a river segment, or existing minor dams and diversion structures within a segment will not, of and by themselves, render a segment ineligible.
- It must possess at least one outstandingly remarkable value that relates to the river. These values include scenic, recreational, geological, fish and wildlife, historical, cultural, or other similar values, such as paleontological, ecological, biological, botanical, hydrological, scientific, and research.
- A river/stream segment must cross, at some point, lands administered by BLM. A segment will not be determined to be eligible for further study by BLM if they do not have jurisdiction

along at least some portion of the stream segment.

## GUIDELINES FOR ASSESSING OUTSTANDINGLY REMARKABLE VALUES

### Geographic Region of Consideration

All potential Outstandingly Remarkable Values were weighed against similar values throughout the region of consideration.

For the purposes of analysis here, the Upper Colorado River Drainage as defined by U.S.G.S. Hydrologic Maps were used to determine significance.

### Outstandingly Remarkable Values Under Consideration

#### Scenic

The landscape elements of landform, vegetation, water, color, influence of adjacent scenery, scarcity, and cultural modifications are unique and harmonious. The rating area must be scenic quality "A" in VRM Class I or II in the Visual Resource Inventory Handbook, H-8410-1. Scenery and visual attractions should be highly diverse over the majority of the river or river segment length and not common to other rivers in the geographic region.

#### Recreational

Recreational opportunities are or have the potential to be unique enough to attract visitors from outside the geographic region. Visitors would be willing to travel long distances to use the river resources for recreational purposes. River-related opportunities could include, but not be limited to, sightseeing, wildlife observation, photography, hiking, fishing, hunting, and boating.

Interpretive opportunities should be exceptional and attract or have the potential to attract visitors from outside the geographic region.

#### Geologic

The river or area within the river corridor contains an example(s) of a geologic feature, process, or phenomena that is rare, unusual, one-of-a-kind, or unique to the geographic region. The feature(s) may be in an unusually active stage of development, represent a "textbook" example and/or represent a unique or rare combination of geologic features (erosional, volcanic, glacial, and other geologic structures).



## Appendix 7 - Special Emphasis Areas

### Fish

Fish values may be judged on the relative merits of either fish populations or habitat - or a combination of these river-related conditions.

The river is nationally or regionally one of the top producers of resident and/or anadromous fish species. Of particular significance is the presence of populations of federally listed or candidate threatened and endangered species.

The river provides exceptionally high quality habitat for fish species indigenous to the region. Of particular significance is habitat for federally listed or candidate threatened and endangered species.

### Wildlife

Wildlife values may be judged on the relative merits of either wildlife populations or habitat - or a combination of these conditions.

The river or area within the river corridor contains nationally or regionally important populations of indigenous wildlife species. Of particular significance are species considered to be unique or populations of federally listed or candidate threatened and endangered species.

The river or area within the river corridor provides exceptionally high quality habitat for wildlife of national or regional significance, or may provide unique habitat or a critical link in habitat conditions for federally listed or candidate threatened and endangered species.

### Historic

The river or area within the river corridor contains a site(s) or feature(s) associated with a significant event, an important person, or a cultural activity of the past that was rare, unusual, or one-of-a-kind in the region. Of particular significance are sites or features listed in, or are eligible for inclusion in, the National Register of Historic Places.

### Cultural

The river or area within the river corridor contains a site(s) where there is evidence of occupation or use by native Americans. Sites must be rare, one-of-a-kind, have unusual characteristics or exceptional human interest value(s). Sites may have national or regional importance for interpreting prehistory; may be rare and represent an area where a culture or cultural period was first identified and described; may have been used concurrently by two or more cultural groups; or may have been used by cultural groups for rare or sacred purposes. The river or segment should be an integral part of the occupation and not just a coincidental occurrence.

### Other Similar Values

No specific evaluation guidelines have been developed for the "other similar values" category. Additional river-related values include hydrologic, ecologic/biologic diversity, paleontologic, botanic, and scientific study opportunities.



**TABLE A7-3:  
STREAMS AND RIVERS CONSIDERED FOR WILD AND SCENIC RIVER ELIGIBILITY**

1.	Allen Draw	39.	Jones Hollow
2.	Anderson Hollow	40.	Kettle Creek
3.	Argyle Creek	41.	Lake Creek
4.	Ashley Creek	42.	Lambson Draw
5.	Beaver Creek	43.	Little Davenport Creek
6.	Bender Draw	44.	Little Brush Creek
7.	Big Draw	45.	Logge Canyon
8.	Big Springs	46.	Lower Water Hollow
9.	Big Brush Creek	47.	Marshall Draw
10.	Birch Creek	48.	Martin Draw
11.	Blair Draw	49.	Mill Canyon
12.	Bowrey Draw	50.	Minnie Maud Creek
13.	Castle Peak Creek	51.	Mosby Creek
14.	Clay Basin Creek	52.	Nine Mile Creek
15.	Collier Hole Creek	53.	O-Wi-Yu-Kuts Creek
16.	Cow Creek	54.	Pariette Draw
17.	Crouse Creek	55.	Pigeon Creek
18.	Crow Creek	56.	Pinnacle Canyon
19.	Crumb Canyon	57.	Pot Creek
20.	Deep Creek	58.	Red Creek
21.	Diamond Gulch	59.	Sage Creek
22.	Dry Fork Creek	60.	Sand Wash Creek
23.	Dutch John Canyon	61.	Sears Creek
24.	East Cottonwood Canyon	62.	Sheep Wash Creek
25.	Eight Mile Flat Creek	63.	Simons Creek
26.	Ford Creek	64.	Smelter Creek
27.	Four Mile Creek	65.	South Branch Diamond Gulch
28.	Galloway Creek	66.	Spring Creek
29.	Garden Creek	67.	Steinaker Creek
30.	Gorge Creek	68.	Tolivers Creek
31.	Goslin Creek	69.	Twelve Mile Wash Creek
32.	Green River	70.	Upper Water Hollow
33.	Grindstone Wash	71.	Water Canyon
34.	Halfway Hollow Creek	72.	Wells Draw Creek
35.	Jack Canyon	73.	West Fork Willow Creek
36.	Jackson Creek	74.	Willow Spring Draw
37.	Jesse Ewing Canyon	75.	Willow Creek (Browns Park)
38.	Jones Hole Creek	76.	Willow Creek (Indian Canyon)



**TABLE A7-4:  
ELIGIBILITY ASSESSMENT FOR RIVERS IDENTIFIED FOR POSSIBLE INCLUSION AS COMPONENTS OF  
THE NATIONAL WILD AND SCENIC RIVER SYSTEM**

River or Stream Segment Including Description	Reason for Consideration	Total Length (Miles)	Free Flowing Values		Outstandingly Remarkable Values	Eligibility Determination		Potential Classification	Description of Values and Remarks
			Yes	No		Eligible	Non-Eligible		
<u>Allen Draw</u> Headwaters to confluence with Pot Creek	C	5.0	X				X		Dry most of year. No Outstandingly remarkable values were identified.
<u>Anderson Hollow</u> Headwaters to confluence with West Fork of Willow Creek	C	1.8	X		A	X	X		The segment does not cross land administered by BLM.
<u>Argyle Creek</u> Headwaters to Carbon County line (Resource Area Boundary)	C	21.5	X			X		X	Has Class A scenery and is VRM Class II. It has been determined that visual attractions are highly diverse and should be considered as being Outstandingly Remarkable. Potential classification has been identified as recreational based on disturbances along the river corridor.
<u>Ashley Creek</u> Forest Boundary to confluence with Green River	C	25.5	X				X		Has Class A scenery and is VRM Class II for approximately 1.5 miles below the forest boundary. Below that scenery is Class B & C with VRM Class II, III, and IV. The majority of the creek has been channeled. There are no outstandingly remarkable values.
<u>Beaver Creek</u> Section from Colorado state line to Colorado state line	C	1.5	X				X		No Outstandingly Remarkable Values were identified.
<u>Bender Draw</u> Headwaters to confluence with Willow Creek	C	1.4	X				X		Dry Wash. No Outstandingly Remarkable Values were identified.
<u>Big Brush Creek</u> Forest boundary to confluence with Green River	C	20.0		X			X		Red Fleet Reservoir is on Big Brush Creek. Its location eliminates this creek from further consideration in the Wild and Scenic River process. No Outstandingly Remarkable Values were identified.
<u>Big Draw</u> Headwaters to National Monument boundary	C	1.4	X				X		No Outstandingly Remarkable Values were identified.
<u>Big Springs</u> Source to forest boundary	C	.5		X			X		Area consists of several springs in the headwaters of Goslin Creek. No Outstandingly Remarkable Values were identified.



**TABLE A7-4 (Continued)**  
**ELIGIBILITY ASSESSMENT FOR RIVERS IDENTIFIED FOR POSSIBLE INCLUSION AS COMPONENTS OF**  
**THE NATIONAL WILD AND SCENIC RIVER SYSTEM**

River or Stream Segment Including Description	Reason for Consideration	Total Length (Miles)	Free Flowing Values		Outstandingly Remarkable Values	Eligibility Determination	Potential Classification	Description of Values and Remarks
			Yes	No				
<u>Birch Creek</u> Headwaters to confluence with Willow Creek	C	3.4	X		X	W I S I R I	Dry Wash. No Outstandingly Remarkable Values were identified.	
<u>Blair Draw</u> Headwaters to confluence with Stone Bridge Draw	C	6.8	X		X		Dry Wash. No Outstandingly Remarkable Values were identified.	
<u>Bowrey Draw</u> Headwaters to confluence with Jensen Wash	C	2.2	X		X		Dry Wash. No Outstandingly Remarkable Values were identified.	
<u>Castle Peak Creek</u> Headwaters to confluence with Pariette Draw		16.3	X		X		No Outstandingly Remarkable Values were identified.	
<u>Clay Basin Creek</u> Wyoming state line to confluence with Red Creek	C	9.0	X		X		Dry most of the year. No Outstandingly Remarkable Values were identified.	
<u>Collier Hole Creek</u> Headwaters to confluence with Green River	C	3.3	X		X		No Outstandingly Remarkable Values were identified.	
<u>Cow Creek</u> Headwaters to confluence with Matt Warner Reservoir	C	6.7		X	X		No identified Outstandingly Remarkable Values. There are at least six small reservoirs on stream channel.	
<u>Crouse Creek</u> Headwaters to confluence with Green River	C	11.5		X	X		A two-mile section in Crouse Canyon has Class A scenery and is VRM Class II. This same section on the stream is crossed at least six times by a road that parallels the stream. Small culverts restrict flow. This section of stream cannot be considered to be free flowing. There are no Outstandingly Remarkable Values identified along the remainder of the stream.	
<u>Crow Creek</u> Headwaters to confluence with Deep Creek	C	4.8	X		X		Dry most of the year. No Outstandingly Remarkable Values.	



**TABLE A7-4 (Continued)**  
**ELIGIBILITY ASSESSMENT FOR RIVERS IDENTIFIED FOR POSSIBLE INCLUSION AS COMPONENTS OF**  
**THE NATIONAL WILD AND SCENIC RIVER SYSTEM**

River or Stream Segment Including Description	Reason for Consideration	Total Length (Miles)	Free Flowing Values		Outstandingly Remarkable Values	Eligibility Determination		Potential Classification	Description of Values and Remarks
			Yes	No		Eligible	Non-Eligible		
<u>Crumb Canyon</u> Headwaters to confluence with Willow Creek	C	1.3	X				X		No identified Outstandingly Remarkable Values. Dry most of the year.
<u>Deep Creek</u> Headwaters to Indian Reservation boundary	C	5.0	X				X		No Outstandingly Remarkable Values.
<u>Diamond Gulch</u> Forest Boundary to Jones Hole Fish Hatchery boundary	C	22.4	X				X		No Outstandingly Remarkable Values were identified.
<u>Dry Fork Creek</u> Forest boundary to confluence with Ashley Creek	C	8.7	X				X		For approximately 2 miles directly below the forest boundary, Scenic Quality is Class A and VRM is Class II. For the remaining 6.7 miles, Scenic Quality is B and VRM Class II. Much of creek has been channeled. Scenery cannot be considered as being outstandingly remarkable. No other Outstandingly Remarkable Values were identified.
<u>Dutch John Canyon</u> Headwaters to forest boundary	C	1.7		X			X		There are two dams in a 1.7 mile segment. It is dry most of the year except for impoundment areas behind dams. This wash is not free flowing.
<u>East Cottonwood Canyon</u> Forest boundary to confluence with Big Brush Creek	C	2.4	X				X		Dry Wash. No Outstandingly Remarkable Values were identified.
<u>Eight Mile Flat Creek</u> Headwaters to confluence with Green River	C	8.2	X				X		No Outstandingly Remarkable Values were identified. Dry wash.
<u>Ford Creek</u> Fork Spring to Wyoming state line	C	3.5	X				X		No Outstandingly Remarkable Values were identified.
<u>Four Mile Creek</u> Headwaters to confluence with Green River	C	14.5	X				X		No Outstandingly Remarkable Values were identified. Dry wash.



**TABLE A7-4 (Continued)**  
**ELIGIBILITY ASSESSMENT FOR RIVERS IDENTIFIED FOR POSSIBLE INCLUSION AS COMPONENTS OF**  
**THE NATIONAL WILD AND SCENIC RIVER SYSTEM**

River or Stream Segment Including Description	Reason for Consideration	Total Length (Miles)	Free Flowing Values		Outstandingly Remarkable Values	Eligibility Determination		Potential Classification	Description of Values and Remarks
			Yes	No		Eligible	Non-Eligible		
<u>Garden Creek</u> Headwaters to Monument boundary	C	5.3	X			X		W I S I R I	Dry Wash. No Outstandingly Remarkable Values were identified.
<u>Gorge Creek</u> Forest boundary to confluence with Green River	C	17	X		A, B, D, E, G	X			.3 miles up from Green River; is Scenic Quality A and VRM Class II. The remaining 1.5 miles is Scenic Quality B and Class IV VRM. Based on evaluation of scenic quality, no outstandingly remarkable determination was made. Several dams on channel.
<u>Goslin Creek</u> Headwaters to forest boundary	C	2.3	X			X			Dry wash most of year, except for impoundment areas behind dams. No Outstandingly Remarkable Values.
<u>Green River</u> Segment between Little Hole and Utah State Line	A, B, C, E	22.0	X			X			This segment of the Green River was included in the National River inventory of 1982 and the American Rivers Outstanding Rivers list of 1988. It flows through the existing Green River Corridor ACEC. Between the dam and Indian Crossing, it possesses the outstanding remarkable values of Scenic, Recreation, Fish, and Wildlife values. Between Indian Crossing and the Utah state line, it contains the outstanding/remarkable values of Recreation, Fish, Wildlife, and Cultural Values. This segment of river has been studied and recommended for designation as a Scenic River from Little Hole to the Utah state line.
<u>Green River</u> Segment between Dinosaur National Monument and Ouray	A, B, C, E,	58.0	X		D	X		X	This segment of the Green River was included in the National River Inventory of 1982 and the American Rivers Outstanding Rivers list of 1988. The only Outstandingly Remarkable Value identified, upon analysis, was for T & E fish. This river segment contains humpback chub and squawfish. Potential classification was determined to be recreational.
<u>Green River</u> Segment between Ouray and Carbon County Line	A, B, C, E	36	X		B, D	X		X	This segment was included in the National River Inventory of T & E 1982 and the American Rivers list of 1988. There are Outstandingly Remarkable Values for fish (humpback chub and squawfish) and recreation. Potential classification was determined to be Scenic.



**TABLE A7-4 (Continued)  
ELIGIBILITY ASSESSMENT FOR RIVERS IDENTIFIED FOR POSSIBLE INCLUSION AS COMPONENTS OF  
THE NATIONAL WILD AND SCENIC RIVER SYSTEM**

River or Stream Segment Including Description	Reason for Consideration	Total Length (Miles)	Free Flowing Values		Outstandingly Remarkable Values	Eligibility Determination		Potential Classification	Description of Values and Remarks
			Yes	No		Eligible	Non-Eligible		
<u>Grindstone Wash</u> Headwaters to Forest Service boundary	C	4.7	X			X			No identified Outstandingly Remarkable Values.
<u>Galloway Creek</u> Colorado state line to confluence with Willow Creek	C	1.4	X			X			No identified Outstandingly Remarkable Values.
<u>Halfway Hollow Creek</u> Headwaters to confluence with Twelve Mile Wash	C	16.0	X			X			No Outstandingly Remarkable Values identified. Dry wash.
<u>Jack Canyon</u> Headwaters to Carbon County line	C	1.7	X			X			This segment does not cross land administered by BLM.
<u>Jackson Creek</u> Headwaters to confluence with Green River	C	11.2	X			X			No Outstandingly Remarkable Values were identified.
<u>Jesse Ewing Canyon</u> Headwaters to confluence with Green River	C	4.2	X			X			A one-mile segment has Class A Scenic Quality and is Class II VRM. It was not identified as being an Outstandingly Remarkable Value. A road and three major pipelines parallel the creek. These intrusions impact Scenic values enough to prevent it from possessing Outstandingly Remarkable Scenic Values.
<u>Jones Hole Creek</u> Jones Hole Springs to Dinosaur National Monument boundary	C	.6	X			X			Stream does not cross public land that BLM has surface management responsibility for. It is entirely on land administered by U.S.F. & W.S. and National Park Service.
<u>Jones Hollow</u> Headwaters to confluence with Willow Creek	C	2.4							This segment does not cross land administered by BLM.
<u>Kettle Creek</u> Headwaters to confluence with Pot Creek	C	3.9	X			X			No identified Outstandingly Remarkable Values.



**TABLE A7-4 (Continued)  
ELIGIBILITY ASSESSMENT FOR RIVERS IDENTIFIED FOR POSSIBLE INCLUSION AS COMPONENTS OF  
THE NATIONAL WILD AND SCENIC RIVER SYSTEM**

River or Stream Segment Including Description	Reason for Consideration	Total Length (Miles)	Free Flowing Values		Outstandingly Remarkable Values	Eligibility Determination		Potential Classification	Description of Values and Remarks
			Yes	No		Eligible	Non-Eligible		
<u>Lake Creek</u> Forest boundary to confluence with Deep Creek	C	3.9	X			X		W   S   R   I	No identified Outstandingly Remarkable Values.
<u>Lambson Draw</u> Forest boundary to confluence with Pot Creek	C	5.9	X			X			No identified Outstandingly Remarkable Values.
<u>Little Brush Creek</u> Forest boundary to confluence with Big Brush Creek	C	5.8	X			X			No identified Outstandingly Remarkable Values.
<u>Little Davenport Creek</u> Headwaters to confluence with Gorge Creek	C	2.0	X			X			No identified Outstandingly Remarkable Values. Creek is dry much of year.
<u>Logge Canyon</u> Headwaters to confluence with West Fork of Willow Creek	C	2.7	X			X			This segment does not cross land administered by BLM.
<u>Lower Water Hollow</u> Headwaters to confluence with Minnie Maud Creek	C	3.5	X			X			Scenic Quality is Class A and VRM is Class II, but visual attractions are similar to other streams in the geographic region.
<u>Marshall Draw</u> Headwaters to confluence with Crouse Creek	C	3.5	X			X			No identified Outstandingly Remarkable Values. Creek is dry much of year.
<u>Martin Draw</u> Headwaters to confluence with Red Creek	C	5.3	X			X			No identified Outstandingly Remarkable Values. Creek is dry much of year.
<u>Mill Canyon</u> Forest boundary to confluence with Mosby Creek	C	.5	X			X			No identified Outstandingly Remarkable Values.



**TABLE A7-4 (Continued)  
ELIGIBILITY ASSESSMENT FOR RIVERS IDENTIFIED FOR POSSIBLE INCLUSION AS COMPONENTS OF  
THE NATIONAL WILD AND SCENIC RIVER SYSTEM**

River or Stream Segment Including Description	Reason for Consideration	Total Length (Miles)	Free Flowing Values		Outstandingly Remarkable Values	Eligibility Determination		Potential Classification	Description of Values and Remarks
			Yes	No		Eligible	Non-Eligible		
Minnie Maud Creek Headwaters to Carbon County line	C	6.0	X				X		This segment has Class A Scenic Values and is VRM Class II. Based on analysis, it was not rated as being Outstandingly Remarkable because visual attractions are not highly diverse and similar river segments are found along other streams in the geographic region under consideration. There is no public land along this river segment.
Mosby Creek Forest boundary to Indian Reservation boundary	C	4.5	X				X		No identified Outstandingly Remarkable Values.
Nine Mile Creek Segment between Carbon County line and the confluence with Gate Canyon, that lies within Duchesne County	C, E	6.5	X		A, G	X		X	Outstandingly Remarkable Values of Scenic and Cultural are found along this segment. The stream is eligible for further study. It has been determined to have a potential classification of Recreational based on disturbances along the segment.
Nine Mile Creek Segment that lies within Duchesne County between the potential Green River and Gate Canyon	C, E	11.5	X		A, G	X		X	Outstandingly Remarkable Values of Scenic and Cultural are found along this segment. The stream is eligible for further study. It has been determined to have a classification of Scenic based on disturbances along the segments.
O-Wi-Yu-Kuts Creek Colorado state line to confluence with Willow Creek	C	2.0	X				X		No identified Outstandingly Remarkable Values.
Pariette Draw Indian Reservation boundary to confluence with Green River	C	9.9	X				X		No identified Outstandingly Remarkable Values. There is one large dam and several small diversions on this stream.
Pigeon Creek Wyoming state line to confluence with Martin Draw	C	1.4	X				X		Dry wash.
Pinnacle Canyon Headwaters to confluence with Argyle Creek	C	2.2	X				X		No identified Outstandingly Remarkable Values. Dry most of year. Scenic Quality is Class A and VRM is Class II, but visual attraction are similar to other streams in the geographic region.



**TABLE A7-4 (Continued)**  
**ELIGIBILITY ASSESSMENT FOR RIVERS IDENTIFIED FOR POSSIBLE INCLUSION AS COMPONENTS OF**  
**THE NATIONAL WILD AND SCENIC RIVER SYSTEM**

River or Stream Segment Including Description	Reason for Consideration	Total Length (Miles)	Free Flowing Values		Outstandingly Remarkable Values	Eligibility Determination		Potential Classification	Description of Values and Remarks
			Yes	No		Eligible	Non-Eligible		
<u>Pot Creek</u> Forest boundary to Colorado state line	C	23.0	X		X				No Outstandingly Remarkable Values were identified. There are three major dams and reservoirs on this creek. They are Matt Warner, Calder, and Crouse Reservoirs. They impact the streams free flowing character.
<u>Red Creek</u> Wyoming state line to forest boundary	C	9.2	X		X				No Outstandingly Remarkable Values were identified. It is subject to flash flooding and can be dry during the summer months.
<u>Sage Creek</u> Headwaters to Dinosaur National Monument boundary	C	1.7	X		X				No Outstandingly Remarkable Values were identified.
<u>Sand Wash Creek</u> Headwaters to confluence with Green River	C	7.9	X		X				No Outstandingly Remarkable Values were identified. Dry wash.
<u>Sears Creek</u> Headwaters to confluence with Green River	C	8.3	X		X				No identified Outstandingly Remarkable Values. Colorado River cutthroat trout (a state of Utah sensitive species) was introduced into Sears Creek in 1990. However, because it is not currently known if they survived in the stream, and the fact that there are numerous other streams in the geographic region that contain large populations of this fish, it was not identified here as being an Outstandingly Remarkable Value.
<u>Sheep Wash Creek</u> Headwaters to confluence with Green River	C	5.2	X		X				No Outstandingly Remarkable Values were identified. Dry wash.
<u>Simons Creek</u> Headwaters to confluence with Pot Creek	C	3.2	X		X				No Outstandingly Remarkable Values were identified. Several small dams along creek.
<u>Smeiter Creek</u> Headwaters to confluence with Deep Creek	C	2.9	X		X				No Outstandingly Remarkable Values were identified. The creek is dry much of the year.
<u>South Branch Diamond Gulch</u> Headwaters to confluence with Diamond Gulch	C	3.0	X		X				No Outstandingly Remarkable Values were identified.



**TABLE A7-4 (Continued)**  
**ELIGIBILITY ASSESSMENT FOR RIVERS IDENTIFIED FOR POSSIBLE INCLUSION AS COMPONENTS OF**  
**THE NATIONAL WILD AND SCENIC RIVER SYSTEM**

River or Stream Segment Including Description	Reason for Consideration	Total Length (Miles)	Free Flowing Values		Outstandingly Remarkable Values	Eligibility Determination		Potential Classification	Description of Values and Remarks
			Yes	No		Eligible	Non-Eligible		
<u>Spring Creek</u> Forest boundary to confluence with Ashley Creek	C	5.4	X				X		No Outstandingly Remarkable Values were identified. The creek is dry much of the year.
<u>Steinaker Creek</u> Headwaters to Steinaker Reservoir	C	4.2	X				X		No Outstandingly Remarkable Values were identified. Dry wash.
<u>Tolivers Creek</u> Headwaters to confluence with Green River	C	8.7	X				X		No Outstandingly Remarkable Values were identified.
<u>Twelve Mile Wash Creek</u> Headwaters to confluence with Green River	C	16.0	X				X		No Outstandingly Remarkable Values were identified. Dry wash.
<u>Upper Water Hollow</u> Headwaters to confluence with Minnie Maud Creek identified.	C	3.6	X				X		Scenic Quality is Class A and VRM is Class II, but visual attractions are similar to other streams in the geographic region. No Outstandingly Remarkable Values were identified.
<u>Water Canyon</u> Headwaters to confluence with Argyle Creek	C	2.3	X				X		Scenic Quality is Class A and VRM is Class II, but visual attractions are similar to other streams in the geographic region. No Outstandingly Remarkable Values were identified.
<u>Wells Draw Creek</u> Headwaters to Indian Reservation boundary	C	16.5	X				X		No Outstandingly Remarkable Values were identified. Dry wash.
<u>West Fork of Willow Creek</u> Headwaters to confluence with Willow Creek	C	4.2	X				X		This segment does not cross land administered by BLM.
<u>Willow Creek (Browns Park)</u> Colorado state line to the confluence of Green River	C	11.8	X				X		No Outstandingly Remarkable Values were identified.
<u>Willow Creek (Indian Canyon)</u> Headwaters to Carbon County line	C		X				X		No Identified Outstandingly Remarkable Values. Scenic Quality is Class A and VRM is Class II, but visual attractions are similar to other streams in the geographic region.



**TABLE A7-4 (Continued)**  
**ELIGIBILITY ASSESSMENT FOR RIVERS IDENTIFIED FOR POSSIBLE INCLUSION AS COMPONENTS OF**  
**THE NATIONAL WILD AND SCENIC RIVER SYSTEM**

River or Stream Segment Including Description	Reason for Consideration	Total Length (Miles)	Free Flowing Values		Outstandingly Remarkable Values	Eligibility Determination		Potential Classification	Description of Values and Remarks
			Yes	No		Eligible	Non-Eligible		
Willow Spring Draw National Forest boundary to confluence with Diamond Gulch	C	5.2		X				W   S   R	There are at least ten dams on this segment of stream. It cannot be considered to be free flowing.

**KEY TO TABLE A7-4:**

1. Reason for Consideration
  - A. USDI, National Park Service, Nationwide Rivers Inventory list of 1982.
  - B. American Rivers Outstanding Rivers list of 1988.
  - C. Vernal District List.
  - D. Public nominations obtained during the Diamond Mountain RMP scoping public meetings
  - E. Professional knowledge of District and Area staff, obtained over years of field experience in the resource area.
  
2. Outstanding Remarkable Values
  - A. Scenic
  - B. Recreational
  - C. Geological
  - D. Fish
  - E. Wildlife
  - F. Historic
  - G. Cultural
  - H. Other



## **SUITABILITY ASSESSMENT FOR ELIGIBLE RIVER SEGMENTS**

### **ARGYLE CREEK, HEADWATERS TO CARBON COUNTY LINE.**

*Characteristics Which Do Or Do Not Make The Area A Worthy Addition To The National WSR System.*

The segment has Class A scenery and is VRM Class II. It goes dry in some areas during late summer and early fall months.

*Status Of Landownership, Minerals (Surface And Subsurface), Use In The Area, Including The Amount Of Private Land Involved And Associated Or Incompatible Uses.*

Only 5.0 miles of the 25.5 mile segment is on public land. The remainder is state and private property.

*Reasonably Foreseeable Potential Uses Of The Land And Related Waters Which Would Be Enhanced, Foreclosed, Or Curtailed If The Area Were Included In The National WSR System, And The Values Which Could Be Foreclosed Or Diminished If The Area Is Not Protected As Part Of The System.*

Currently the area is used for grazing, the growing of grass and alfalfa hay.

*Federal, Public, State, Tribal, Local, Or Other Interests In Designation Or Nondesignation Of The River, Including The Extent To Which The Administration Of The River, Including The Costs Thereof, May Be Shared By State, Local, Or Other Agencies And Individuals.*

No other Federal, public, state, tribal or local interests have expressed an interest in designation. No help could be expected in sharing the costs of administration.

*Estimated Cost Of Acquiring Necessary Lands, Interests In Lands, And Administering The Area If It Is Added To The National WSR River System.*

It is estimated that to acquire the private and State land along the stream, would cost approximately one million dollars (\$1,000,000). Very few owners would be willing sellers.

It is estimated to cost an additional twenty thousand dollars (\$20,000) annually to protect resource values and administer the increased use along the corridor if Argyle is designated a Wild and Scenic River.

*Ability Of The Agency To Manage And Protect The River Area Or Segment As A WSR River, Or Other Means To Protect Identified Values Other Than WSR Designation.*

The stream segment could not be managed effectively as a Wild and Scenic River unless private and State lands were acquired.

The only outstandingly remarkable value identified was scenery. If the stream segment was found to be unsuitable for further study the stream corridor would be returned to multiple use management. BLM would continue to mitigate actions to protect the Class II VRM designation.

*Historical Or Existing Rights Which Would Be Adversely Affected As To Foreclose, Extinguish, Curtail, Infringe, Or Constitute A Taking Which Would Entitle The Owner To Just Compensation If The Area Were Included In The National WSR System.*

None.

*Other Issues And Concerns Identified In The Resource Management Planning Process.*

No other concerns were identified.

### **Suitability Determination**

This segment is unsuitable for designation as a recreational river in the Wild and Scenic River System. Return the corridor to multiple use management.

### **NINE MILE CREEK, BETWEEN CARBON COUNTY LINE AND CONFLUENCE WITH GATE CANYON**

*Characteristics Which Do Or Do Not Make The Area A Worthy Addition To The National WSR System.*

This segment has outstandingly remarkable Scenic (Class A scenery and is VRM Class II) and Cultural values.

It goes dry in some areas during late summer and early fall months.

*Status Of Landownership, Minerals (Surface And Subsurface), Use In The Area, Including The Amount Of Private Land Involved And Associated Or Incompatible Uses.*

Less than one mile of the 6.5 mile segment is on public land. The remainder is state and private property.



*Reasonably Foreseeable Potential Uses Of The Land And Related Waters Which Would Be Enhanced, Foreclosed, Or Curtailed If The Area Were Included In The National WSR System, And The Values Which Could Be Foreclosed Or Diminished If The Area Is Not Protected As Part Of The System.*

The river segment is paralleled by the Nine Mile Canyon Back Country Byway. This road has been formally designated and is being managed to protect both cultural and scenic values.

Much of the private land in the corridor is cultivated or used for pasture as parts of several ranches along the creek.

*Federal, Public, State, Tribal, Local, Or Other Interests In Designation Or Nondesignation Of The River, Including The Extent To Which The Administration Of The River, Including The Costs Thereof, May Be Shared By State, Local, Or Other Agencies And Individuals.*

No other Federal, public, State, tribal or local interests have expressed an interest in designation. No help could be expected in sharing the costs of administration.

*Estimated Cost Of Acquiring Necessary Lands, Interests In Lands, And Administering The Area If It Is Added To The National WSR River System.*

It is estimated that to acquire the private and State land along the stream, would cost approximately two hundred fifty thousand dollars (\$250,000) and not all owners would be willing sellers.

It is estimated to cost an additional twenty thousand dollars (\$20,000) annually to protect resource values and administer the increased use along the corridor if Nine Mile Creek is designated a Wild and Scenic River.

*Ability Of The Agency To Manage And Protect The River Area Or Segment As A WSR River, Or Other Means To Protect Identified Values Other Than WSR Designation.*

The stream segment could not be managed effectively as a Wild and Scenic River unless private and State lands were acquired. The federally designated Nine Mile Back Country Byway will provide protection for scenic values in the corridor.

Special management proposals for the proposed Nine Mile Canyon cultural resources district, if implemented, would give protection to cultural values in the corridor.

*Historical Or Existing Rights Which Would Be Adversely Affected As To Foreclose, Extinguish, Curtail, Infringe, Or*

*Constitute A Taking Which Would Entitle The Owner To Just Compensation If The Area Were Included In The National WSR System.*

None.

*Other Issues And Concerns Identified In The Resource Management Planning Process.*

No other concerns were identified.

## **Suitability Determination**

This segment is unsuitable for designation as a recreational river in the Wild and Scenic River System. Manage the corridor under multiple use standards or special prescriptions if an ACEC is designated.

## **NINE MILE CREEK, PORTION IN DUCHESNE COUNTY BETWEEN GATE CANYON AND THE GREEN RIVER.**

*Characteristics Which Do Or Do Not Make The Area A Worthy Addition To The National WSR System.*

This segment has outstandingly remarkable scenic (Class A scenery and is VRM Class II) and cultural values.

It goes dry in some areas during some months in late summer and fall.

*Status Of Landownership, Minerals (Surface And Subsurface), Use In The Area, Including The Amount Of Private Land Involved And Associated Or Incompatible Uses.*

Approximately three miles of the 11.5 mile segment is on private or State Land. The remainder is managed by BLM.

*Reasonably Foreseeable Potential Uses Of The Land And Related Waters Which Would Be Enhanced, Foreclosed, Or Curtailed If The Area Were Included In The National WSR System, And The Values Which Could Be Foreclosed Or Diminished If The Area Is Not Protected As Part Of The System.*

The private land within the corridor is used for grazing livestock.

*Federal, Public, State, Tribal, Local, Or Other Interests In Designation Or Nondesignation Of The River, Including The Extent To Which The Administration Of The River, Including The Costs Thereof, May Be Shared By State, Local, Or Other Agencies And Individuals.*



No other Federal, public, State, tribal or local interests have expressed an interest in designation. No help could be expected in sharing the costs of administration.

*Estimated Cost Of Acquiring Necessary Lands, Interests In Lands, And Administering The Area If It Is Added To The National WSR River System.*

It is estimated that to acquire the private and State land along the stream, would cost approximately one hundred forty thousand dollars (\$140,000) and not all owners would be willing sellers.

It is estimated to cost an additional twenty thousand dollars (\$20,000) annually to protect resource values and administer the increased use along the corridor if Nine Mile Creek is designated a Wild and Scenic River.

*Ability Of The Agency To Manage And Protect The River Area Or Segment As A WSR River, Or Other Means To Protect Identified Values Other Than WSR Designation.*

The stream segment could not be managed effectively as a Wild and Scenic River unless private and State lands were acquired. The federally designated Nine Mile Back Country Byway will provide protection for scenic values in the corridor.

Special management proposals for the Nine Mile Canyon cultural resources district, if implemented, would give protection to cultural values in the corridor.

*Historical Or Existing Rights Which Would Be Adversely Affected As To Foreclose, Extinguish, Curtail, Infringe, Or Constitute A Taking Which Would Entitle The Owner To Just Compensation If The Area Were Included In The National WSR System.*

None.

*Other Issues And Concerns Identified In The Resource Management Planning Process.*

No other concerns were identified.

## **Suitability Determination**

This segment is unsuitable for designation as a recreational river in the Wild and Scenic River System. Manage the corridor under multiple use standards or special prescriptions if an ACEC is designated.

## **GREEN RIVER BETWEEN DINOSAUR NATIONAL MONUMENT AND OURAY**

*Characteristics Which Do Or Do Not Make The Area A Worthy Addition To The National WSR System.*

This segment has outstandingly remarkable values for threatened or endangered fish.

*Status Of Landownership, Minerals (Surface And Subsurface), Use In The Area, Including The Amount Of Private Land Involved And Associated Or Incompatible Uses.*

Approximately 43 miles of the 58 mile segment is on private, State, U.S. Fish and Wildlife property or land on the Uintah and Ouray Indian Reservation. The remaining 15 miles are administered by BLM. There is more public land on the south side of the river than the north (24 miles south, 6 miles north). Most of the public lands are within a developed gas field and numerous mining claims have been worked in the Horseshoe Bend and Escalante Ranch areas for gold contained in river gravels.

*Reasonably Foreseeable Potential Uses Of The Land And Related Waters Which Would Be Enhanced, Foreclosed, Or Curtailed If The Area Were Included In The National WSR System, And The Values Which Could Be Foreclosed Or Diminished If The Area Is Not Protected As Part Of The System.*

The private land within the corridor is primarily used for grazing with some areas cultivated.

The area has high potential for oil and gas and much of it is currently within a producing gas field.

There is some activity periodically on mining claims filed on gold contained in the river gravels.

The corridor also contains sand and gravel deposits important for the development of Uintah County.

*Federal, Public, State, Tribal, Local, Or Other Interests In Designation Or Nondesignation Of The River, Including The Extent To Which The Administration Of The River, Including The Costs Thereof, May Be Shared By State, Local, Or Other Agencies And Individuals.*

Uintah County opposes a wild and scenic designation on this segment of the river. They are concerned that the area is too important to the economic development of Ashley Valley to warrant the restrictions a Wild and Scenic River Designation would entail.



The Park Service at Dinosaur National Monument would probably support designation of the river where it borders the monument boundary, a distance of about 11 miles of which 5 miles are public lands.

*Estimated Cost Of Acquiring Necessary Lands, Interests In Lands, And Administering The Area If It Is Added To The National WSR River System.*

Because of high mineral values of both private and state lands in the river corridor, it would not be feasible to acquire the necessary lands.

It is estimated to cost an additional thirty thousand dollars (\$30,000) annually to protect resource values and administer the increased use along the corridor if the middle segment of the Green River is designated a Wild and Scenic River.

In addition, a one-time cost of two hundred thousand dollars (\$200,000) would be required to develop facilities such as campgrounds and raft ramps.

*Ability Of The Agency To Manage And Protect The River Area Or Segment As A WSR River, Or Other Means To Protect Identified Values Other Than WSR Designation.*

BLM is currently managing the corridor to maintain scenic values on public lands. This would continue if the river segment is not found to be suitable for designation.

*Historical Or Existing Rights Which Would Be Adversely Affected As To Foreclose, Extinguish, Curtail, Infringe, Or Constitute A Taking Which Would Entitle The Owner To Just Compensation If The Area Were Included In The National WSR System.*

None.

*Other Issues And Concerns Identified In The Resource Management Planning Process.*

No other concerns were identified.

### **Suitability Determination**

This segment is unsuitable for designation as a recreational river in the Wild and Scenic River System. Manage the corridor under multiple use standards. Continue to protect scenic values in the river corridor.

## **GREEN RIVER BETWEEN OURAY AND CARBON COUNTY LINE**

*Characteristics Which Do Or Do Not Make The Area A Worthy Addition To The National WSR System.*

This segment has outstandingly remarkable recreational and threatened or endangered fish values. It currently receives very little use, and is largely undeveloped.

*Status Of Landownership, Minerals (Surface And Subsurface), Use In The Area, Including The Amount Of Private Land Involved And Associated Or Incompatible Uses.*

Approximately 9 miles of the 36-mile segment is private, state or Uintah and Ouray Indian Reservation lands. The remaining 27 miles are administered by BLM.

*Reasonably Foreseeable Potential Uses Of The Land And Related Waters Which Would Be Enhanced, Foreclosed, Or Curtailed If The Area Were Included In The National WSR System, And The Values Which Could Be Foreclosed Or Diminished If The Area Is Not Protected As Part Of The System.*

The private land within the corridor is used for grazing livestock.

Approximately 50 percent of the river corridor has high potential for oil and gas development. Very little activity can be detected from within the river corridor.

*Federal, Public, State, Tribal, Local, Or Other Interests In Designation Or Nondesignation Of The River, Including The Extent To Which The Administration Of The River, Including The Costs Thereof, May Be Shared By State, Local, Or Other Agencies And Individuals.*

No other public, state, tribal or local interests have expressed an interest in designation. No help could be expected in sharing the costs of administration.

*Estimated Cost Of Acquiring Necessary Lands, Interests In Lands, And Administering The Area If It Is Added To The National WSR River System.*

It is estimated that to acquire the remaining private and State lands along the river would cost at least one hundred thousand dollars (\$100,000).

It is estimated to cost an additional forty thousand dollars (\$40,000) annually to protect resource values and administer the increased use along the corridor if the lower Green River is designated a Wild and Scenic River.



In addition, a one time cost of two hundred thousand dollars (\$200,000) would be required to develop facilities such as campgrounds and raft ramps.

*Ability Of The Agency To Manage And Protect The River Area Or Segment As A WSR River, Or Other Means To Protect Identified Values Other Than WSR Designation.*

The river segment is currently being managed to protect wild and scenic river values. However, designation would assure that this relatively undisturbed river segment would be protected into the future.

*Historical Or Existing Rights Which Would Be Adversely Affected As To Foreclose, Extinguish, Curtail, Infringe, Or Constitute A Taking Which Would Entitle The Owner To Just Compensation If The Area Were Included In The National WSR System.*

None.

*Other Issues And Concerns Identified In The Resource Management Planning Process.*

No other concerns were identified.

## **Suitability Determination**

This segment is suitable for designation as a scenic river in the Wild and Scenic River System. Continue interim management to protect identified values until a final decision on designation is made.

## **GREEN RIVER BETWEEN LITTLE HOLE AND UTAH STATE LINE.**

*Characteristics Which Do Or Do Not Make The Area A Worthy Addition To The National WSR System.*

This segment has outstandingly remarkable scenic, recreation, fish, wildlife and cultural values. It is a popular river for both fishing and floating. It has been studied for inclusion into the National Wild and Scenic River System

*Status Of Landownership, Minerals (Surface And Subsurface), Use In The Area, Including The Amount Of Private Land Involved And Associated Or Incompatible Uses.*

Approximately 7 miles of the 22 mile segment is private and state land. The remainder is administered by either the Forest Service or BLM.

*Reasonably Foreseeable Potential Uses Of The Land And Related Waters Which Would Be Enhanced, Foreclosed,*

*Or Curtailed If The Area Were Included In The National WSR System, And The Values Which Could Be Foreclosed Or Diminished If The Area Is Not Protected As Part Of The System.*

The private land within the corridor is cultivated or used for grazing livestock.

Fishing and floating are very popular activities within the corridor.

The area has low to moderate potential for oil and gas development. Some interest has been expressed in the past about mining claims and prospecting for gold in the gravels along the river. The corridor also contains sand and gravel deposits important for development at Daggett County.

*Federal, Public, State, Tribal, Local, Or Other Interests In Designation Or Nondesignation Of The River, Including The Extent To Which The Administration Of The River, Including The Costs Thereof, May Be Shared By State, Local, Or Other Agencies And Individuals.*

The Forest Service is currently moving ahead and pursuing designation of the river corridor between Flaming Gorge Dam and the forest boundary as a Wild and Scenic River. This proposed action by them would cover about 6 miles of this river segment. Other public, state and local interests have not expressed strong support for designation. No help other than the Forest Service can be expected in sharing the costs of administration.

*Estimated Cost Of Acquiring Necessary Lands, Interests In Lands, And Administering The Area If It Is Added To The National WSR River System.*

It is estimated that to acquire the remaining private lands along the river would cost at least five hundred thousand dollars (\$500,000) and the land owner would probably not be a willing seller.

Currently, BLM and the State of Utah, Division of Wildlife Resources have acquired most of the private land that was originally along the river.

It is estimated to cost an additional forty thousand dollars (\$40,000) annually to protect resource values and administer the increased use along the corridor if the upper Green River is designated a Wild and Scenic River.

In addition, a one time cost of three hundred thousand dollars (\$300,000) would be required to develop facilities such as campgrounds and raft ramps.



## Appendix 7 - Special Emphasis Areas

*Ability Of The Agency To Manage And Protect The River Area Or Segment As A WSR River, Or Other Means To Protect Identified Values Other Than WSR Designation.*

The river segment could, and is, being managed to protect wild and scenic river values without acquiring the remaining private lands, even though it has not been formally designated.

The Green River Corridor ACEC was established in 1983 to protect the river corridor.

*Historical Or Existing Rights Which Would Be Adversely Affected As To Foreclose, Extinguish, Curtail, Infringe, Or Constitute A Taking Which Would Entitle The Owner To Just Compensation If The Area Were Included In The National WSR System.*

None.

*Other Issues And Concerns Identified In The Resource Management Planning Process.*

The river bank provides habitat for the threatened plant *Spiranthes diluvialis*.

### **Suitability Determination**

The upper segment of the Green River is suitable for designation as a scenic river in the Wild and Scenic River System. Continue interim management to protect identified values until a final decision on designation is made.



## APPENDIX 8

# VEGETATION AND LIVESTOCK MANAGEMENT

### CONTENTS:

*Vegetation Inventory History & Ecological Condition for Livestock*

*Current Forage Assignments*

*Allotment Categorization*

*Range Monitoring Studies*

*Rangeland Improvements*









## VEGETATION INVENTORY HISTORY AND ECOLOGICAL CONDITION

Forage surveys were conducted in a portion of the Three Corners Planning Unit in 1958, and in the Ashley Unit in 1960, Diamond Mountain forage survey was completed in 1978. The Ocular Reconnaissance Method was used in all cases and determined grazing capacity estimates through vegetation density and composition ocular estimates.

In December 1982, the BLM adopted as its principal rangeland inventory method the Range Site Inventory procedure described in the Soil Conservation Service (SCS) *National Range Handbook*. This procedure involves the correlation of a soil series to a specific range site. A range site is a distinctive kind of rangeland that differs from other types of rangeland in its ability to produce a characteristic natural plant community. The species composition and total production levels vary between range sites, providing different potentials, objectives, and stocking capabilities for each specific plant community.

Ecological conditions of the resource area were estimated using existing ocular reconnaissance data (the "Utah-2s range condition record") collected in conjunction with the Uintah, Diamond Mountain, and Henry's Fork soils surveys completed in partnership with the U.S. Soil Conservation Service between 1978 and 1989. The estimates of species' composition by weight, in relation to the applicable standardized ecological site description's climax community

composition (as outlined by the SCS), allowed for the determination of the present ecological condition. For example, if 25% or less of the theorized "potential" climax community was present at the time of the data collection, then an ecological condition of "early" was assigned; if between 26-50%, then a mid-seral condition was assigned; if between 51-75%, then "late", and if greater than 76%, then an ecological condition of "climax" was assigned. Those public lands not falling into one of these classes (i.e., badlands and rock outcrop) are included in the "Undetermined" category.

Present ecological condition by allotment is summarized in Table A8-1. Of the total 655,273 acres mapped, 1% is in Potential Natural Condition/climax, 27% in late, 67% in mid, and 6% in early ecological seral stage.

Ecological condition is dependent on many variables and their associations with each other and is highly complex. Range conditions are dynamic and are influenced by both controlled and uncontrolled variables. Vegetation site potentials change due to past conditions. Ecological condition ratings are approximate and are used as a tool for evaluating management towards attaining desired goals (W.H. Moir, 1989). Maximum vegetation diversity, often the most desirable objective for livestock and most species of big game in the resource area, occurs frequently not at climax but in the mid to late seral stages.



Squawbush



TABLE A8-1:

Allotment Name	Allot. No.	Mgmt. Catgy	Permittee	Current Season of Use		Class Live-Stock	Live-Stock Pref. AUMs	Susp'd AUMs
				From	To			
Antelope Powers	15879	I	E. Moon & Son	1201	0420	Sheep	3421	1372
Aunt Knoll	15807	I	Strawberry River Livestock Inc.- Chad Peatros	1101	0120	Sheep	729	231
Argyle Ridge	04873	M	L & L Bryner J & L Oliver-Wimmer Dave & Vilate Terry	0516 0601 0615	1015 1015 1115	Cattle Cattle Cattle	540	220
Asphalt Ridge	05807	C	G. Sprouse	0301 0222	0420 0228	Sheep	26	15
Bates Spring	14823	C	C. McKeachnie	0511	1110	Sheep	67	
Bealer Basin	14806	M	G & E Holmes-Buist	0515	1031	Cattle	246	159
Big Wash*	05867	I	O J & A N Moon	0301 1116	0310 0228	Cattle	980	
Big Wash Draw	15885	I	E C Smith	1101	0228	Cattle	516	
Blair Basin	14824	C	Searle Bros.	0615	1001	Cattle	15	
Bridgeport	14805	I	Willow Cr. Land & Lvstk	0411	0530	Cattle	139	
Browns Park (Colo) <sup>6</sup>	C4806	C	Lazy VD L & Lvstk	1201	0430	Cattle	530	
Brush Creek	04858	I	L E McNeil D A Soderquist J W Shield	1101 0506 0506 0506	0205 0605 0605 0605	Cattle Cattle Cattle	884	
Bull Canyon	04878	M	G & G Fasselin	1101 0301	0228 0430	Cattle	1000	1000
Canal	15816	M	N K Huber	1205	0215	Cattle	224	
Castle Peak*	05886	I	L W Moon	1101	0420	Sheep	2903	897
Clay Basin*	14802	I	L Myers	0301 0301 0421 1001 1101 1110	0320 0430 0531 1031 0228 0228	Cattle Horses Cattle Cattle Cattle Horses	384	
Clay Basin Meadows*	14804	I	Allen Livestock Inc.	1001	1201	Cattle	365	
Coal Mine Basin*	4885	M	R S & R C Hacking	0501	0615	Cattle	720	
Cooper Draw	4835	M	N Holmes & Sons	0516	0630	Sheep	344	
Cottonwood Springs*	04853	I	G Sprouse Blue Diamond Oil	1101	0109	Cattle	945	382
Cove & W Cow Hollow	14817	C	R S & R C Hacking	0601	1031	Cattle	277	
Current Canyon	04877	I	W G Parrot	1101 0301	0228 0330	Cattle	240	240



COMPREHENSIVE GRAZING ALLOTMENT INFORMATION

Current Acreage				Fed ACS/AUM	Current Ecological Condition <sup>5</sup> (Seral Stage) (Acres)				Year Monitoring Established		Existing Range Improvements						<sup>4</sup> Veg Trtm AUM
Fed	Sta	Pvt	DWR		E	M	L	PNC /C	Rng	Wldf	Fnc Mi	Spg	Guz	Pln	Tr	Res	
39559	4192			12	1	57	42		1957	1989	1.2					20	0
5477	1200			8		100			1981								28
9341	1173	8123		17	2	47	51		1981	1987	4.3						0
545	7111	495		21		26	74										
339		879		5		46	54		1990								
1813		1051		7		86	54		1990								14
4571	762			5	93 <sup>7</sup>	6	1		1982	1987	8.1						40
7384	979			14	2	98 <sup>7</sup>			1969	1986	3.5						82
384		1018		26		100											0
9179	979	728	111	66		94	6		1982	1985	1						40
5625	1280	160				81	9		1981		1						140
14133	1607	645		16	2	53	45		1982	1981	15		1	3	2	25	100
15974	651	467		16	2	83	15		1982		2.5						54
2633	653	769		12	2	86	42				2.4						0
36278	5632	17		12	5	90	5		1957		5						41
11081	617	184	1329	29		70	26	4	1967		2	3		0.7	1		21
4264	879	689		12		62	38		1967		4	2				3	55
4615	534	1162		6		100 <sup>7</sup>			1967		4.6						161
2358		617		7		97 <sup>7</sup>	9		1981								0
13688	2580	195		15	10	54 <sup>7</sup>	36		1967		7.6	1		1.2	2	5	130
2057	2391	11		7		33	67		1990		0.7						41
6433	462	184		27		24	76		1982		3.3						55



TABLE A8-1 (Continued):

Allotment Name	Allot. No.	Mgmt. Catgy	Permittee	Current Season of Use		Class Live-Stock	Live-Stock Pref. AUMs	Susp'd AUMs
				From	To			
Deep Creek	04884	C	R E & H Jensen	0525	1024	Cattle	8	
Devil Canyon	04882	M	G & G Fasselin	1101	0430	Cattle	1368	1352
Diamond Mountain	04837	I	F & F Cook J W Chivers	0501 0916	0630 1031	Cattle Cattle	788	
Diamond Rim	04861	I	W.B. Searle	0401 1101	0531 1231	Horses	108	
Dinosaur Park	04867	C	A & N Kidd D Karren	0414 1205	0515 0104	Cattle Cattle	103	
Donkey Flat*	04859	I	L E McNeill I Sadlier Colton Ranch Inc.	0515 0516 1201 0501	0531 0530 1205 0531	Cattle Cattle Cattle Cattle	402	
Dry Creek (Colo) <sup>2</sup>	04882	M	Mr & Mrs J Allen	0516	1030	Cattle	275	
Dry Fork	04854	I	Dwayne Holmes	0601	1030	Cattle	470	
E. Cow Hollow	14822	C	N B Rasmussen	0601	1031	Cattle	0	
E. Huber	15811	M	N Holmes & Sons	1216	0430	Sheep	1048	167
E. Little Mtn*	04845	I	G Huber	0516	1015	Cattle	265	70
Eight Mile Flat	05887	M	Strawberry River Livestock Inc. - Chad Peatros	1101	0401	Sheep	1520	1274
Five Mile	04874	I	G & G Fasselin J & G Bedwell J H & N L Wimmer M W Burdick	1101 1201 0301 0201	0228 0301 0430 0228	Cattle Cattle Cattle	1056	1034
Flynns Point	04889	C	Randy Searle	1116	0215	Cattle	40	
Gadsen	04881	C	M G Jackson	0516	1031	Cattle	57	43
Gadsen Draw	14810	C	R Anderson	0501 0916	0630 1031	Sheep	106	
Goslin Mtn.*	14810	M	Blue Diamond Oil	0501	1120	Cattle	2521	
Green River Bottoms*	15878	M	G L & J Hadden	0510	1031	Cattle	330	132
Green River (PRRA) <sup>1</sup>	04049	I	Jim Wilcox	0201	1015	Cattle	185	
Hacking	04850	C	E & C Investment Co.	0516 1016	0615 1115	Cattle Cattle	62	32
Halfway Hollow	15808	M	Blue Diamond Oil G. Sprouse	0301 0222	0420 0228	Cattle Cattle	154	61
Hatch Cove	04834	M	C L Oldaker S L & R Boren	0515 0516	1031 1015	Cattle Cattle	281	
Holmes-Palmer	15810	C	N Holmes & Sons	1101	1215	Sheep	129	174



COMPREHENSIVE GRAZING ALLOTMENT INFORMATION

Current Acreage				Fed ACS/AUM	Current Ecol. Condition <sup>5</sup> (Seral Stage)(Acres)				Year Monitoring Established	Existing Range Improvements						<sup>4</sup> Veg Trtm AUM	
Fed	Sta	Pvt	DWR		E	M	L	PNC/C	Rng	Wldf	Fnc Mi	Spg	Guz	Pln	Tr	Res	
234	172	595		29		7	93		1974		1.5						0
14823	1957	267		11		83	17		1982		2.5						0
5721	2591	6683		7	1	65	34		1981		0.1		1	4	1	6	14
2535	6			21		96 <sup>7</sup>	4		1981 1982								28
1429	1190	478		14		100										2	14
5510	300	55		14		80	20		1981		11.2		1			6	55
6147		800				82	19		1974								42
5154	1134	1312		11	2	83	6	9	1983		1.5						40
528	6	1507		11	19	82	1				0.5						0
16663	2174	195		19		77	23		1982							15	0
2580	172	973		10		100 <sup>7</sup>			1968		10		1				28
22629	2085	2580		15	1	96	3		1957		7.6					12	0
13205	1918	512		13	7	76 <sup>7</sup>	17		1982 1987		9.5		2			15	96
289	601	929		7		40	60										0
1056	33	2052		19		83	87		1983		1.5						0
1329	22	2602		13		160	18				0.1						0
16874	1740	504	1167	13		39	57	4	1967 1985		11	1		3	3		56
6272	456	839		19	19	83	1		1983		1.5						0
3706																	0
656		28		11	4	35	57										0
3386	6670	334		22		75	25		1982		3					2	0
2891	289	450		10		28	72		1981		0.7					2	42
1707	2680	267		13	24	34	42				2.4					1	10



TABLE A8-1 (Continued):

Allotment Name	Allot. No.	Mgmt. Catgy	Permittee	Current Season of Use		Class Live-Stock	Live-Stock Pref. AUMs	Susp'd AUMs
				From	To			
Horseshoe Bend*	05814	I	V D & D M Massey	0501	0915	Cattle	145	
Hoy Flat (Colo) <sup>2</sup>	04840	M	Pease, Martin & Sutton	0511	1031	Cattle	315	
Hoy Mountain*	04816	I	D & C Boren	0516 0516	1030 1030	Cattle Horses	568	
Island Park	04840	I	W L Staley	0301 1101	0430 0228	Cattle	35	
Jackson-Crouse-Dry Hollow	14812	M	C W McCoy Sheep Co.	0510	1027	Cattle	980	
Johnson	04863	C	O W Johnson	0520 1101	0619 1130	Cattle	100	
Kyune I (PRRA) <sup>1</sup>	04128	M	J,J,D Jensen	0601	1030	Cattle	53	
Lambson-Crouse-Davis <sup>3*</sup>	04846	I	R H & L Siddoway	0506 0901	0705 1105	Sheep	572	
Lears Canyon	04875	I	J D & L Oliver-Wimmer J H & N L Wimmer M W Burdick	0515 0601	1015 0715	Cattle Cattle	308	895
Little Brush Creek	04865	C	B & L Nielson	0501	0930	Horses	15	
Little Desert*	05880	I	D J & A N Moon	0301 1116	0415 0228	Sheep Sheep	2564	1240
Little Hole	14811	I	R Hunting	0516	1015	Cattle	330	
Log Cabin	04830	C	J R Siddoway	0601	1015	Cattle	58	
Mame Hole-Bear Hollow	04816	C	G & M Hacking	0510	1026	Cattle	140	
Mail Draw	14826	M	H Wilkins	0516	1031	Cattle	86	
Marshall Draw <sup>3</sup>	14811	M	C W McCoy Sheep Co	0510	1027			
Max Canyon (PRRA) <sup>1</sup>	14073	C	G & G Fasselin				5	
McCoy Flat	05805	M	A D Atwood	1216	0315	Sheep	843	433
McFarley Flat	04863	M	S Rasmussen	1101 0401	0117 0430	Cattle	418	
McKee Spring	14825	C	J Drollinger	0601	1130	Cattle	170	
Mosby	04847	M	D D Jenkins	0601	0831	Cattle	220	
Natural Lake	14820	C	J Siddoway L & I	0601 0901	0701 1101		100	
Oden	04880	C	F D Caldwell	0301 1101	0630 0228	Cattle	2	



COMPREHENSIVE GRAZING ALLOTMENT INFORMATION

Current Acreage				Fed ACS/AUM	Current Ecol. Condition <sup>5</sup> (Serial Stage)(Acres)				Year Monitoring Established		Existing Range Improvements						<sup>4</sup> Veg Trtm AUM
Fed	Sta	Pvt	DWR		E	M	L	PNC/C	Rng	Wildf	Fnc Mi	Spg	Guz	Pln	Tr	Res	
2163	2680	267		13	21	31	42		1970		2.4					4	10
8445		1050		27					1989								42
3892	445	1490		6		52	2	40	1969		5.2						58
7350	1490	200		210		53 <sup>7</sup>	47		1979				2				69
3892	2252	6344		17	2	40	62		1987		4						130
823	128	200		10		100					1						28
1235																	0
3892	233	1095	2102	7	16 <sup>7</sup>	22	62		1987								31
8885	828	962		29	5	74	21		1989		1.1						28
							100										0
43323	5810			17	2	70	28		1990		8.5					15	28
6755	345		667	20		80	31		1987		1.3	2		0.5	4	9	137
640		111		11			100										0
1452	83	1340		17		33	67		1990								83
817		311		10		88	12		1988		1						0
5404	1018	72	2241	11		9	80	1	1990		0.7						42
115																	0
12604	4737	1201		15	1	78	21		1988								0
7556		222		18	40	69	40		1982		1.3	5	1	2			58
795		2330		5		10	90		1967		0.7						28
2152	300	111		10	50 <sup>7</sup>	17	29	1	1982 1981		0.8	3		2.5	9		0
801		1974		8		71	29	100	1987								0
11	66	1		6			100										0



TABLE A8-1

Allotment Name	Allot. No.	Mgmt. Catgy	Permittee	Current Season of Use		Class Live-Stock	Live-Stock Pref. AUMs	Susp'd AUMs
				From	To			
Offield Mtn. (Colo) <sup>2</sup>	04841	M	F L Massey	0511	1031	Cattle	255	
Ouray Road	15802	M	W E Brown V M Dudley	0501 0511 1101	0615 0610 0228	Cattle	857	
Ouray Valley	15815	C	W Cattle Mgmt Inc	0601	0930	Cattle	30	
Paddys Gap	04860	I	Colton Ranch Inc B Hatch	1206 0412 1215	0105 0430 0125	Sheep	291	
Parley Canyon	04883	I	D & V Terry G & G Fasselin	0801 1101	1001 1201	Cattle	355	357
Pelican Lake	05812	M	Blue Diamond Oil G. Sprouse	0301 1125	0503 0228		544	
Perry	04852	I	M Huber	0501	0630	Cattle	96	
Powell/Sadlier	04872	C	L E McNeill I Sadlier	0416	0515	Cattle	165	
Red Creek Flat <sup>3*</sup>	04809	I						
Red Mountain	04857	M	Gibson Ranch L C Taylor D Rasmussen	0505 0503 0415 0901	0604 0602 0531 1018	Cattle Cattle	275	
Rich & Stetson	15801	C	N Holmes & Sons	0501	0510	Sheep	65	29
Ruple Cabin*	14833	I	R S & R C Hacking UBGA	1001 0601	1010 1001	Cattle Cattle	2434	10
Rye Grass <sup>3</sup>	14807	M						
S J Hatch*	04862	I	L Siddoway L Karren	0301 1101	0505 0228	Sheep	1681	62
School Bus Draw	04838	M	Richard Pedersen	0515	0726	Cattle	180	
Sears Canyon <sup>3</sup>	04809	M	L Siddoway	0510 0910	0620 1010	Sheep		
Serviceberry Spring	04828	C	D M Walker R O Walker	0516 0516	1031 1031	Cattle Cattle	113	
Shindy*	04849	M	R S & R C Hacking	0501 0501	0531 0531	Cattle	68	
Shiner*	04869	I	F & F Cook J W Chivers	1101 1101	0430 0430	Cattle Cattle	3000	
Shiner (Colo) <sup>2</sup>	04842	C	D Karren	0516	1025	Cattle	177	
Smelter Springs	04848	C	M R & O C Todd	0516	1031	Cattle	24	
S. Pot Creek <sup>2*</sup> (Colo)	04848	I	S Rasmussen	0515	0930	Cattle	877	
Spring Creek	04856	I	L C Taylor D B Murphy	0503 0516 1116	0602 0530 1215	Cattle Cattle	196	



COMPREHENSIVE GRAZING ALLOTMENT INFORMATION

Current Acreage				Fed ACS/AUM	Current Ecol. Condition <sup>5</sup> (Serai Stage)(Acres)				Year Monitoring Establish	Existing Range Improvements						<sup>4</sup> Veg Trmt AUM	
Fed	Sta	Pvt	DWR		E	M	L	PNC/C	Rng	Wldf	Fnc Mi	Spg	Guz	Pln	Tr	Res	
7305		965		29					1989								42
16958	1201	1062		20	4	82	13		1969		0.1					10	0
489		350		16		10	10				0.5						0
3820	323			13	10	20	6		1990 1990		6.8					20	56
14728	1168	773		45	3	53	44		1981		2.7		1			5	35
6461	684	523		12	22	62	3	13	1990		2.7					40	0
1629	1006	1646		17		84	10		1983 1982		0.5						62
2124	11	17		13	3		44										0
8212	1346	111		17		10	31		1967 1985		9			0.5	1		42
6661	1079	3225		24	3	69	3	25	1984 1981		1.5						28
600	11	6		9	9	17	74										0
12004	1006	2075		5		62	35	3	1990		44		2			20	63
3386	506	395	867	3		10	51		1967 1985								42
24903	2897	817		15	9	69	22		1981 1981		8.8						83
1529		667		9		9	51		1989								28
5021	206		784		13 <sup>7</sup>	60	27										42
1974	111	2863	773	18		77	23		1990								0
1913	323	17		28		95 <sup>7</sup>	5		1971		3	1					83
38697	3703	2135		18		48	62		1973 1985		3.7	2	2			35	137
1440		2835		9		100											0
384	128	195		16		23	75	2	1974		1.5						0
6213		506		7					1974		0.2						42
4164	1918	1657		21	9	80	2	9	1974		0.6		2				0



TABLE A8-1 (Continued):

Allotment Name	Allot. No.	Mgmt. Catgy	Permittee	Current Season of Use		Class Live-Stock	Live-Stock Pref. AUMs	Susp'd AUMs
				From	To			
Smokem-up	04817	C						
Stone Cabin* (PRRA) <sup>1</sup>	04109	I	G & G Fasselin	0501	0930	Cattle	2	
Sulfur Canyon (PRRA) <sup>1</sup>	04111	C	G & G Fasselin	0501	1015	Cattle	158	
Taylor Flat <sup>3*</sup>	04808	I						
Three Corners	14800	M	Raftopoulos Bros.	0801	0930	Cattle	167	
Twelve Mile	15813	M	Blue Diamond Oil G. Sprouse	0301	0420	Cattle	316	58
Twin Knolls	04891	M	A Moon & Sons	1116	0310	Cattle	596	369
N. Warren Draw	14813	I	U Gardiner C & K Gardiner	0515 0515	1031 1024	Cattle Cattle	190	
S. Warren Draw	14827	M						
Water Canyon #1	04876	M	A Leautaud	0516	0930	Cattle	153	82
Water Canyon #2	04879	M	J D Wilcox	0216	0228	Cattle	138	260
Watson <sup>3*</sup>	04804	I						
Wells Draw	15884	I	A N Moon & Sons	1201 0301	0228 0415	Sheep Cattle	814	406
W. Huber	15803	M	G Huber W E Brown W M Dudley	0401 0501 0511	0430 0615 0610	Cattle Cattle Cattle	402	61
W. Little Mtn	04846	I	K Huber	0516 1010	0615 1204	Cattle Cattle	124	
W. Pelican Lake	04886	C	J B Jenkins	1101	0331	Cattle	251	
W. Pot Creek	04829	C	M McCarrel	0518	1017	Cattle	107	
Wetlands*	15877	I	R Lamb  Bar F Partnership	0301 0416 1016 0216 0516	0415 0605 0215 0228 0215	Cattle	1096	365
Wild Mtn <sup>2</sup> (Colo)	04844	M	R S & R C Hacking  A & H & VE	0610 0601 0601	0910 0930 1031	Cattle	249 20	65
Wilkerson	04884	C	R C Wilkerson	0601	1015	Cattle	15	
Willow Creek	14801	I	Allen Lvstk Inc. Lazy VD L Lvstk.	0516 0516	0930 0930	Cattle Cattle	501	
Willow Springs	04886	M	E R & C Gardiner	0515	1031	Cattle	93	
Young	15809	M	Blue Diamond Oil G Sprouse	0301 1101	0505 0228	Cattle	535	

## FOOTNOTES:

\* - Current AMP

1. The preference represents Diamond Mountain lands. These allotments are administered by Price River R.A. The planning is the responsibility of Vernal District.
2. The grazing on these (approx. 24,000 acres) allotments is administered by Diamond Mountain R.A. and the planning is the responsibility of the Craig District (Little Snake) R.A.
3. Allotments where preference is retired or nonrenewable is as follows: Red Creek Flat, Taylor Flat, Watson, Rye Grass, Marshall Draw, S. Warren Draw, and Sears Canyon.



COMPREHENSIVE GRAZING ALLOTMENT INFORMATION

Current Acreage				Fed ACS/AUM	Current/Objective Ecol. <sup>5</sup> (Seral Stage)(Acres)				Year Monitoring Established	Existing Range Improvements						<sup>4</sup> Veg Trtm AUM	
Fed	Sta	Pvt	DWR		E	M	L	PNC/C	Rng	Wldif	Fnc Mi	Spg	Guz	Pln	Tr	Res	
																	0
320																	0
4116																	0
5371	917	979	728	10	16 <sup>7</sup>	79	10		1967	1985	7.5			3	2		42
1079	306	723		10		23	7		1967			1			1		14
4909	495			11	2	95	3		1982		4					4	0
6033	979			10		39	61		1989							26	0
4081	339	1557	33	22	9	87	4		1990		1.4						42
3186	406	1496	2235			54	46										42
1095	612	2508		7		21	79		1967			2					0
5060	751	1001		37		23	17		1982		5.5						0
6672	767	6	645	34	11 <sup>7</sup>	44	45		1967		7			1.5	1	2	28
9596	1284	50		12	4	95	3		1982	1987	2.1					20	56
4081	858	2324		10	3	97			1982								0
1157	395	1668		9		87	13				10						74
2257	6	56		9	7	65	26	2	1967		1.5						0
1368	133	1362		13		95		9									28
17915	1796	695		15	22	63	15		1957	1974	26						0
4679	858	319		19		99	1		1974		1.5						42
200				10		23	65	9									0
6322	3859	2052		10		51	46	3	1990		2					9	140
917	11	445		11			100		1968								0
7927	963	887		15		9	75	16	1982		2.7		1			10	0

4. Additional estimated AUMs from Range Improvements which could be allocated to wildlife, livestock, or watershed.

5. Seral stage: E=Early; M=Mid; L=Late; PNC/C=Potential Natural Community/Climax.

6. Allotments which are located partially in Diamond Mountain R.A. but grazing is administered by Colorado (Craig District), Little Snake R.A.

7. Acres are in early seral stage due to vegetation manipulation of pinyon-juniper stands to provide more forage and diversity.



**TABLE A8-2:  
EXISTING RIPARIAN INFORMATION BY GRAZING ALLOTMENT**

Allotment Name	PRESENT RIPARIAN STATUS				
	Name	Miles	Priority	Condition	Year Rip. Mon. Est.
Antelope Powers					
Aunt Knoll					
Argyle Ridge					
Asphalt Ridge					
Bates Spring					
Bealer Basin					
Big Wash					
Big Wash Draw					
Blair Basin					
Bridgeport	U. Green River	8	1	Mid	1990
Browns Park (Colo)	U. Green River	0.5	1	Mid	
Brush Creek	Brush Creek	1.5	13	Early	1990
Bull Canyon	Nine Mile Creek	5	13	Mid	1990
Canal					
Castle Peak					
Clay Basin	Clay Basin Creek	8	5	Early	1990
Clay Basin Meadows	Clay Basin Creek	1	5	Early	1990
Coal Mine Basin					
Cooper Draw					
Cottonwood Springs					
Cove & W. Cow Hollow					
Current Canyon					
Deep Creek					
Devil Canyon	Nine Mile Creek	1	13	Mid	1990
Diamond Mountain	Diamond Gulch	7	9	Mid	1990
Diamond Rim					
Dinosaur Park					
Donkey Flat	Little Brush Creek	2	3	Mid	1989



**TABLE A8-2: (Continued)  
EXISTING RIPARIAN INFORMATION BY GRAZING ALLOTMENT**

Allotment Name	PRESENT RIPARIAN STATUS				
	Name	Miles	Priority	Condition	Year Rip. Mon. Est.
Dry Creek (Colo)					
Dry Fork	Dry Fork Creek	2	29	Late	1990
East Cow Hollow					
East Huber					
East Little Mountain					
Eight Mile Flat					
Five Mile					
Flynns Point					
Gadsen					
Gadsen Draw					
Goslin Mountain	Martin Draw	4	12	Early	1989
	Grindstone Wash	5	9	Mid	
	Red Creek	4	4	Early	
Green River Bottoms	Lower Green River	6	2	Early	1984
Green River (PRRA)					
Hacking					
Halfway Hollow					
Hatch Cove					
Holmes-Palmer					
Horseshoe Bend	Lower Green River	1	2	Early	1990
Hoy Flat (Colo)					
Hoy Mountain					
Island Park					
Jackson-Crouse-Dry Hollow	Upper Green River	2	1	Late	1990
Johnson					
Kyune I (PRRA)					
Lambson-Crouse-Davis	Upper Sears Creek	3	20	Late	1990
Lears Canyon	Argyle Creek	2	16	Early	1989
Little Brush Creek					



**TABLE A8-2: (Continued)**  
**EXISTING RIPARIAN INFORMATION BY GRAZING ALLOTMENT**

Allotment Name	PRESENT RIPARIAN STATUS				
	Name	Miles	Priority	Condition	Year Rip. Mon. Est.
Little Desert	Four Mile Wash	1	18	Mid	1990
	Lower Green River	6	2	Late	
Little Hole	Upper Green River	5	1	Mid	1989
	Jackson Draw Creek	1	23	Mid	
	L. Davenport Creek	1	24	Late	
	Gorge Creek	1	25	Late	
Log Cabin					
Mame Hole-Bear Hollow					
Mail Draw					
Marshall Draw					
Max Canyon (PRRA)					
McCoy Flat					
McFarley Flat					
McKee Spring					
Mosby	Mosby Creek	1	11	Mid	1989
Natural Lake					
Oden					
Offield Mountain (Colo)					
Ouray Road					
Ouray Valley					
Paddys Gap					
Parley Canyon	Argyle Creek	0.5	16	Early	1989
Pelican Lake	Lower Green River	2	2	Late	1990
	Pelican Lake Draw	1.5	22	Mid	
Perry	Deep Creek	0.3	34	Late	
Powell/Sadlier	Lagoon Creek	1	35	Mid	
Red Creek Flat	Upper Green River	5	1	Mid	
Red Mountain	Coyote Creek	1	31	Late	
Rich & Stetson					
Ruple Cabin	Pot Creek	0.2	32	Mid	1990



**TABLE A8-2: (Continued)**  
**EXISTING RIPARIAN INFORMATION BY GRAZING ALLOTMENT**

Allotment Name	PRESENT RIPARIAN STATUS				
	Name	Miles	Priority	Condition	Year Rip. Mon. Est.
Rye Grass					
S.J. Hatch					
School Bus Draw					
Sears Canyon	Upper Sears Creek	3	8		
Serviceberry Spring					
Shindy					
Shiner					
Shiner (Colo)					
Smelter Springs	Smelter Creek	0.3	33	Late	
S. Pot Creek (Colo)					
Spring Creek	Spring Creek	2.5	14	Mid	1990
	Ashley Creek	2	21	Mid	
Smokem-up					
Stone Cabin (PRRA)					
Sulfur Canyon					
Taylor Flat	Upper Green River	7	1	Mid	1990
	Lower Sears	1	7	Mid	
	L. Tolivers Creek	1.5	6	Mid	
Three Corners					
Twelve Mile					
Twin Knolls					
North Warren Draw	U. Tolivers Creek	1.5	15	Late	1989
South Warren Draw					
Water Canyon #1					
Water Canyon #2					
Watson	Upper Green River	4	1	Mid	
	Crouse Creek	2	30	Late	
Wells Draw					
West Huber					
West Little Mountain					



**TABLE A8-2: (Continued)  
EXISTING RIPARIAN INFORMATION BY GRAZING ALLOTMENT**

Allotment Name	PRESENT RIPARIAN STATUS				
	Name	Miles	Priority	Condition	Year Rip. Mon. Est.
West Pelican Lake					1990
West Pot Creek					
Wetlands	Lower Green River Pariette Wash	5 10	2 10	Early Mid	1990
Wild Mountain (Colo)					
Wilkerson					
Willow Creek	Upper Willow Creek Lower Willow Creek Birch Creek Beaver Creek Clay Basin Creek	0.2 3 1 1 1	17 28 26 27 5	Early Late Mid Mid Early	1990
Willow Spring					
Young	Lower Green River	1.5	2	Late	1990



## FORAGE ALLOCATION HISTORY

Following passage of the Taylor Grazing Act in 1934, grazing allotments were organized and significant reductions in livestock forage allocations implemented. Formal adjudication of grazing privileges were completed from 1958-1967. More than half of the grazing allotments received reductions. For example, more than half the cattle allotments in the Nine Mile Canyon area were reduced by 50% (BLM, 1980).

During this same period, the newly constructed Flaming Gorge Dam, and its resultant reservoir, flooded or covered important big game winter habitat and migration routes. As partial mitigation for these losses, the Bureau of Reclamation purchased private ranch property and conveyed it to the Utah Division of Wildlife Resources for management. This property served as base land for 2,361 federal Animal Unit Months (AUMs) of cattle grazing privileges in the Browns Park area. As a result of this transaction, the Diamond Mountain Resource Area retired the attached grazing privileges on six allotments to partially replace winter forage for big game.

Livestock husbandry and economic factors changed to favor cattle from 1967-1977. Converting from sheep to cattle grazing in the Diamond Mountain and Three Corners areas during this period resulted in a net loss of approximately 3,800 AUMs.

Since the time the Three Corners and Ashley-Duchesne Grazing EISs were completed in 1980 and 1982, livestock preference has continued to decline while wildlife forage use has increased. At the time the grazing EISs were written, livestock preference totaled 55,203 AUMs and wildlife allocations were 21,888 AUMs. Current livestock preference is 50,299 AUMs while current wildlife use totals 27,570 AUMs.

Problems in resource management and possible solutions are identified in Table A8-3. Table A8-4 lists rangeland improvement proposals under each alternative by allotment and Table A8-5 lists priorities for allotment management plan development and/or revisions. Table A8-6 documents the proposed allotment management recategorization for Alternatives B through E.





TABLE A8-3:

**PROBLEMS, CONFLICTS, AND OPPORTUNITIES IN RANGELAND  
MANAGEMENT FOR THE DIAMOND MOUNTAIN RESOURCE AREA**

(Numbers refer to key on next 2 pages)

<u>ALLOTMENT</u>	<u>RESOURCE CONFLICT/ PROBLEM</u>	<u>ALLOTMENT</u>	<u>RESOURCE CONFLICT/ PROBLEM</u>
ANTELOPE POWERS	1, 3, 8, 18	LOG CABIN	
AUNT KNOLL	1, 6, 3, 2	MAME HOLE/BEAR HOLLOW	6, 11
ARGYLE RIDGE	2, 4a	MAIL DRAW	11
ASPHALT RIDGE		MARSHALL DRAW	1, 4s, 5, 6, 11
BATES SPRING	11, 3	MAX CANYON (PRRA)	
BEALER BASIN	5, 9, 11	McCOY FLAT	1, 10, 13, 16
BIG WASH	3, 5, 1, 14	McFARLEY FLAT	1, 8
BIG WASH DRAW	1, 7	McKEE SPRING	3
BLAIR BASIN	11	MOSBY	1
BRIDGEPORT	3, 4h, 11	NATURAL LAKE	
BROWNS PARK (UTAH)	2	ODEN	
BRUSH CREEK	1, 4e, 5, 6, 7, 8, 10	OFFIELD MOUNTAIN (COLO)	
BULL CANYON	1, 8, 11	OURAY ROAD	1, 10
CANAL		OURAY VALLEY	
CASTLE PEAK	1, 6, 7, 13, 16, 18	PADDY'S GAP	1, 6, 7
CLAY BASIN	1, 4fq, 7, 11	PARLEYS CANYON	6
CLAY BASIN MEADOWS	1, 4f, 5, 6, 9, 11	PELICAN LAKE	1, 8, 10
COAL MINE BASIN	4s, 6, 11, 12, 14, 17	PERRY	5, 6
COOPER DRAW	1, 9, 11	POWELL/SADLIER	1, 10
COTTONWOOD SPRINGS	1, 6, 10, 17	RED CREEK FLAT	4q, 17
COVE & WEST COW HOLLOW	5, 6	RED MOUNTAIN	4s, 12, 15
CURRENT CANYON	1, 6, 11	RICH & STETSON	
DEEP CREEK	3	RUPLE CABIN	1, 2, 11, 12
DEVILS CANYON	1, 8, 11	RYE GRASS	6, 11
DIAMOND MOUNTAIN	1, 4g, 5, 11	S. J. HATCH	1, 6, 7, 10, 16
DIAMOND RIM	6, 11, 17	SCHOOL BUS DRAW	4s, 6, 9, 11
DINOSAUR PARK	1	SEARS CANYON	6, 10, 11
DONKEY FLAT	1, 3, 4j, 5, 11, 12, 17	SERVICEBERRY SPRING	
DRY FORK	1, 3, 6, 11	SHINDY	1, 12, 17
EAST COW HOLLOW		SHINER	1, 6, 8
EAST HUBER	1, 8, 13, 16	SHINER (COLO)	
EAST LITTLE MOUNTAIN	4s, 6	SMEALTER SPRINGS	3
EIGHT MILE FLAT	1, 7, 13, 16, 18	SOUTH POT CREEK (COLO)	
FIVE MILE	5, 6, 7, 8, 11	SPRING CREEK	1, 4r, 8
FLYNNS POINT		STONE CABIN (PRRA)	
GADSON		SULFUR CANYON (PRRA)	
GADSON DRAW		TAYLOR FLAT	1, 3, 4kl, 6, 11, 12
GOSLIN MOUNTAIN	1, 3, 4imq, 5, 11, 14	THREE CORNERS	5
GREEN RIVER BOTTOMS	4h, 3, 11	TWELVE MILE	1, 8, 10
GREEN RIVER (PRRA)		TWIN KNOLLS	1, 7
HACKING	3	NORTH WARREN DRAW	6, 11
HALFWAY HOLLOW	1, 8, 10	SOUTH WARREN DRAW	6, 11
HATCH COVE	9, 11	WATER CANYON #1	
HOLMES-PALMER		WATER CANYON #2	10
HORSESHOE BEND	1, 3, 4h, 9, 11	WATSON	1, 11
HOY FLAT (COLO)		WELLS DRAW	1, 3, 6, 7
HOY MOUNTAIN	2, 6, 11	WEST HUBER	1, 8
ISLAND PARK	1, 11	WEST LITTLE MOUNTAIN	5, 6
JACKSON/CROUSE/DRY HOLLOW	1, 6, 9, 11	WEST PELICAN LAKE	10
JOHNSON	6	WEST POT CREEK	4p
KYUNE I (PRRA)		WETLANDS	4h
LAMBSON/CROUSE/DAVIS	4s, 5, 11, 12	WILD MOUNTAIN (COLO)	
LEARS CANYON	4a, 6, 11	WILKERSON	
LITTLE DESERT	1, 3, 6, 8, 13, 16, 18	WILLOW CREEK	1, 4ds, 5, 6, 11
LITTLE HOLE	1, 4hs, 6, 11	WILLOW SPRINGS	3
		YOUNG	1, 8



**TABLE A8-3 (Continued):  
KEY TO PROBLEMS AND OPPORTUNITIES**

TYPES OF PROBLEMS AND CONFLICTS		MANAGEMENT OPPORTUNITIES																																								
1.	Existing water sources are insufficient to allow uniform distribution in the allotment as a whole or are unreliable. Some areas are being over-utilized near existing water; other portions of the allotment are not providing the number of AUMs authorized.	Improve livestock and wildlife distribution by developing additional water projects and/or salting. Implement grazing management systems that would alter traditional grazing patterns and provide for improved distribution of use.																																								
2.	Existing livestock preference exceeds the current production capabilities of the vegetation communities involved.	Monitor actual livestock utilization in relation to actual numbers to determine proper carrying capacity. Place excess preference shown by monitoring into suspended preference or non-use.																																								
3.	Total forage available plus additional forage possible from rangeland improvements is less than the forage required to meet future objective forage levels for wildlife and livestock preference combined.	Lower wildlife objective levels to meet total forage capabilities. Allow objective wildlife levels to be reached while reducing livestock preference where there is dietary overlap between livestock and wildlife.																																								
4.	Portions of the one or more of the following riparian areas are in unsatisfactory condition:  <table border="0" style="margin-left: 20px;"> <tr> <td>A.</td> <td>Argyle Creek</td> <td>K.</td> <td>Lower Sears Creek</td> </tr> <tr> <td>B.</td> <td>Ashley Creek</td> <td>L.</td> <td>Lower Tolivers Creek</td> </tr> <tr> <td>C.</td> <td>Beaver Creek</td> <td>M.</td> <td>Martin Draw</td> </tr> <tr> <td>D.</td> <td>Birch Creek</td> <td>N.</td> <td>Nine Mile Creek</td> </tr> <tr> <td>E.</td> <td>Brush Creek</td> <td>O.</td> <td>Pariette Wash</td> </tr> <tr> <td>F.</td> <td>Clay Basin Creek</td> <td>P.</td> <td>Pot Creek</td> </tr> <tr> <td>G.</td> <td>Diamond Gulch</td> <td>Q.</td> <td>Red Creek</td> </tr> <tr> <td>H.</td> <td>Green River</td> <td>R.</td> <td>Spring Creek</td> </tr> <tr> <td>I.</td> <td>Grindstone Wash</td> <td>S.</td> <td>Springs</td> </tr> <tr> <td>J.</td> <td>Little Brush Creek</td> <td></td> <td></td> </tr> </table>	A.	Argyle Creek	K.	Lower Sears Creek	B.	Ashley Creek	L.	Lower Tolivers Creek	C.	Beaver Creek	M.	Martin Draw	D.	Birch Creek	N.	Nine Mile Creek	E.	Brush Creek	O.	Pariette Wash	F.	Clay Basin Creek	P.	Pot Creek	G.	Diamond Gulch	Q.	Red Creek	H.	Green River	R.	Spring Creek	I.	Grindstone Wash	S.	Springs	J.	Little Brush Creek			Improve riparian habitat by implementing grazing systems with grazing deferment, utilization limits, and/or seasons of use conducive for riparian improvement. Exclude riparian areas from livestock grazing. Install fences where needed to control grazing (deferment or exclusion). Install instream structures where needed to stabilize streams. Plant riparian vegetation to accelerate improvement. Control noxious weeds which are encroaching on beneficial plant species.
A.	Argyle Creek	K.	Lower Sears Creek																																							
B.	Ashley Creek	L.	Lower Tolivers Creek																																							
C.	Beaver Creek	M.	Martin Draw																																							
D.	Birch Creek	N.	Nine Mile Creek																																							
E.	Brush Creek	O.	Pariette Wash																																							
F.	Clay Basin Creek	P.	Pot Creek																																							
G.	Diamond Gulch	Q.	Red Creek																																							
H.	Green River	R.	Spring Creek																																							
I.	Grindstone Wash	S.	Springs																																							
J.	Little Brush Creek																																									
5.	Certain portions of this allotment have excessive sagebrush canopy and/or decadent non-productive, old-age stands of sagebrush or greasewood which reduces vegetation diversity and the amount of desirable forage available for wildlife and/or livestock.	Improve forage quality through the implementation of various vegetation manipulations such as prescribed burning and plowing and seeding (See "Standard Operating Procedures for Rangeland Improvements" later in this Appendix).																																								
6.	Certain portions of this allotment contain large amounts of unproductive, closed stands of pinyon/juniper reducing vegetation diversity, ground cover, and the amount of desirable forage available for wildlife and livestock.	Improve forage diversity, quality, and quantity for wildlife and livestock while improving long term watershed stability through prescribed burning or chaining followed by seeding (See "Standard Operating Procedures for Rangeland Improvements" later in this Appendix).																																								
7.	Excessive soil erosion is occurring on certain portions of the allotment because of a lack of vegetation cover.	Improve soil stability or highly erosive soils by constructing improvement projects designed to provide watershed stability (See "Standard Operating Procedures for Rangeland Improvements" later in this Appendix).																																								
8.	Continuous, early spring grazing on semi-desert winter/spring use allotments is resulting in stress to desirable forage species that require periodic rest during the growing season.	Provide periodic spring grazing rest by implementing grazing systems that rotate spring use. discontinue grazing during spring "green up" on winter/spring allotments. Delay turnout until after seedripeness on spring/summer allotments.																																								
9.	Continuous grazing during the growing season on summer allotments results in stress to desirable forage species that require periodic rest during the growing season.	Provide periodic growing season rest by implementing grazing systems that rotate growing season use. Delay spring turnout until maximum herbaceous growth is attained.																																								
10.	The boundary of the allotment is not fenced or secured by natural boundaries that will control authorized livestock. Livestock occasionally drift into or out of the authorized allotment, resulting in trespass situations.	Control livestock use by constructing boundary fences or additional cross fences.																																								



Appendix 8 - Vegetation and Livestock Management

TYPES OF PROBLEMS AND CONFLICTS	MANAGEMENT OPPORTUNITIES
11. Plant and insect pests have posed a problem to the vegetative productivity of the allotment.	Coordinate with other affected agencies to control noxious weeds and insect pests.
12. Recreational activities by the public are resulting in gates being left open. This causes livestock to drift in and out of authorized areas.	Install cattle guards in problem locations to minimize livestock drifting.
13. Certain areas used as sheep bedding grounds for too long a period or successively each year is causing localized vegetation degradation.	Rotate sheep bedding grounds each year and limit utilization to 60% maximum.
14. Certain fences in place on cattle allotments are not built to wildlife specifications and inhibit free movement.	Modify fences to meet BLM wildlife specifications.
15. Periodic ORV use within the allotments is resulting in accelerated erosion on areas with fragile soils.	Restrict ORV use to existing road and trails, designated roads and trails, or close areas to ORV use.
16. Desert allotments with shrub vegetation types and grass understory are being utilized by one class of livestock with predominant use on shrubs if sheep are stocked and grass if cattle are stocked.	Periodically rotate class of livestock on allotments where agreements can be reached with permittees, periodically resting vegetation types.
17. Old pinyon/juniper chainings (20 years plus) are re-establishing themselves back to P/J and reducing the vegetation understory. This degrades the watershed, decreases forage production for wildlife and livestock and lessens plant diversity.	Re-establish a mid-seral vegetation stage through vegetation manipulation such as prescribed burning and seeding (See "Standard Operating Procedures for Rangeland Improvements" later in this Appendix).
18. Well pads and roads from oil and gas development are accelerating erosion.	Where possible, install erosion control structures, and use existing roads for new locations of wells. Insure compliance of actual construction of well pads and access roads. Where necessary, relocate proposed access routes and well pad sites located in highly erosive areas.



TABLE A8-4:  
RANGELAND IMPROVEMENTS - ALTERNATIVES A and E

ALLOTMENTS	GRAZING SYSTEM		VEGETATION MANIPULATION						STRUCTURAL PROJECTS				
	Spring Defer	Rest Rotate	Burn <sup>3</sup>	Burn & Seed <sup>2</sup>	Chem.	Fwd Hvst	Inter-seed	P/C	Res.	Fencing (Miles) Div. Bndry	Guzzlers & Spgs.	Pipe-lines (Mi.)	Wells
Antelope Powers	X								20				
Aunt Knoll	X			200					10				
Argyle Ridge		X											
Asphalt Ridge	X												
Bates Spring									1				
Bealer Basin		X								2		.5	
Big Wash			300						20		2		
Big Wash Draw		X <sup>1</sup>				400		200 <sup>C</sup>	20	1			
Blair Basin									1				
Bridgeport				600					5	1.5*	1		
Browns Park				800					10				1
Brush Creek	X <sup>1</sup>		200	300					20	10,1			
Bull Canyon	X <sup>1</sup>			200					5		3		
Canal									2				
Castle Peak						300			100				
Clay Basin		X							15		1	1	
Clay Basin Meadows		X <sup>1</sup>		300					15	.5*	1	.5	
Coal Mine Basin				1,400					5	.5*	2	.5	
Cooper Draw		X							3	2			
Cottonwood Springs	X			1,300					15		3	4.5	
Cove & W. Cow Hollow									2				
Current Canyon				200		200			5		2		
Deep Creek													



TABLE A8-4 (Continued):  
RANGELAND IMPROVEMENTS - ALTERNATIVES A and E

ALLOTMENTS		GRAZING SYSTEM			VEGETATION MANIPULATION						STRUCTURAL PROJECTS				
		Spring Defer	Rest Rotate	Burn <sup>3</sup>	Burn & Seed <sup>2</sup>	Chem.	Frwd Hvst	Inter- seed	P/C	Res.	Fencing (Miles) Div. Bndry	Guzzlers & Spgs.	Pipe- lines (Mi.)	Wells	
Devils Canyon	04882	X <sup>1</sup>								5		2			
Diamond Mountain	04837		X		100					6	.5	1	4		
Diamond Rim	04861				200										
Dinosaur Park	04867									2			1		
Donkey Flat	04859				200	200			400 <sup>P</sup>	15	2	1	1		
Dry Fork	04854	X			200		100			2		2	.5		
E. Cow Hollow	14822														
E. Huber	15811	X								15		1			
E. Little Mountain	04845				200							1			
Eight Mile Flat	05887	X								12		1			
Five Mile	04874	X			200		500			10		2			
Flynns Point	04889														
Gadsen	04881														
Gadsen Draw	14810														
Goslin Mountain	14803			200	200					25	2*	1	3		
Green River (PRRA) <sup>6</sup>	04806									5					
Green River Bottoms	15878											1			
Hacking	04850											1			
Halfway Hollow	15808	X								2					
Hatch Cove	04834				200					2					
Holmes-Palmer	15810														
Horseshoe Bend	05814		X					200			1.5*	1			
Hoy Mountain	14815				200								.5		
Island Park	04870				500					6		2			



TABLE A8-4 (Continued):  
RANGELAND IMPROVEMENTS - ALTERNATIVES A and E

ALLOTMENTS	GRAZING SYSTEM			VEGETATION MANIPULATION							STRUCTURAL PROJECTS				
	Spring Defer	Rest Rotate	Burn <sup>3</sup>	Burn & Seed <sup>2</sup>	Chem.	Fwd Hfst	Interseed	P/C	Res.	Fencing (Miles) Div. Bndry	Guzzlers & Spgs.	Pipe-lines (Mi.)	Wells		
Jackson/Crouse/Dry Hollow	14812	X <sup>1</sup>		900					15		2				
Johnson	04851			200					2						
Kyune I <sup>6</sup> (PRRA)	04129														
Lambson/Crouse/Davis	14818			100					5						
Lears Canyon	04875			200											
Little Brush Creek	04865														
Little Desert	05880	X							25		2				
Little Hole	14811		X <sup>1</sup>	1,000					6	1*	2	.5			
Log Cabin	04830														
Mame Hole-Bear Hollow	04816			200					3						
Mail Draw	14826			200					3						
Marshall Draw	14814		200	200					3						
McCoy Flat	05805								15		1				
McFarley Flat	04863	X		200						1.5	4	1			
McKee Spring	14825			200					3						
Mosby	04847		X <sup>1</sup>								3	2.5			
Natural Lake	14820														
Oden	04880														
Ourray Road	15802								10	9					
Ourray Valley	15815														
Paddys Gap	04860			400					20						
Parley Canyon	04863			100		100			6		1				
Pelican Lake	05812	X							10		1				
Perry	04852			450					5						



TABLE A8-4 (Continued):  
RANGELAND IMPROVEMENTS - ALTERNATIVES A and E

ALLOTMENTS	GRAZING SYSTEM			VEGETATION MANIPULATION						STRUCTURAL PROJECTS			
	Spring Defer	Rest Rotate	Burn <sup>3</sup>	Burn & Seed <sup>2</sup>	Chem.	Frwd Hvst	Inter-seed	P/C	Res.	Fencing (Miles) Div. Bndry	Guzzlers & Spgs.	Pipe-lines (Mi.)	Wells
Powell/Sadlier									2				
Red Creek Flat				800					10			.5	
Red Mountain				200							1		
Rich & Stetson									2				
Ruple Cabin					300				10		2		
Rye Grass				300									
S.J. Hatch				300					10				
School Bus Draw				200					2	2*			
Sears Canyon				300									
Serviceberry Spring													
Shindy			100	500							1	.5	
Shiner		X		1,000					35	2	4	3	
Smelter Springs													
Spring Creek	X									.5	2		
Stone Cabin (PRRA)													
Sulfer Canyon (PRRA)			200						2				
Taylor Flat		X		300						2		2	
Three Corners			200						2		4		
Twelve Mile	X								4		1		
Twin Knolls									20				
N. Warren Draw				200					5				
S. Warren Draw				200					3				
Water Canyon #1													
Water Canyon #2											2		



TABLE A8-4 (Continued):  
RANGELAND IMPROVEMENTS - ALTERNATIVES A and E

ALLOTMENTS	GRAZING SYSTEM			VEGETATION MANIPULATION						STRUCTURAL PROJECTS				
	Spring Defer	Rest Rotate	Burn <sup>3</sup>	Burn & Seed <sup>2</sup>	Chem.	Fwrd Hfst	Inter-Seed	P/C	Res.	Fencing (Miles) Div. Bndry	Guzzlers & Spgs.	Pipe-lines (Mi.)	Wells	
Watson				200					2			1.5		
Wells Draw				800				200 <sup>C</sup>						
West Huber	X								2					
W. Little Mountain				800	250									
W. Pelican Lake										1				
W. Pot Creek				800						.2				
Wetlands										3*				
Wild Mountain														
Wilkerson														
Willow Creek				800					10					
Young	X								15	5	1	5	1	
TOTALS			1,400	18,000	500	1,500	200	800	657	38.7	19	63	33.5	1

\* - Fencing to improve riparian habitat.

P - Plow and Seed allotment.

C - Contour Furrow & Seed

1 - Possible Allotment Management Plan Development.

2 - Predominantly P/J. If pinyon/juniper areas will not carry a fire, chaining may be substituted.

3 - Predominantly sagebrush. If sagebrush understory will not carry a fire, chemicals may be substituted for control.

4 - Includes division, boundary, and enclosure fences.

5 - A preferred treatment method is selected for each

6 - Allotments where grazing is administered by Price River Resource Area.

7 - Commercial and personal firewood cutting/seedling.



TABLE A8-4 (Continued):  
RANGELAND IMPROVEMENTS - ALTERNATIVE B

ALLOTMENTS	GRAZING SYSTEM			VEGETATION MANIPULATION					STRUCTURAL PROJECTS				
	Spring Defer	Rest Rotate	Burn <sup>3</sup>	Burn & Seed <sup>2</sup>	Chem.	Frwd Hvst	P/C	Res.	Fencing (Miles) Div. Bndry	Guzzlers & Spgs.	Pipe-lines (Mi.)	Wells	
Antelope Powers	X							20					
Aunt Knoll	X			100				10					
Argyle Ridge		X							6*3				
Asphalt Ridge													
Bates Spring													
Bealer Basin		X							2				
Big Wash								20					
Big Wash Draw		X <sup>1</sup>				200	200 <sup>P</sup>	20	1				
Blair Basin													
Bridgeport				300				5	1.5*				
Browns Park								10					
Brush Creek	X <sup>1</sup>			150				20	10.1*				
Bull Canyon	X <sup>1</sup>							5					
Canal								2					
Castle Peak						150							
Clay Basin		X						15	3*	3	1		
Clay Basin Meadows		X <sup>1</sup>		150				5	5*	1	.5		
Coal Mine Basin			100	100				5	.5*		.5		
Cooper Draw		X						3	2				
Cottonwood Springs				650				5		1	1.5		
Cove & W. Cow Hollow	X		100										
Current Canyon				100				5	.5*				
Deep Creek									2.5*				



TABLE A8-4 (Continued):  
RANGELAND IMPROVEMENTS - ALTERNATIVE B

ALLOTMENTS	GRAZING SYSTEM			VEGETATION MANIPULATION					STRUCTURAL PROJECTS				
	Spring Defer	Rest Rotate	Burn <sup>3</sup>	Burn & Seed <sup>2</sup>	Chem.	Frwd Hvst	P/C	Res.	Fencing (Miles) Div. Bndry	Guzzlers & Spgs.	Pipe-lines (Mi.)	Wells	
Devils Canyon	X <sup>1</sup>							6					
Diamond Mountain		X		100				6	.5	1	4		
Diamond Rim				100									
Dinosaur Park			100					2		1	4		
Donkey Flat				200	200			6		2	4		
Dry Fork	X			200		100		2		2	.5		
E. Cow Hollow													
E. Huber	X							15					
E. Little Mountain										1			
Eight Mile Flat	X <sup>1</sup>							12	20*	1			
Five Mile	X <sup>1</sup>			100		250		10		2			
Flynns Point													
Gadsen													
Gadsen Draw													
Goslin Mountain			200	100				15	12*	1	3		
Green River (PRRA) <sup>6</sup>								5					
Green River Bottoms													
Hacking										1			
Halfway Hollow								2					
Hatch Cove	X			100				2					
Holmes-Palmer													
Horseshoe Bend		X						1	1.5				
Hoy Mountain			200	100						.5			
Island Park				250						2			



TABLE A8-4 (Continued):  
RANGELAND IMPROVEMENTS - ALTERNATIVE B

ALLOTMENTS	GRAZING SYSTEM			VEGETATION MANIPULATION					STRUCTURAL PROJECTS				
	Spring Defer	Rest Rotate	Burn <sup>3</sup> (acres)	Burn & Seed <sup>2</sup>	Chem.	Frwd Hyst	P/C	Res.	Fencing (Miles) Div. Bndry	Guzzlers & Spgs.	Pipe-lines (Mi.)	Wells	
Jackson/Crouse/DryHollow 14812	X <sup>1</sup>		200	350									
Johnson 04851				100				2					
Kyune I <sup>6</sup> (PRRA) 04129													
Lambson/Crouse/Davis 14818								5					
Lears Canyon 04875													
Little Brush Creek 04865													
Little Desert 05880	X			100				15		2			
Little Hole 14811		X <sup>1</sup>		400				5	1*	2	.5		
Log Cabin 04830													
Mame Hole-Beau Hollow 04816				100				3					
Mail Draw 14826								3					
Marshall Draw 14814								3					
McCoy Flat 05805								5		1			
McFarley Flat 04863	X								3	6	1		
McKee Spring 14825				100				3					
Mosby 04847		X <sup>1</sup>							2*	3	2.5		
Natural Lake 14820													
Oden 04880													
Ouray Road 15802								15	9				
Ouray Valley 15815													
Paddys Gap 04860				200				20					
Parley Canyon 04883								5		1			
Pelican Lake 05812	X							10		1			
Perry 04852				200				5					



TABLE A8-4 (Continued):  
RANGELAND IMPROVEMENTS - ALTERNATIVE B

ALLOTMENTS	GRAZING SYSTEM		VEGETATION MANIPULATION					STRUCTURAL PROJECTS				
	Spring Defer	Rest Rotate	Burn <sup>3</sup>	Burn & Seed <sup>2</sup>	Chem.	Frwd Hvst	P/C	Res.	Fencing (Miles) Div. Bndry	Guzzlers & Spgs.	Pipe-lines (Mi.)	Wells
Powell/Sadlier 04872								2				
Red Creek Flat 04809				200					2		.5	
Red Mountain 04857				100						1		
Rich & Stetson 15801												
Ruple Cabin 14833				100				10		2		
Rye Grass 14807												
S.J. Hatch 04862				100				10				
School Bus Draw 04838				100				2	3*			
Sears Canyon 14809												
Serviceberry Spring 04828												
Shindy 04849			200	250						1	.5	
Shiner 04842		X		300				35	2	4	3	
Smelter Springs 04848												
Spring Creek 04856	X								5	2		
Stone Cabin (PRRA) 04109												
Sulfur Canyon (PRRA) 04111			200					2				
Taylor Flat 04808		X		100							2	
Three Corners 14800								2		1		
Twelve Mile 15813	X							4		1		
Twin Knolls 04819								20				
N. Warren Draw 14813								5				
S. Warren Draw 14827								3				
Water Canyon #1 04876												
Water Canyon #2 04879										2		



TABLE A8-4 (Continued):  
RANGELAND IMPROVEMENTS - ALTERNATIVE B

ALLOTMENTS	GRAZING SYSTEM		VEGETATION MANIPULATION					STRUCTURAL PROJECTS				
	Spring Defer	Rest Rotate	Burn <sup>3</sup>	Burn & Seed <sup>2</sup>	Chem.	Frwd Hvst	P/C	Res.	Fencing (Miles) Div. Bndry	Guzzlers & Spgs.	Pipe-lines (Mi.)	Wells
Watson				100				2			1.5	
Wells Draw				100			200 <sup>C</sup>					
West Huber	X							2				
W. Little Mountain				200								
W. Pelican Lake									1			
W. Pot Creek				100				.2				
Wetlands								7*				
Wild Mountain												
Wilkerson												
Willow Creek				100				6	7*			
Young	X							10	5	1		
TOTALS			1,350	6,700		600	400	444	109.7	19.5	48	23.5

\* - Fencing to improve riparian habitat.

P - Plow and Seed allotment.

C - Contour Furrow & Seed

1 - Possible Allotment Management Plan Development.

2 - Predominantly P/J. If pinyon/juniper areas will not carry a fire, chaining may be substituted.

3 - Predominantly sagebrush. If sagebrush understory will not carry a fire, chemicals may be substituted for control.

4 - Includes division, boundary, and enclosure fences.

5 - A preferred treatment method is selected for each

6 - Allotments where grazing is administered by Price River Resource Area.

7 - Commercial and personal firewood cutting/seeding.



TABLE A8-4 (Continued):  
RANGELAND IMPROVEMENTS - ALTERNATIVES C and D

ALLOTMENTS		GRAZING SYSTEM			VEGETATION MANIPULATION						STRUCTURAL PROJECTS				
		Spring Defer	Rest Rotate	Burn <sup>3</sup>	Burn & Seed <sup>2</sup>	Chem.	Fwrd Hvst	P/C	Res.	Fencing (Miles) Div. Bndry	Guzzlers & Spgs.	Pipe-lines (Mi.)	Wells		
Antelope Powers	15879	X							20						
Aunt Knoll	15807	X			200				15						
Argyle Ridge	04873		X							3					
Asphalt Ridge	05807														
Bates Spring	14823														
Bealer Basin	14806		X	200						2		.5			
Big Wash	05881			800					20		2				
Big Wash Draw	15885		X <sup>1</sup>				400	200 <sup>C</sup>	20	1					
Blair Basin	14824								1						
Bridgeport	14805			200	600				5	1.5*	1				
Browns Park	04806			800					10						
Brush Creek	04858	X <sup>1</sup>		200	300				20	10.1*					
Bull Canyon	04878	X <sup>1</sup>							5		3				
Canal	15816								2						
Castle Peak	05886						300		100						
Clay Basin	14802		X	300					15		1	1			
Clay Basin Meadows	14804		X <sup>1</sup>	200	300				15		1	.5			
Coal Mine Basin	04855			300	1,400				5	.5*	2	.5			
Cooper Draw	04835		X						3	2					
Cottonwood Springs	04853	X			1,300				15	2	3	4.5			
Cove & W. Cow Hollow	14817			200					2						
Current Canyon	04877				200		200		5		2				
Deep Creek	04884														



TABLE A8-4 (Continued):  
RANGELAND IMPROVEMENTS - ALTERNATIVES C and D

ALLOTMENTS	GRAZING SYSTEM			VEGETATION MANIPULATION					STRUCTURAL PROJECTS				
	Spring Defer	Rest Rotate	Burn <sup>3</sup>	Burn & Seed <sup>2</sup>	Chem.	Frwd Hvst	P/C	Res.	Fencing (Miles) Div. Bndry	Guzzlers & Spgs.	Pipe-lines (Mi.)	Wells	
Devils Canyon	X <sup>1</sup>							5		2			
Diamond Mountain		X		100				5	.5	1	4		
Diamond Rim				200									
Dinosaur Park			200					2	1		1		
Donkey Flat			400		200		400 <sup>P</sup>	15	2*	1	1		
Dry Fork	X			300				2		2	.5		
E. Cow Hollow													
E. Huber	X							15		1			
E. Little Mountain			200							1			
Eight Mile Flat	X <sup>1</sup>							12		1			
Five Mile	X <sup>1</sup>			200		500		10		2			
Flynns Point													
Gadsen													
Gadsen Draw													
Goslin Mountain			400	200				25	2*	1	3		
Green River (PRRA) <sup>6</sup>								5					
Green River Bottoms										1			
Hacking										1			
Halfway Hollow	X							2					
Hatch Cove			200	200				2					
Holmes-Palmer													
Horseshoe Bend		X						1	1.5*				
Hoy Mountain			400	200					.5				
Island Park				500				5		2	.5		



TABLE A8-4 (Continued):  
RANGELAND IMPROVEMENTS - ALTERNATIVES C and D

ALLOTMENTS	GRAZING SYSTEM			VEGETATION MANIPULATION					STRUCTURAL PROJECTS				
	Spring Defer	Rest Rotate	Burn <sup>3</sup>	Burn & Seed <sup>2</sup>	Chem.	Frwd Hvst	P/C	Res.	Fencing (Miles) Div. Bndry	Guzzlers & Spgs.	Pipe-lines (Mi.)	Wells	
Jackson/Crouse/DryHollow 14812		X <sup>1</sup>	200	900				15		2			
Johnson 04851				200				2					
Kyune I <sup>6</sup> (PRRA) 04129													
Lambson/Crouse/Davis 14818			100	150				6					
Lears Canyon 04875				200									
Little Brush Creek 04865													
Little Desert 05880	X			200				25		2			
Little Hole 14811		X <sup>1</sup>		1,000				6	1*	2	.5		
Log Cabin 04830													
Mame Hole-Beau Hollow 04816				200				3					
Mail Draw 14826								3					
Marshall Draw 14814			200	200				3					
McCoyFlat 05805								15		4			
McFarley Flat 04863	X			200					1.5	4	1		
McKee Spring 14825				200				3					
Mosby 04847		X <sup>1</sup>								3	2.5		
Natural Lake 14820													
Oden 04880													
Ouray Road 15802								15					
Ouray Valley 15815										9			
Paddys Gap 04860				400				20					
Parley Canyon 04863			100	100				6		1			
Pelican Lake 05812	X							10					
Perry 04852				150				5					



TABLE A8-4 (Continued):  
RANGELAND IMPROVEMENTS - ALTERNATIVES C and D

ALLOTMENTS	GRAZING SYSTEM			VEGETATION MANIPULATION						STRUCTURAL PROJECTS			
	Spring Defer	Rest Rotate	Burn <sup>3</sup>	Burn & Seed <sup>2</sup>	Chem.	Frwd Hvst	P/C	Res.	Fencing (Miles) Div. Bndry	Guzzlers & Spgs.	Pipe-lines (Mi.)	Wells	
Powell/Sadlier								2					
Red Creek Flat				200				15			.5		
Red Mountain				200				2		1			
Rich & Stetson													
Ruple Cabin			500	200				10		2			
Rye Grass				300									
S.J. Hatch			200	500				10					
School Bus Draw				200				2	2*				
Sears Canyon				300									
Serviceberry Spring													
Shindy			200	500						1	.5		
Shiner		X		1,000				35	2	4	3		
Smelter Springs													
Spring Creek	X								.5	2			
Stone Cabin (PRRA)													
Sulfur Canyon (PRRA)			200										
Taylor Flat		X		300				2*			2		
Three Corners				200				2			1		
Twelve Mile	X							4		1			
Twin Knolls								20					
N. Warren Draw			200	200				5					
S. Warren Draw			200	200				3					
Water Canyon #1										2			
Water Canyon #2													



TABLE A8-4 (Continued):  
RANGELAND IMPROVEMENTS - ALTERNATIVES C and D

ALLOTMENTS	GRAZING SYSTEM			VEGETATION MANIPULATION						STRUCTURAL PROJECTS				
	Spring Defer	Rest Rotate	Burn <sup>3</sup>	Burn & Seed <sup>2</sup>	Chem.	Fwrd Hvst	P/C	Res.	Fencing (Miles) Div. Bndry	Guzzlers & Spgs.	Pipe- lines (Mi.)	Wells		
Watson				200				2			1.5			
Wells Draw				200			200 <sup>C</sup>							
West Huber	X							2						
W. Little Mountain				400	250									
W. Pelican Lake									1					
W. Pot Creek				200					.2					
Wetlands									3*					
Wild Mountain														
Wilkerson														
Willow Creek			400	800				10						
Young	X							15	5	1	1.5	1		
TOTALS			7,250	17,100	450	1,500	800	655	40.2	62	33.5	1		

\* - Fencing to improve riparian habitat.  
P - Flow and Seed allotment.  
C - Contour Furrow & Seed  
1 - Possible Allotment Management Plan Development.  
2 - Predominantly P/J. If pinyon/juniper areas will not carry a fire, chaining may be substituted.  
3 - Predominantly sagebrush. If sagebrush understory will not carry a fire, chemicals may be substituted for control.  
4 - Includes division, boundary, and exclosure fences.  
5 - A preferred treatment method is selected for each allotment.  
6 - Allotments where grazing is administered by Price River Resource Area.  
7 - Commercial and personal firewood cutting/seeding.



**TABLE A8-5  
PRIORITY FOR NEW ALLOTMENT  
MANAGEMENT PLANS AND REVISIONS**

NEW AMPS	PRIORITY
Antelope Powers	1
Big Wash Draw	18
Brush Creek	5
Clay Basin Meadows	14
Eight Mile Flat	13
Five Mile	8
McFarley Flat	10
Shiner	1
**Diamond Mountain	
Willow Creek	15
AMP REVISIONS	
Cottonwood Springs	1
*Pelican Lake	
*Twelve Mile	
*Young	
Goslin Mountain	2
Horseshoe Bend	5
Hoy Mountain	12
Little Desert	1
Red Creek Flat	11
S.J. Hatch	18
Taylor Flat	8
Wetlands	10
<p>* These allotments are currently used in conjunction with the Cottonwood Springs allotment and would be part of that AMP.                      ** This allotment is currently used in conjunction with the Shiner Allotment and would be part of that AMP.</p>	





## THE ALLOTMENT CATEGORIZATION PROCESS

The criteria used for the placement of the allotments into the categories were based on resource potential, resource use conflicts or controversy, opportunity for positive economic return on public investments, and the present management situation. The specific criteria used for each category are as follows:

### Category "M": Maintaining Existing Resource Conditions

- The present ecological condition and management are satisfactory.
- Late to climax condition, if desired, will be maintained under present management, or mid condition or improving with improvement expected to continue under present management, or opportunities for BLM management are limited because percentage of public land is low or acreage of public lands is small.
- Allotment has a potential for moderate or high vegetation production and is producing at or near this potential.
- There are no significant land-use resource conflicts with livestock grazing.
- Landownership status may or may not limit management opportunities.
- Opportunities for positive economic return from public investment may exist.

### Category "I": Improve Existing Resource Conditions

- Present ecological condition is unsatisfactory.
- Ecological condition is in early to mid seral stage.
- Ecological condition is in mid to late seral stage.
- Ecological succession is expected to regress further.
- Allotment has a potential for medium to high vegetation production but production is low to moderate.
- Resource conflicts/controversy with livestock grazing are evident.

- There is potential for positive economic return on public investment.

### Category "C": Custodial Management

- Present ecological condition is not in a downward trend.
- Allotment has a low vegetation production potential and is producing near this level.
- There may or may not be limited conflicts between livestock grazing and other resources.
- Present management is satisfactory or is the only logical management under existing conditions.
- Opportunities for positive economic return on public investments do not exist.

## MANAGEMENT OBJECTIVES

**"M" Allotments.** To authorize actions that are consistent with or will maintain current uses and satisfactory range condition and productivity. Monitoring studies will be established at a level that will detect changes in present resource management and/or condition. The intensity and workload requirements of the studies will depend on the resource values involved.

**"I" Allotments.** To implement management actions that will improve existing resource condition and productivity and enhance overall multiple use opportunities. Monitoring will be carried out at an intensity sufficient to support actions taken toward achieving management objectives and will be implemented on a priority basis. Monitoring will continue at a higher intensity to ensure the effectiveness of the actions.

**"C" Allotments.** To manage the allotment in a custodial manner while protecting the existing resource values. Management actions will emphasize the issuance of billings, grazing leases, and transfers. Monitoring will consist of periodic allotment inspections, use supervision, and photo plots to detect possible changes in existing resource values. A specific schedule for monitoring will not be developed, but monitoring will be conducted as the opportunity arises in conjunction with other range management work.

## CURRENT GRAZING ALLOTMENT INFORMATION

Table A8-1 lists livestock grazing information specific to each allotment in the resource area.



TABLE A8-6:  
RECORD OF PROPOSED ALLOTMENT CATEGORIZATION

Allotment Name	Range Condition Sat. Unsat.		Allotment Potential Hi. Med. Low		Present Productivity Hi. Med. Low		Resource Conflicts Many Few None		Controversy Hi Low None		Present Management Satis. Unsat.		Willingness to Invest Yes Maybe No		Other Criteria Allotment Characteristics	Category M I C
	X		X		X		X		X		X		X			
Antelope Powers	X		X		X		X		X		X		X		Critical Pronghorn Antelope habitat Critical Watershed Area	X
Aunt Knoll		X	X		X		X		X		X		X		Critical Watershed Area	X
Argyle Ridge	X		X		X		X		X		X		X		Riparian Concern	X
Asphalt Ridge	X		X			X		X		X			X			
Bates Spring	X		X		X		X		X		X		X			
Bealer Basin	X		X		X		X		X		X		X			
Big Wash	X		X		X		X		X		X		X		Potential Livestock/wildlife conflict	X
Big Wash Draw		X	X		X		X		X		X		X		Potential Livestock/wildlife conflict	X
Blair Basin	X		X		X		X		X		X		X			
Bridgeport	X		X		X		X		X		X		X		Wildlife habitat pot'nt'l High critical deer winter range	X
Brush Creek	X		X		X		X		X		X		X		Critical deer winter range; Pot. livestock/wildlife conflict	X
Browns Park (Utah)	X		X		X		X		X		X		X		Critical deer winter range; High wildlife habitat potential	X
Bull Canyon	X		X		X		X		X		X		X		No spring use rest	X
Canal	X		X		X		X		X		X		X			
Castle Peak	X		X		X		X		X		X		X		Critical Pronghorn Antelope habitat; Critical Watershed	X
Clay Basin	X		X		X		X		X		X		X		Riparian Concern	X
Clay Basin Meadows	X		X		X		X		X		X		X		Riparian Concern	X
Coal Mine Basin	X		X		X		X		X		X		X		High Potential wildlife habitat	X



TABLE A8-6 (Continued):  
RECORD OF PROPOSED ALLOTMENT CATEGORIZATION

Allotment Name	Range Condition Sat. Unsat.		Allotment Potential Hi. Med. Low		Present Productivity Hi. Med Low		Resource Conflicts Many Few None		Controversy Hi Low None		Present Management Satis. Unsat.		Willingness to Invest Yes Maybe No		Other Criteria Allotment Characteristics	Category M I C
	X		X		X		X		X		X		X			
Cooper Draw	X		X		X				X		X		X			X
Cottonwood Springs	X		X		X				X		X		X		High pot. wildlife habitat	
Cove & Cow Hollow	X		X		X				X		X		X			X
Current Canyon	X		X		X				X		X		X			
Deep Creek	X		X		X				X		X		X			X
Devils Canyon	X		X		X				X		X		X		No spring use rest	X
Diamond Mountain	X		X		X				X		X		X		Riparian concern	X
Diamond Rim	X		X		X				X		X		X		High pot. wildlife habitat	X
Dinosaur Park	X		X		X				X		X		X			
Donkey Flat	X		X		X				X		X		X		Crit. deer winter rng; Pot. Ivstkw/wldlf conflicts	X
Dry Fork	X		X		X				X		X		X		High pot. wldlf habitat	X
E. Cow Hollow	X		X		X				X		X		X			
E. Huber	X		X		X				X		X		X		Critical pronghorn antelope habitat; no spring use rest	X
E. Little Mountain	X		X		X				X		X		X		High pot. wldlf. habitat	X
Eight Mile Flat	X		X		X				X		X		X		Critical pronghorn antelope habitat; Critical Watershed	X
Five Mile	X		X		X				X		X		X		Pot. Ivstkw/wldlf conflict	X
Flynns Point	X		X		X				X		X		X			
Gadsen	X		X		X				X		X		X			
Gadsen Draw	X		X		X				X		X		X			
Goslin Mountain	X		X		X				X		X		X		Pot. Ivstkw/wldlf conflict; Riparian concern	X
Green River Bottoms		X		X	X				X		X		X		Riparian Concern	X
Green River (FRRA)		X		X	X				X		X		X		No spring use rest	X



TABLE A8-6 (Continued):  
RECORD OF PROPOSED ALLOTMENT CATEGORIZATION

Allotment Name	Range Condition Sat. Unsat.		Allotment Potential Hi. Med. Low		Present Productivity Hi. Med Low		Resource Conflicts Many Few None		Controversy Hi Low None		Present Management Satis. Unsat.		Willingness to Invest Yes Maybe No		Other Criteria Allotment Characteristics	Category M I C	
	X		X		X		X		X		X		X				
Hacking	X		X		X		X		X		X		X				X
Halfway Hollow	X		X		X		X		X		X		X			X	
Hatch Cove	X		X		X		X		X		X		X			X	
Holmes/Palmer	X		X		X		X		X		X		X			X	
Horseshoe Bend	X		X		X		X		X		X		X		Riparian concern		X
Hoy Mountain	X		X		X		X		X		X		X		Riparian concern		X
Island Park	X		X		X		X		X		X		X		High pot. wldlf. habitat		X
Jackson-Crouse-Dry Hollow	X		X		X		X		X		X		X		High pot. wldlf. habitat		X
Johnson	X		X		X		X		X		X		X			X	
Kyune I (PRRA)	X		X		X		X		X		X		X			X	
Lambson-Crouse-Davis	X		X		X		X		X		X		X			X	
Lears Canyon	X		X		X		X		X		X		X			X	
Little Brush Creek	X		X		X		X		X		X		X			X	
Little Desert	X		X		X		X		X		X		X		No spring use rest		X
Little Hole	X		X		X		X		X		X		X		Riparian concern		X
Log Cabin	X		X		X		X		X		X		X				X
Mame Hole-Bear Hollow	X		X		X		X		X		X		X			X	
Mail Draw	X		X		X		X		X		X		X			X	
Marshall Draw	X		X		X		X		X		X		X			X	
Max Canyon (PRRA)	X		X		X		X		X		X		X			X	
McCoy Flat	X		X		X		X		X		X		X			X	
McFarley Flat	X		X		X		X		X		X		X			X	
McKee Spring	X		X		X		X		X		X		X			X	



TABLE A8-6 (Continued):  
RECORD OF PROPOSED ALLOTMENT CATEGORIZATION

Allotment Name	Range Condition Sat. Unsat.		Allotment Potential Hi. Med. Low		Present Productivity Hi. Med Low		Resource Conflicts Many Few None		Controversy Hi. Low None		Present Management Satis. Unsat.		Willingness to Invest Yes Maybe No		Other Criteria Allotment Characteristics	Category M I C
	X		X		X		Many	Few	None	Hi.	Low	Satis.	Unsat.	Yes		
Mosby	X		X		X			X		X		X		X		X
Natural Lake	X			X		X			X		X			X		
Oden	X		X			X		X		X		X		X		X
Ouray Road	X		X			X		X		X		X		X		X
Ouray Valle	X			X		X		X		X		X		X		X
Paddys Gap	X			X		X		X		X		X		X		X
Parley Canyon	X		X			X		X		X		X		X		X
Pelican Lake		X	X			X		X		X		X		X		X
Perry	X			X		X		X		X		X		X		X
Powell/Sadlier	X		X			X		X		X		X		X		X
Red Creek Flat	X		X			X		X		X		X		X		X
Red Mountain	X		X			X		X		X		X		X		X
Rich & Stetson	X			X					X		X			X		X
Ruple Cabin		X	X			X		X		X		X		X		X
Rye Grass	X		X			X		X		X		X		X		X
S.J. Hatch		X		X		X		X		X		X		X		X
School Bus Draw	X		X			X		X		X		X		X		X
Sears Canyon	X			X		X		X		X		X		X		X
Serviceberry Spring		X		X				X		X		X		X		X
Shindy		X	X			X		X		X		X		X		X
Shiner		X	X			X		X		X		X		X		X
Smelter Springs		X		X		X		X		X		X		X		X
Smoken-up	X			X		X		X		X		X		X		X
Spring Creek		X	X			X		X		X		X		X		X



TABLE A8-6 (Continued):  
RECORD OF PROPOSED ALLOTMENT CATEGORIZATION

Allotment Name	Range Condition Sat. Unsat.	Allotment Potential		Present Productivity		Resource Conflicts		Controversy		Present Management		Willingness to Invest		Other Criteria Allotment Characteristics	Category M I C
		Hi. Med. Low	Hi. Med. Low	Hi. Med Low	Hi. Med Low	Many Few None	Hi Low None	Satis. Unsat.	Yes Maybe No	Yes Maybe No					
Stone Cabin (PRRA)	X	X		X		X		X		X		X			X
Sulfer Canyon (PRRA)	X		X		X	X		X		X			X		X
Taylor Flat	X	X		X	X	X		X		X		X		Riparian concern; Crit. deer winter range	X
Three Corners	X		X		X	X		X		X		X			X
Twelve Mile	X		X		X	X		X		X		X		Crit. pronghorn anelope hbt; No spring use rest	X
Twin Knolls	X		X		X	X		X		X		X			X
N. Warren Draw	X		X		X	X		X		X		X			X
S. Warren Draw	X		X		X	X		X		X		X			X
Water Canyon #1	X		X		X	X		X		X		X			X
Water Canyon #2	X		X		X	X		X		X		X			X
Watson	X	X		X		X	X	X		X		X		Crit. deer winter mg.; high pot. wldlf. habitat	X
Wells Draw	X		X		X	X		X		X		X		Crit. elk winter mg.; Pot. Ivstkwldlf. conflict	X
West Huber	X		X		X	X		X		X		X		No spring use rest	X
W. Little Mountain	X	X		X		X		X		X		X		High pot. wldlf. habitat	X
W. Pelican Lake	X		X		X	X		X		X		X			X
W. Pot Creek	X		X		X	X		X		X		X			X
Wetlands	X		X		X	X	X	X		X		X		Riparian concern	X
Wilkerson	X		X		X	X		X		X		X			X
Willow Creek	X	X		X		X		X		X		X		Riparian concern	X
Willow Springs	X		X		X	X		X		X		X			X
Young	X		X		X	X		X		X		X			X



## RANGE MONITORING STUDIES

### Purpose

The purpose of monitoring studies is to provide the data needed for making management decisions, determining the effectiveness of on-the-ground management actions, and evaluating progress toward meeting management objectives on high priority allotments. Management objectives in the resource area are (a) to gather adequate data on all "I" and "M" category allotments, (b) to determine the effects of management actions on the rangeland resources, and (c) to provide quantifiable data needed to support management decision. All monitoring plans will follow BLM Manual 4400, Technical References 4400-1 through 4.

### Methods

A formal evaluation of any allotment or management unit must examine the effects of consumptive uses in that area, such as livestock grazing and wildlife. A high degree of interdisciplinary coordination will ensure that multiple use principles are considered.

Resource objectives will be developed for each allotment. Objectives will be meaningful, specific, and measurable.

The monitoring studies established in specific allotments where wildlife-livestock conflicts have been identified will be designed to provide information for wildlife and range management personnel to determine actual problems or conflicts. At a minimum, information will be needed on actual use levels and forage utilization by each ungulate species involved. This will require close cooperation and specific input from UDWR during the planning, implementation, and analysis of the monitoring studies.

Currently there are 247 vegetation monitoring sites (223 livestock and/or wildlife and 24 riparian) in the resource area, employing any one or all of the following methods: three plot density, frequency, line intercept, photo plot, and big game pellet group transects.

The method, amount, and intensity of monitoring established and conducted for each allotment will depend on category, resource values, and specific allotment objectives. High intensity monitoring will be implemented in allotments identified as top "I" priority. Low-intensity monitoring studies will be carried out on the remaining lower priority "I" and "M" category allotments so that significant changes in current management or resource values can be detected.

High-intensity studies provide sufficient data to support decisions that establish grazing capacities, seasons of use, and the kind and number of grazing animals by allotment. Studies at this level of monitoring are those that determine actual use and forage utilization as well as climatic studies.

Trend studies will be used along with annual climatic data and information on actual use and forage utilization to analyze the effectiveness of the management decisions taken to achieve specific allotment objectives.

Low-intensity studies are those that detect undesirable changes in existing range condition that could warrant re-evaluation of the priority or category for that allotment. At a minimum, such studies include an allotment inspection and the completion of an allotment inspection form.

Management adjustments would not be made until monitoring over time verified a conflict or problem and determined its extent. Data gathered by monitoring and consultation and coordination with affected parties would support management decisions related to livestock and wildlife stocking levels and other adjustments.

## STANDARD OPERATING PROCEDURES FOR RANGELAND IMPROVEMENTS

### Prescribed Burns

The pattern of vegetation modification would be an irregular or mottled design to maintain aesthetics and provide habitat diversity.

Soil moisture conditions and the season of the burn would be selected to benefit the survival of desired species.

Fire lines and breaks would be built in conformance with the district fire plan. Following treatment, fire lines would be rehabilitated, berms smoothed, disturbed areas reseeded, etc. as necessary to conform to the original conformation of the site.

Burning would be conducted in such a manner as to allow convection to vent smoke and provide the most complete combustion of material, thus restricting air pollution.

In order to protect known cultural values and threatened, endangered, and sensitive plant and animal species, a clearance would be required prior to burning.



The need for buffer zones to protect critical wildlife habitat would be coordinated with the UDWR.

Care will be taken to locate and protect all legal markers including cadastral, property, and claim markers.

Protection of the watershed would be considered to reduce any short term loss of soil. Gully plugging, reseeding, and other watershed preserving practices would be applied when warranted.

Permittees might have to defer grazing in some rangeland for periods of up to three years. Temporary fencing would be used to protect certain sites.

If funding and conditions warrant, burned areas will be seeded with a variety of plant species providing forage and watershed benefits.

## Chemical Treatment

Projects would conform to state and Environmental Protection Agency (EPA) pollution standards. Application of chemicals would conform to EPA regulations and BLM requirements.

The patterns of the vegetation modification would be designed to blend into the landscape to maintain the natural appearance of the area.

In order to control drift, chemical sprays would be applied only when winds are less than 5 miles per hour.

The need for and proper dimensions of buffer zones to protect wildlife habitat would be jointly agreed upon by the BLM and UDWR.

Chemically treated vegetation would be left in place, with the exception of woodland products, which could be harvested.

Season of treatment and soil moisture conditions would be selected to give the best kill to target species and preserve desired species.

In order to protect known cultural values, threatened, endangered, and sensitive plant and animal species, a clearance would be required prior to treatment.

Visual resources would be considered in the development of the treatment area.

Care would be taken to locate and protect all legal markers including cadastral, property, and claim markers.

Cooperation with the range user would be maintained to protect treated areas from grazing following treatment. Deferments in grazing would generally be one to three growing seasons. Where grazing systems with rest periods in the grazing cycle are being followed, treatments and deferment of use would be worked in with the normal rest periods in the grazing cycle.

## Chainings

The patterns of the vegetation modification would be designed to blend into the landscape to maintain the natural appearance of the area. Irregular patterns would be implemented to increase the edge effect for wildlife and maintain aesthetics.

Areas within 200 feet of well-traveled roads would not be chained.

The need for, and proper dimensions of buffer zones would be jointly agreed to by BLM and the Utah Division of Wildlife Resources (UDWR) prior to on-the-ground development of projects. Buffer zones would be provided, where necessary, to prevent disturbance to riparian ecosystems.

Vegetation would be left in place or burned. Permits would be given for salvage of woodland products following treatment.

Areas will be seeded with a variety of plant species adapted to the specific site. The mixture would be a variety of browse, forbs, and grass species that are desirable for both livestock, wildlife, and watershed.

Treatment areas would not be grazed by livestock until vegetation becomes established. In most cases, two growing seasons of rest would be required.

In order to protect known cultural values, threatened, endangered, and sensitive plant and animal species, a clearance would be required prior to chaining.

Care would be taken to locate and protect all legal markers including cadastral, property, and claim markers.

## Firewood Harvesting

Harvest areas will be designed in an irregular fashion to maintain aesthetics and produce edge effect for wildlife and maintain sustained timber yield.

Cutting and harvesting areas would be closed when weather conditions would result in excessive erosion, soil compaction, and rutting of roads.



Areas within 100 feet of well-traveled roads would not be harvested.

Stump height would not exceed 12 inches.

Approximately 75% of slash piles would be burned and slash would be scattered on slopes greater than 30% and in drainage bottoms.

In order to protect known cultural values, threatened, endangered, and sensitive plant and animal species, a clearance would be required prior to cutting.

## Reservoirs

In order to protect known cultural values, threatened, endangered, and sensitive plant and animal species, a clearance would be required prior to construction and the least amount of ground possible would be disturbed for access to the site.

The borrow areas and reservoir dikes would be revegetated.

BLM earthwork guidelines and specifications would be followed for the construction of retention dams and reservoirs.

## Seeps-Springs

A cooperative agreement between BLM and permittee for construction and maintenance would be developed where applicable.

In order to protect known cultural values, threatened, endangered, and sensitive plant and animal species, a clearance would be required prior to development.

The sites would be restored to the original conformation of the site. Seeding of adapted species would be used to restore disturbed areas.

Some water would be left at the original source for wildlife purposes.

A wildlife escape device would be installed in all open water troughs capable of trapping wildlife.

Spring construction and fencing to restrict livestock from the spring source would comply with BLM specific fencing specifications.

Water troughs and above-ground tanks and facilities would be designed and painted to blend with the natural

environment. Water tanks would be anchored with wooden posts.

## Guzzlers

The shape and color of guzzlers would blend with the natural environment.

A wildlife escape ramp would be installed in conjunction with all open water troughs capable of trapping wildlife.

Fencing to restrict livestock and wildlife from the collection and storage areas would comply with BLM fence stipulations.

## Fencing

All fences would be built according to BLM specifications including design to facilitate wildlife movement.

Clearing of fence lines prior to construction would be limited to brush removal.

Gates would be installed along the fence at intersections of all official access roads or trails; in natural passes, and other strategic places to facilitate movement of recreators, livestock, and wildlife.

A cooperative agreement between BLM and permittee for construction and maintenance of fences would be developed where applicable.

A clearance for cultural values, and threatened, endangered, and sensitive species would be required prior to construction.

## Water Pipelines

A cooperative agreement between BLM and permittee for construction and maintenance of fences would be developed where applicable.

In order to protect known cultural values, threatened, endangered, and sensitive plant and animal species, a clearance would be required prior to development.

The sites would be restored to the original conformation of the land. Seeding of adapted species would be used to restore disturbed areas.

A wildlife escape device would be installed in all watering troughs capable of trapping wildlife.

Water troughs and above-ground tanks and facilities would be designed and painted to blend with the natural



environment. Water tanks would be anchored with wooden posts.

### **Contour Furrowing and Plow and Seed**

In order to protect known cultural values, threatened, endangered, and sensitive plant and animal species, a clearance would be required prior to development.

Design projects on contour to prevent erosion hazards and insure optimum water infiltration.

Seed with a variety of species adapted to site providing watershed and forage benefits.

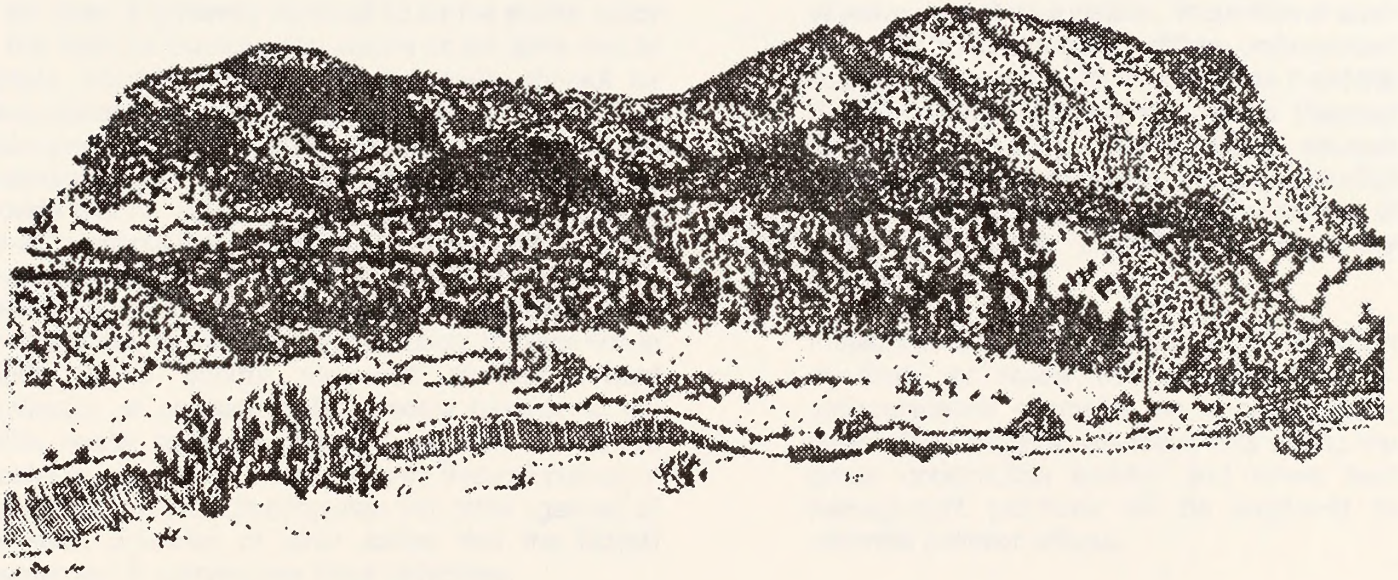


# APPENDIX 9

## WATERSHED RESOURCES

### CONTENTS:

*Utah State Water Quality Standards for DMRA*









## STATE OF UTAH WATER QUALITY STANDARDS

The following information are excerpts from the current State of Utah water quality standards as they apply to waters within the boundaries of the Diamond Mountain Resource Area. These state regulations are provided under the authority of 26-1-1 through 20, Utah Code Annotated 1953, as amended, and most recently revised April, 1988.

### R448-2 Standards of Quality for Waters of the State

#### R448-2-0 Public Policy

Whereas the pollution of the waters of this state constitute a menace to public health and welfare, creates public nuisances, is harmful to wildlife, fish, and aquatic life, and impairs domestic, agricultural, industrial, recreational, and other legitimate beneficial uses of water, and whereas such pollution is contrary to the best interests of the state and its policy for the conservation of the water resources of the state, it is hereby declared to be the public policy of this state to conserve the waters of the state and to protect, maintain and improve the quality thereof for public water supplies, for the propagation of wildlife, fish, and aquatic life, and for domestic, agricultural, industrial, recreational, and other legitimate beneficial uses; to provide that no waste be discharged into any waters of the state without first being given the degree of treatment necessary to protect the legitimate beneficial uses of such waters; to provide for the prevention, abatement, and control of new or existing water pollution; to place first in priority those control measures directed toward elimination of pollution which creates hazards to the public health; to insure due consideration of financial problems imposed on water polluters through pursuit of these objectives; and to cooperate with other agencies of the state, agencies of other states, and the federal government in carrying out these objectives.

#### R448-2-3 Antidegradation Policy

##### 3.1 Maintenance of Water Quality

Waters whose existing quality is better than the established standards for the designated uses will be maintained at high quality unless it is determined by the committee, after appropriate intergovernmental coordination and public participation in concert with the Utah continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area in

which the waters are located. However, existing instream water uses shall be maintained and protected. No water quality degradation is allowable which would interfere with or become injurious to existing instream water uses.

In those cases where potential water quality impairment associated with a thermal discharge is involved, the antidegradation policy and implementing method shall be consistent with Section 316 of the Federal Clean Water Act.

##### 3.2 Antidegradation Segments

Waters of high quality which have been determined by the committee to be of exceptional recreational or ecological significance or have been determined to be a State or National resource requiring protection, shall be maintained at existing high quality through designation, by the Committee after public hearing, as antidegradation segments. New point source discharges of wastewater, treated or otherwise, are prohibited in such segments after the effective date of designation. Protection of such segments from pathogens in diffuse, underground sources is covered in R448-5 and R448-7 and the Regulations for Individual Wastewater Disposal Systems (R449-201). Other diffuse sources (nonpoint sources) of wastes shall be controlled to the extent feasible through implementation of best management practices or regulatory programs.

Projects such as, but not limited to, construction of dams or roads will be considered in antidegradation segments on a case-by-case basis where pollution will result only during the actual construction activity, and where best management practices will be employed to minimize pollution effects.

Waters of the state designated as antidegradation segments are listed in Section 2.12.

#### R448-2-4 Colorado River Salinity Standards

In addition to quality protection afforded by these regulations to waters of the Colorado River and its tributaries, such waters shall be protected also by requirements of "Proposed Water Quality Standards for Salinity including Numeric Criteria and Plan of Implementation for Salinity Control, Colorado River System, June 1975" and a supplement dated August 26, 1975, entitled "Supplement, including Modifications to Proposed Water Quality Standards for Salinity including



Numeric Criteria and Plan of Implementation for Salinity Control, Colorado River System, June 1975", as approved by the seven Colorado River Basin States and the U.S. Environmental Protection Agency, as updated by the 1978 Revision and the 1981, 1984, and 1987 Reviews of the above documents.

#### **R448-2-6 Use Designations**

The Committee as required by 26-11-6 Utah Code Annotated in 1953, as amended, shall group the waters of the state into classes so as to protect against controllable pollution the beneficial uses designated within each class as set forth below. Surface waters of the state are hereby classified as shown in Section 2.13.

6.1 Class 1 -- protected for use as a raw water source for domestic water systems.

- a. Class 1A -- Reserved
- b. Class 1B -- Reserved
- c. Class 1C -- protected for domestic purposes with prior treatment by treatment processes as required by the Utah Department of Health.

6.2 Class 2 -- protected for in-stream recreational use and aesthetics.

- a. Class 2A -- protected for recreational bathing (swimming).
- b. Class 2B -- protected for boating, water skiing, and similar uses, excluding recreational bathing (swimming).

6.3 Class 3 -- protected for in-stream use by aquatic wildlife.

- a. Class 3A -- protected for cold water species of game fish and other cold water aquatic life, including the necessary aquatic organisms in their food chain.
- b. Class 3B -- protected for warm water species of game fish and other warm water aquatic life, including the necessary aquatic organisms in their food chain.
- c. Class 3C -- protected for nongame fish and other aquatic life, including the necessary aquatic organisms in their food chain.
- d. Class 3D -- protected for waterfowl, shore birds, and other water-oriented wildlife not included in classes 3A, 3B, or 3C, including the necessary aquatic organisms in their food chain.

6.4 Class 4 -- protected for agricultural uses including irrigation of crops and stock watering.

6.5 Class 5 -- Reserved

6.6 Class 6 -- waters requiring protection when conventional uses as identified in Sections 2.6.1

through 2.6.5 do not apply. Standards for this class are determined on a case-by-case basis.

#### **R448-2-7 Water Quality Standards**

##### **7.1 Application of Standards**

The numeric criteria listed in Section 2.14 shall apply to each of the classes assigned to waters of the State as specified in Section 2.6 of these regulations. It shall be unlawful and a violation of these regulations for any person to discharge or place any wastes or other substances in such manner as may interfere with designated uses protected by assigned classes or to cause any of the applicable standards to be violated, except as provided in R448-1-3.1. The Committee may allow, on a case-by-case basis, site specific modifications based upon bioassay or other tests performed in accordance with standard procedures determined by the Committee.

##### **7.2 Narrative Standards**

It shall be unlawful, and a violation of these regulations, for any person to discharge or place any waste or other substance in such a way as will be or may become offensive such as unnatural deposits, floating debris, oil, scum, or other nuisances such as color, odor, or taste; or conditions which produce undesirable aquatic life or which produce objectionable tastes in edible aquatic organisms; or concentrations or combinations of substances which produce undesirable physiological responses in desirable resident fish, or other desirable aquatic life, as determined by bioassay or other tests performed in accordance with standard procedures determined by the Committee.

#### **R448-2-8 Protection of Downstream Uses**

All actions to control waste discharges under these regulations shall be modified as necessary to protect downstream designated uses.

#### **R448-2-9 Intermittent Waters**

Failure of a stream to meet water quality standards when stream flow is either unusually high or less than the 7-day, 10-year minimum flow shall not be cause for action against persons discharging wastes which meet both the requirements of R448-1 and the requirements of applicable permits.



**R448-2-12 Antidegradation Segments**

In addition to assigned use classes, the following surface waters of the Diamond Resource Area are hereby designated as antidegradation segments:

- Strawberry River and tributaries, from confluence with Red Creek to headwaters.
- Avintaquin Creek, from confluence with Strawberry River to confluence with Cottonwood Creek.
- Ashley Creek and tributaries, from Steinaker diversion to headwaters.

- Jones Hole Creek and tributaries, from confluence with Green River to headwaters.
- Green River, from state line to Flaming Gorge Dam.
- Tollivers Creek, from confluence with Green River to headwaters.

**12-13 Statewide**

All surface waters geographically located within the outer boundaries of U.S. National Forests whether on public or private lands.

**R448-2-13 Classification of Waters of the State of Utah Within DMRA.**

UPPER COLORADO RIVER BASIN GREEN RIVER DRAINAGE			
AREA	STATE CLASSIFICATION		
Nine Mile Creek and tributaries, from confluence with Green River to headwaters	1C	3A	4
Pariette Draw and tributaries, from confluence with Green River to headwaters		3B, 3D	4
Duchesne River and tributaries, from confluence with Green River to Myton Water Treatment Plant intake		3A	4
Duchesne River and tributaries, from Myton Water Treatment Plant intake to headwaters	1C	3A	4
Uinta River and tributaries, from confluence with Duchesne River to Highway US-40 crossing		3A	4
Uinta River and tributaries, from Highway US-40 crossing to headwaters		3A	4
Power House Canal from confluence with Uinta River to headwaters		3A	4
Lake Fork River and tributaries, from confluence with Duchesne River to headwaters	1C	3A	4
Lake Fork Canal from Dry Gulch Canal diversion to Moon Lake	1C		4
Dry Gulch Canal, from Myton Water Treatment Plant to Lake Fork Canal	1C		4
Whiterocks River and Canal, from Tridell Water Treatment Plant to headwaters	1C	3A	4
Ashley Creek and tributaries, from confluence with Green River to Steinaker diversion		3A	4
Ashley Creek and tributaries, from Steinaker diversion to headwaters	1C	3A	4
Big Brush Creek and tributaries, from confluence with Green River to Tyzack (Red Fleet) Dam		3B	4



## R448-2-13 Classification of Waters of the State of Utah Within DMRA.

UPPER COLORADO RIVER BASIN GREEN RIVER DRAINAGE			
AREA	STATE CLASSIFICATION		
Big Brush Creek and tributaries, from Tyzack (Red Fleet) Dam to headwaters	1C	3A	4
Jones Hole Creek and tributaries, from confluence with Green River to headwaters		3A	
Diamond Gulch Creek and tributaries, from confluence with Green River to headwaters		3A	4
Pot Creek and tributaries, from Crouse Reservoir to headwaters		3A	4
Green River and tributaries, from state line to Flaming Gorge Dam except as listed below:	2B	3A	4
Crouse Creek and tributaries, from confluence with Green River to headwaters		3A	4
Willow Creek and tributaries, from confluence with Green River (Daggett County) to headwaters		3A	4
Sears Creek and tributaries, Daggett County		3A	
Tollivers Creek and tributaries, Daggett County		3A	
Red Creek and tributaries, from confluence with Green River to state line		3C	4
Jackson Creek and tributaries, Daggett County		3A	
Davenport Creek and tributaries, Daggett County		3A	
Goslin Creek and tributaries, Daggett County		3A	
Gorge Creek and tributaries, Daggett County		3A	
Beaver Creek and tributaries, Daggett County		3A	
O-Wi-Yu-Kuts Creek and tributaries, County		3A	
Cart Creek and tributaries, from Flaming Gorge Reservoir to headwaters		3A	
Eagle Creek and tributaries, from Flaming Gorge Reservoir to headwaters		3A	
Carter Creek and tributaries, from Flaming Gorge Reservoir to headwaters		3A	



R448-2-13 Classification of Waters of the State of Utah Within DMRA.

UPPER COLORADO RIVER BASIN GREEN RIVER DRAINAGE				
AREA	STATE CLASSIFICATION			
Sheep Creek and tributaries, from Flaming Gorge Reservoir to headwaters			3A	4
Birch Spring Draw and tributaries, from Flaming Gorge Reservoir to headwaters			3C	4
Spring Creek and tributaries, from Flaming Gorge Reservoir to headwaters			3A	
Birch Creek and tributaries, from state line to headwaters			3A	4
Burnt Fork and tributaries, from state line to headwaters			3A	4
Middle Fork Beaver Creek and tributaries, from state line to headwaters			3A	4
West Fork Beaver Creek and tributaries, from state line to headwaters			3A	4
Henry's Fork and tributaries, from state line to headwaters			3A	4
NATIONAL WILDLIFE REFUGES AND STATE WATERFOWL MANAGEMENT AREAS				
Browns Park Waterfowl Management Area, Daggett County			3A, 3D	
Ouray National Wildlife Refuge, Uintah County			3B, 3D	
Stewart Lake Waterfowl Management Area, Uintah County			3B, 3D	
UINTAH COUNTY				
Brough Reservoir		2B	3A	4
Calder Reservoir		2B	3A	4
Crouse Reservoir		2B	3A	4
Pelican Lake		2B	3B	4
Red Fleet Reservoir	1C	2B	3A	4
Steinaker Reservoir	1C	2B	3A	4



**TABLE 2.14.1  
NUMERIC CRITERIA FOR DOMESTIC, RECREATION, AND  
AGRICULTURAL USES**

PARAMETER	DOMESTIC	RECREATION AND AESTHETICS		AGRICULTURE														
	SOURCE E 1C	2A	2B	4														
<b>BACTERIOLOGICAL</b> (30-day geometric mean) (No.)/100 ML Max. total coliforms Max. fecal coliforms	5000 2000	1000 200	5000 200															
<b>PHYSICAL</b> MIN. DISSOLVED OXYGEN (MG/L) (1) pH (Range) Turbidity Increase (NTU)	5.5 6.5-9.0	5.5 6.5-9.0 10	5.5 6.5-9.0 10	6.5-9.0														
<b>METALS (Acid soluble, maximum MG/L)(2):</b> Arsenic Barium Cadmium Chromium Copper Lead Mercury Selenium Silver	0.05 1.0 0.01 0.05 0.05 0.05 0.002 0.01 0.05			0.1 0.01 0.10 0.2 0.1 0.05														
<b>INORGANICS (Maximum MG/L)</b> Boron Fluoride (3) Nitrates as N Total dissolved solids (4)	1.4-2.4 10			0.75 1200														
<b>RADIOLOGICAL (Maximum pCi/L)</b> Gross Alpha Radium 226, 228 (Combined) Strontium 90 Tritium	15 5 8 20000			15														
<b>ORGANICS (Maximum UG/L)</b> Chlorophenoxy Herbicides 2,4-D 2,4,5-TP Endrin Hexachlorocyclohexane (Lindane) Methoxychlor Toxaphene	100 10 0.2 4 100 5																	
<b>POLLUTION INDICATORS (5)</b> Gross Beta (pCi/L) Bod (MG/L) Nitrate as N (MG/L) Phosphate as P (MG/L)	50	5 4 0.05	5 4 0.05	50 5														
<p><b>FOOTNOTES:</b></p> <p>(1) These limits are not applicable to lower water levels in deep impoundments.</p> <p>(2) The acid soluble method as used by the State Health Laboratory involves acidification of the sample in the field, no digestion process in the laboratory, filtration, and analysis by atomic absorption spectrophotometry.</p> <p>(3) Maximum concentration varies according to the daily maximum mean air temperature.</p> <table border="1"> <thead> <tr> <th>Temp (C)</th> <th>MG/L</th> </tr> </thead> <tbody> <tr> <td>12.0</td> <td>2.4</td> </tr> <tr> <td>12.1-14.6</td> <td>2.2</td> </tr> <tr> <td>14.7-17.6</td> <td>2.0</td> </tr> <tr> <td>17.7-21.4</td> <td>1.8</td> </tr> <tr> <td>21.5-26.2</td> <td>1.6</td> </tr> <tr> <td>26.3-32.5</td> <td>1.4</td> </tr> </tbody> </table> <p>(4) Total dissolved solids (TDS) limits may be adjusted on a case-by-case basis.</p> <p>(5) Investigations should be conducted to develop more information where these pollution indicator levels are exceeded.</p>					Temp (C)	MG/L	12.0	2.4	12.1-14.6	2.2	14.7-17.6	2.0	17.7-21.4	1.8	21.5-26.2	1.6	26.3-32.5	1.4
Temp (C)	MG/L																	
12.0	2.4																	
12.1-14.6	2.2																	
14.7-17.6	2.0																	
17.7-21.4	1.8																	
21.5-26.2	1.6																	
26.3-32.5	1.4																	



**TABLE 2.14.2  
NUMERIC CRITERIA FOR AQUATIC WILDLIFE**

PARAMETER	AQUATIC WILDLIFE			
	3A	3B	3C	3D
<b>PHYSICAL</b>				
Total dissolved gases	(1)	(1)		
Dissolved oxygen (MG/L) (2)				
30 day average	6.5	5.5	5.0	5.0
7 day average	9.5/5.0	6.0/4.0		
1 day average	8.0/4.0	5.0/3.0	3.0	3.0
Max. temperature (C)	20	27	27	
Max. temperature change (C)	2	4	4	
pH (range)	6.5-9.0	6.5-9.0	6.5-9.0	6.5-9.0
Turbidity increase (NTU)	10	10	15	15
<b>METALS (3)</b>				
(Acid Soluble, UG/L) (4)				
Arsenic (trivalent)				
4 day average	190	190	190	190
1 hour average	360	360	360	360
Cadmium (5)				
4 day average	1.1	1.1	1.1	1.1
1 hour average	3.9	3.9	3.9	3.9
Chromium (hexavalent)				
4 day average	11	11	11	11
1 hour average	16	16	16	16
Chromium (trivalent) (5)				
4 day average	210	210	210	210
1 hour average	1700	1700	1700	1700
Copper (5)				
4 day average	12	12	12	
1 hour average	18	18	18	18
Cyanide (free)				
4 day average	5.2	5.2	5.2	
1 hour average	22	22	22	22
Iron (maximum)	1000	1000	1000	1000
Lead (5)				
4 day average	3.2	3.2	3.2	3.2
1 hour average	82	82	82	82
Mercury				
4 day average	0.012	0.012	0.012	0.012
1 hour average	2.4	2.4	2.4	2.4
Nickel (5)				
4 day average	160	160	160	160
1 hour average	1400	1400	1400	1400
Selenium				
4 day average	5.0	5.0	5.0	5.0
1 hour average	20	20	20	20
Silver				
4 day average	0.12	0.12	0.12	
1 hour average	4.1	4.1	4.1	4.1
Zinc (5)				
4 day average	110	110	110	110
1 hour average	120	120	120	120
<b>INORGANICS (MG/L) (3)</b>				
Ammonia as N (un-ionized) (6)				
4 day average	(6a)	(6a)		
1 hour average	(6b)	(6b)	(6b)	(6b)
Chlorine (total residual) (7)				
4 day average	0.011	0.011		
1 hour average	0.019	0.019	0.2	(8)
Hydrogen Sulfide (undissociated, max, UG/L)	2.0	2.0	2.0	2.0
Phenol (maximum)	0.01	0.01	0.01	0.01
<b>RADIOLOGICAL (maximum pCi/L)</b>				
Gross Alpha (9)	15	15	15	15



**TABLE 2.14.2 (Continued)  
NUMERIC CRITERIA FOR AQUATIC WILDLIFE**

PARAMETER	3A	3B	3C	3D
<b>ORGANICS (UG/L) (3)</b>				
Aldrin (maximum)	3.0	3.0	3.0	3.0
Chlordane				
4 day average	0.0043	0.0043	0.0043	0.0043
1 hour average	2.4	2.4	2.4	2.4
Endosulfan				
4 day average	0.056	0.056	0.056	0.056
1 hour average	0.18	0.18	0.18	0.18
Endrin				
4 day average	0.0023	0.0023	0.0023	0.0023
1 hour average	0.18	0.18	0.18	0.18
Guthion (maximum)	0.01	0.01	0.01	0.01
Heptachlor				
4 day average	0.0038	0.0038	0.0038	0.0038
1 hour average	0.52	0.52	0.52	0.52
Hexachlorocyclohexane (Lindane)				
4 day average	0.08	0.08	0.08	0.08
1 hour average	2.0	2.0	2.0	2.0
Methoxychlor (maximum)	0.03	0.03	0.03	0.03
Mirex (maximum)	0.001	0.001	0.001	0.001
Parathion (maximum)	0.04	0.04	0.04	0.04
PCB's				
4 day average	0.014	0.014	0.014	0.014
1 hour average	2.0	2.0	2.0	2.0
Pentachlorophenol (10)				
4 day average	13	13	13	13
1 hour average	20	20	20	20
Toxaphene				
4 day average	0.0002	0.0002	0.0002	0.0002
1 hour average	0.73	0.73	0.73	0.73
<b>POLLUTION INDICATORS (9)</b>				
Gross Beta (pCi/L)	50	50	50	50
Bod (MG/L)	5	5	5	5
Nitrate as N (MG/L)	4	4	4	
Phosphate as P (MG/L) (11)	0.05	0.05		

**FOOTNOTES:**

- (1) Not to exceed 110% of saturation
- (2) These limits are not applicable to lower water levels in deep impoundments. First number in column is for when early life stages are present, second number is for when all other life stages present.
- (3) Where criteria are listed as 4-day average and 1-hour average concentration, these concentrations should not be exceeded more often than once every three years on the average.
- (4) The acid soluble method as used by the State Health Laboratory involves acidification of the sample in the field, no digestion process in the laboratory, filtration, and analysis by atomic absorption spectrophotometry.
- (5) Hardness dependent criteria. 100 mg/l used. See Table 2.14.3 for complete equation.
- (6) Un-ionized ammonia toxicity is dependent upon the temperature and pH of the waterbody. For detailed explanation refer to Federal Register, Vol. 50, 30784, July 29, 1985.
- (6a) The 4-day average concentration of un-ionized ammonia in mg/l as N:  $(0.80/FT/FPH/Ratio) * 0.822$
- (6b) The 1-hour average concentration of un-ionized ammonia in mg/l as N:  $(0.52/FT/FPH/2) * 0.822$
- Where: FT is a function of temperature which adjusts the criteria concentration for the ambient temperature.
- $$FT = 10^{0.03(20-TCAP)} ; TCAP \leq T \leq 30.$$
- $$FT = 10^{0.03(20-T)} ; 0 \leq T < TCAP$$
- and FPH is a function of pH which adjusts the criteria concentration for ambient pH.
- $$FPH = 1 ; 8.0 \leq pH \leq 9.0$$
- $$= (1 + 10^{7.4-pH}) / 1.25 ; 6.5 \leq pH < 8.0$$
- and RATIO is the ratio between acute and chronic criteria and is dependent upon pH.
- $$RATIO = 16 ; 7.7 \leq pH \leq 9.0$$
- $$= 24 (10^{7.7-pH} / (1 + 10^{7.4-pH})) ; 6.5 \leq pH < 7.7$$
- and TCAP is the maximum temperature that the criteria can be applied and is dependent upon the aquatic community present (i.e., warm water or cold water).
- For Class 3A only: TCAP = 15C in equation 6a  
For Class 3A only: = 20C in equation 6b  
For Class 3B: TCAP = 20C in equation 6a  
For Class 3B, 3C, and 3D: TCAP = 25C in equation 6b
- For Tables of Values, see following page. (FOOTNOTES CONTINUED ON BOTTOM OF NEXT PAGE.)



**TABLE 2.14.2 (Continued)**  
**NUMERIC CRITERIA FOR AQUATIC WILDLIFE**

1-HOUR AVERAGE CONCENTRATION OF UN-IONIZED AMMONIA AS N (MG/L) FOR CLASS 3A WATERS TEMPERATURE (C)							
pH	0.00	5.00	10.00	15.00	20.00	25.00	30.00
6.50	0.008	0.011	0.015	0.021	0.030	0.030	0.030
7.00	0.019	0.027	0.038	0.054	0.076	0.076	0.076
4.50	0.037	0.053	0.075	0.105	0.149	0.149	0.149
8.00	0.054	0.076	0.107	0.151	0.214	0.214	0.214
8.50	0.054	0.076	0.107	0.151	0.214	0.214	0.214
9.00	0.054	0.076	0.107	0.151	0.214	0.214	0.214
4-DAY AVERAGE CONCENTRATION OF UN-IONIZED AMMONIA AS N (MG/L) FOR CLASS 3A WATERS TEMPERATURE (C)							
6.50	0.001	0.001	0.001	0.002	0.002	0.002	0.002
7.00	0.002	0.002	0.003	0.005	0.005	0.005	0.005
7.50	0.005	0.008	0.011	0.015	0.015	0.015	0.015
8.00	0.010	0.015	0.021	0.029	0.029	0.029	0.029
8.50	0.010	0.015	0.021	0.029	0.029	0.029	0.029
9.00	0.010	0.015	0.021	0.029	0.029	0.029	0.029
1-HOUR AVERAGE CONCENTRATION OF UN-IONIZED AMMONIA AS N (MG/L) FOR CLASS 3B, 3C, AND 3D WATERS TEMPERATURE (C)							
6.50	0.008	0.011	0.015	0.021	0.030	0.042	0.042
7.00	0.019	0.027	0.038	0.054	0.076	0.107	0.107
7.50	0.037	0.053	0.075	0.105	0.149	0.210	0.210
8.00	0.054	0.076	0.107	0.151	0.214	0.302	0.302
8.50	0.054	0.076	0.107	0.151	0.214	0.302	0.302
9.00	0.054	0.076	0.107	0.151	0.214	0.302	0.302
4-DAY AVERAGE CONCENTRATION OF UN-IONIZED AMMONIA AS N (MG/L) FOR CLASS 3B WATERS TEMPERATURE (C)							
6.50	0.001	0.001	0.001	0.002	0.002	0.002	0.002
7.00	0.002	0.002	0.003	0.005	0.007	0.007	0.007
7.50	0.005	0.008	0.011	0.015	0.022	0.041	0.041
8.00	0.010	0.015	0.021	0.029	0.041	0.041	0.041
8.50	0.010	0.015	0.021	0.029	0.041	0.041	0.041
9.00	0.010	0.015	0.021	0.029	0.041	0.041	0.041
<p>(7) Special case segments and maximum TRC concentrations as follows:            Mill Race from Interstate Highway 15 to the Provo City wastewater treatment plant discharge: 0.2 mg/l.            Ironton Canal (Utah County), from Utah Lake (Provo Bay) to east boundary of Denver and Rio Grande Western Railroad right-of-way: 0.05 mg/l.            Beer Creek (Utah County) from 4850 West (in NE1/4NE1/4 sec. 36, T.8 S., R.1 E.) to headwaters: 0.3 mg/l</p> <p>(8) Numeric criteria determined on a case-by-case basis.</p> <p>(9) Investigations should be conducted to develop more information where these levels are exceeded.</p> <p>(10) pH dependent criteria. pH 7.8 used in table. See Table 2.14.4 for equation.</p> <p>(11) Phosphate as P (mg/l) limit for lakes and reservoirs shall be 0.025.</p>							



**TABLE 2.14.3  
EQUATIONS FOR PARAMETERS WITH  
HARDNESS (1) DEPENDENCE**

PARAMETER	4-DAY AVERAGE CONCENTRATION (UG/L)	1-HOUR AVERAGE CONCENTRATION (UG/L)
Cadmium	$e(0.7852 [1n (\text{hardness})]-3.490)$	$e(1.128[1n (\text{hardness})]-3.828)$
Chromium (Trivalent)	$e(0.8190[1n (\text{hardness})]+1.561)$	$e(0.8190[1n (\text{hardness})]+3.688)$
Copper	$e(0.8545[1n (\text{hardness})]-1.465)$	$e(0.9422[1n (\text{hardness})]-1.464)$
Lead	$e(1.273[1n (\text{hardness})]-4.705)$	$e(1.273[1n (\text{hardness})]-1.460)$
Nickel	$e(0.8460[1n (\text{hardness})]+1.1645)$	$e(0.8460[1n (\text{hardness})]+3.3612)$
Silver	N/A	$e(1.72[1n (\text{hardness})]-6.52)$
Zinc	$e(0.8473[1n (\text{hardness})]+0.7614)$	$e(0.8473[1n (\text{hardness})]+0.8604)$
FOOTNOTE: (1) Hardness as mg/1 CaCO <sub>3</sub>		

**TABLE 2.14.4  
EQUATIONS FOR  
PENTACHLOROPHENOL  
(pH DEPENDENT)**

4-DAY AVERAGE CONCENTRATION (UG/L)	1-HOUR AVERAGE CONCENTRATION (UG/L)
$e[1.005(\text{pH})]-5.290$	$e[1.005(\text{pH})]-4.830$

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plan element undertaken as necessary to implement the more general RMP decisions.

**ALLOTMENT MANAGEMENT PLAN (AMP):** A livestock grazing activity plan for a specific allotment based on multiple-use resource management objectives. The AMP considers livestock grazing in relation to other uses of the rangelands and in relation to renewable resources (i.e., watershed, vegetation and wildlife). An AMP establishes the seasons of use, number of livestock to be permitted on the allotment and the rangeland developments needed.

**ALLUVIAL:** Relating to or formed by water carrying and depositing rocks, soils, and other materials.

**ALTERNATIVE:** Different ways of addressing the planning issues and management activities considered in this RMP. These serve to provide the decision maker and the public a clear basis for choices among the options.

**ANIMAL DAMAGE CONTROL (ADC):** An interagency program mandated to protect human health and safety as well as agricultural and other resources from damage caused by wildlife. The primary focus of animal damage control in DMRA centers on the predation of domestic livestock, particularly sheep. However, other areas of concern deal with the occasional population flareups of rodents that may pose a risk to human health or physical damage to agricultural crops.

**ANIMAL UNIT MONTH (AUM):** The amount of forage necessary for the sustenance of one cow or its equivalent for a period of one month. Applied to both livestock and wildlife species.

**APPRAISED VALUE OR APPRAISED PRICE:** Synonymous with fair market value. The amount of money specified as the minimum acceptable bid in the public notice ordering lands into the market. The determination of appraised value or appraised price is made by experienced, trained appraisers within the BLM staffs, or by contract using standard appraisal practices.

**AQUIFER:** An underground body of rock or similar material capable of storing water and transmitting it to wells or springs.

**ARCHEOLOGICAL DENSITY AREAS:** Areas where the probability of encountering significant cultural resource sites is high, moderate, or low. Such distinctions were based on extrapolation from existing resource area data.

**AREA OF CRITICAL ENVIRONMENTAL CONCERN (ACEC):** An area within the public lands where special management attention is required to protect important historic, cultural, or scenic values; fish and wildlife, or natural systems or processes; or, to protect life and safety from natural hazards.

**AVOIDANCE AREA:** An environmentally sensitive area where rights-of-way would be granted only in cases where there is a prevailing need and no practical alternative location exists, and then only with appropriate provisions to protect the sensitive environmental components.

**BACK-COUNTRY BYWAYS:** Back country roads and vehicle trails BLM has designated and promotes for their high scenic and public interest values. As part of the National Scenic Byway System, backcountry byways vary from single-track bike trails to narrow, low speed, paved roads, often requiring the use of a 4-wheel drive vehicle.

**BEST MANAGEMENT PRACTICES (BMP):** A practice, or combination of practices, determined by a state government or a designated planning agency to be the most effective, practicable means of preventing or reducing the amount of pollution generated by nonpoint sources to a level compatible with water quality goals.

**BIOLOGICAL CONTROL:** The use of natural enemies or agents, including but not limited to certain livestock species (e.g. goats), to attack a target plant, retard growth, prevent regrowth, or prevent seed formation.

**CANDIDATE SPECIES:** An animal or plant that may be designated threatened or endangered in the near future. This status offers no legal protection under the Endangered Species Act of 1973. However, current Bureau policy does direct management consistent with multiple use for conservation of candidate species and their habitats, ensuring that Bureau-approved actions do not contribute to the need to list these species.

**Category 1:** Plant or animal species for which the USF&WS currently has on file substantial information to support a proposal to list as threatened or endangered.

**Category 2:** Plant or animal species for which current information indicates that a proposal to list as threatened or endangered is possibly appropriate, but for which more information is needed to support a listing proposal.



**CARRYING CAPACITY (RECREATION):** The maximum number of people at one time that an area or facility can accommodate without impairing the natural, cultural, or developed resource.

**CARRYING CAPACITY (VEGETATION):** The maximum number of animals possible without inducing damage to vegetation or related resources such as watershed. Normally expressed in terms of acres per AUMs, or sometimes referred to as the total AUMs available in any given area, such as a grazing allotment or herd unit.

**CASUAL USE:** Activities ordinarily resulting in no appreciable disturbance of public lands, resources, or improvements; for example, activities that do not involve the use of mechanized earth-moving equipment or explosives, or in areas designated as closed to OHVs, do not involve the use of motorized vehicles.

**CATEGORICAL EXCLUSION:** A category of actions which do not individually or cumulatively have a significant effect on the human environment and which have been found to have no such effect in procedures adopted by BLM in implementation of the regulations and for which, therefore, neither an EA nor EIS is required.

**CLASSIFICATION OF LANDS:** The process of determining whether the lands are more valuable or suitable for transfer or use under particular or various public land laws than for retention in federal ownership for management purposes.

**CLIMAX VEGETATION:** The final natural vegetation community that emerges after a series of successive vegetation stages. Such a community can perpetuate itself indefinitely, unless disturbed by outside forces or influences.

**CLOSURES TO LEASING:**

**Discretionary:** Lands where BLM has determined that energy and/or mineral leasing, entry, or disposal would not be in the public interest.

**Nondiscretionary:** Lands specifically closed to energy and/or mineral leasing, entry, or disposal by law, regulation, a Secretary of Interior decision, or Executive Order.

**COAL BED METHANE GAS:** Gas produced from fractured coal seams which are buried at depth. The coal seams act not only as the source of the gas

generated, but also act as the reservoir which stores the gas.

**COLOR:** A visual element considered in determining a visual resource management class that determines how the character of a landscape is perceived, specifically the reflected light of different wave lengths that enables the eye to differentiate otherwise identical objects. Refer also to form, line and texture.

**COMBINED HYDROCARBON LEASE (CHL):** A lease issued in a Special Tar Sands Area for the removal of gas and nongaseous hydrocarbon substances other than coal, oil shale, or "Gilsonite".

**COMMUNICATION SITE:** An area of public land granted to an applicant under authority contained in FLPMA and its regulations, to be used for a communication structure or facility.

**COMMUNITIZATION AGREEMENT:** An agreement formed between more than one operator based upon an approved unit (spacing or drilling) which encompasses more than one lease.

**COMMUNITY:** A groups of plants and animals living together in a common area and having close interactions.

**CONDITIONS OF APPROVAL:** Conditions or provisions (requirements) under which an Application for a Permit to Drill or Sundry Notice is approved.

**COORDINATED RESOURCE MANAGEMENT PLAN (CRMP):** A plan for management of one or more grazing allotments that involve all the affected resources, e.g., range, wildlife, watershed, minerals, recreation.

**CORD (OF WOOD):** A unit of measure of wood volume. A cord is the amount of cut logs or wood in a stack measuring 4 by 4 by 8 feet.

**CORRIDOR:** A strip of public land forming a passageway between two points in which transportation and/or utility systems exist or may be located. A designated corridor is the preferred location for existing and future right-of-way grants that has been identified by law, by Secretarial Order, through land use planning, or by other management decision.

**CRITERIA (PLANNING):** The standards or rules and other factors developed by the manager and interdisciplinary team for their use in forming



## Glossary

- judgments about decision making, analysis, and data collection during planning.
- CRITICAL SOILS:** Soils that contain very high saline soils and/or are highly susceptible to water erosion.
- CRITICAL HABITAT:** Any air, land, or water area, including elements thereof, which have been determined (and published in the Federal Register) to be essential to the survival of wild populations of an endangered or threatened species or to be necessary for their recovery to a point at which the measures provided pursuant to the ESA are no longer necessary.
- CRUCIAL HABITAT:** Rangeland on which a wildlife or plant species not federally listed as threatened or endangered depends for survival. No alternative suitable habitat is available because of some site limiting factor(s).
- CULTURAL RESOURCE:** The fragile and nonrenewable remains of human activity, occupation, or endeavor reflected in districts, sites, structures, buildings, objects, artifacts, ruins, works of art, architecture, and natural features that were of importance in human events. These resources consist of physical remains, areas where significant human events occurred even though evidence of the event no longer remains, and the environment immediately surrounding the resource. Synonymous with archeological resources.
- CUMULATIVE IMPACTS:** Additional and interactive combinations of activities that are not necessarily individually qualitatively different, but together require different management techniques and applications. Cumulative impacts occur when there are multiple infringements on the same values.
- DESIGNATED ROAD:** Those roads designated for OHV travel which are approved in the RMP.
- DESIGNATION:** The official identification and naming of a general area or site on public land. Lands may be designated when they are either (1) withdrawn, (2) given special status by act of Congress, or (3) established by an approved land use plan.
- DIRECTIONAL DRILLING:** Drilling at an angle from the vertical to reach subsurface areas not directly under the wellbore. Such drilling is used to reach a subsurface area beneath a No Surface Occupancy lease.
- DISCRETIONARY:** Any action which the BLM has authority to either approve or deny.
- DISPOSAL WELL:** A well used for the disposal of salt water. The water is pumped into a subsurface geologic formation sealed off from other formations by an impervious layer of rock. The quality of water pumped into the subsurface formation is of equal or better quality than the water occurring naturally in the formation.
- ECOLOGICAL CONDITION:** The present state of vegetation of an ecological site in relation to the potential natural plant community for that site. It is an expression of the relative degree to which the kinds, proportions, and amounts of plants presently in a plant community resemble that of the potential natural community. The terms "early", "mid", "late", and "climax" are used to describe the present vegetation community relative to its natural potential.
- ECOSYSTEM:** A complex self-sustaining natural system which includes living and nonliving components of the environment and the circulation of matter and energy between organisms and their environment.
- EFFECTS:** Synonymous with impacts.
- ENDANGERED SPECIES:** An animal or plant species whose prospects of survival and reproduction are in immediate jeopardy and in danger of extinction throughout all or a significant portion of its range, as defined by the USF&WS under the authority of the Endangered Species Act of 1973, as amended.
- ENVIRONMENTAL ASSESSMENT (EA):** The procedure for analyzing the impacts of some proposed action on a given environment and the documentation of that analysis. An EA is similar to an environmental impact statement (EIS) but is generally smaller in scope. An EA may be preliminary to an EIS.
- ENVIRONMENTAL IMPACT STATEMENT (EIS):** The procedure for analyzing the impacts (both beneficial and adverse) of a proposed action on a given environment, and the documentation of that analysis.
- EPHEMERAL STREAM:** A stream that flows only briefly after a storm or during snowmelt.
- ERODIBLE SOIL:** The accelerated wearing away of the soil and surface by running water, wind, ice or other geological agents on slopes greater than 40 percent and lacking in sufficient vegetation cover to retard natural erosion processes.



- EXCHANGE:** A trading of public lands (surface and/or subsurface estates) that usually do not have high public value, for lands in other ownerships which do have value for public use, management and enjoyment. The exchange may be for the benefit of other federal agencies as well as BLM.
- EXCLUSION AREA:** An environmentally sensitive area where rights-of-way would be granted only in cases where there is a legal requirement to provide such access.
- EXISTING ROAD:** Those roads open to OHV travel identified as such approved in the RMP. Roads not recognized by the RMP or subsequent to the RMP would not be considered an "existing road".
- EXPERIMENTAL, NON-ESSENTIAL POPULATION:** A 1982 amendment to the Endangered Species Act, this designation allows management flexibility assuring reintroduced populations of federally listed endangered species will not significantly impact existing or future land uses. Such a designation would result in: 1) lowering the species' status from endangered to threatened, 2) implementing activity plans for the involved area, and 3) conferring informally with USF&WS on actions likely to jeopardize the species' continued existence (Luce & Oakleaf, 1991).
- EXPLORATORY WELL:** Any well drilled beyond the known producing limits of a pool of hydrocarbons.
- EXTENSIVE RECREATION MANAGEMENT AREAS (ERMA):** Areas where recreation is unstructured and dispersed and where minimal recreation-related investments are required. ERMAs provide recreation visitors the freedom of choice with minimal regulatory constraint.
- FAULT:** A geologic fracture or a zone of fractures along which there has been movement of one side relative to the other.
- FEDERAL LAND POLICY AND MANAGEMENT ACT OF 1976 (FLPMA):** Public Law 94-579, gives the BLM legal authority to establish public land policy; to establish guidelines for administering such policy; and to provide for the management, protection, development, and enhancement of the public land.
- FEE TITLE:** The title or ownership of land; short for "owned in fee." The owner of the fee holds title to the land.
- FIELD:** A single pool or multiple pools of hydrocarbons grouped on, or related to, a single geologic, structural, or stratigraphic feature.
- FIRE MANAGEMENT:** The integration of fire protection, prescribed burning, and fire ecology knowledge into multiple use planning, decision making, and land management activities. Fire management is a program, not of letting fires burn, but rather of placing fire in perspective with overall land management objectives to fulfill the needs of the public.
- FLOODPLAIN:** The nearly level alluvial plain bordering a stream subject to inundation (flooding) during high water.
- FOLD:** A curve or bend of rock layers and is usually a product of compression.
- FORAGE:** Vegetation of all forms available for animal consumption.
- FORM:** A visual element considered in determining a visual resource management class that determines how the character of a landscape is perceived, specifically the shapes of objects such as landforms or patterns in the landscape. Refer also to line, color and texture.
- FREE USE PERMIT:** A permit allowing the removal of woodland products, mineral materials, and other resources from the public lands free of charge.
- GAS (NATURAL):** Hydrocarbons that exist as a gas or vapor at ordinary pressures and temperatures. Methane is the most important, but ethane, propane, and others may be present. Natural gas may occur alone or be associated with oil.
- GEOGRAPHIC INFORMATION SYSTEM (GIS):** Through the use of computer technology, GIS allows the input, storage, analysis, and display of a great volume and variety of physically locatable data (i.e., data which is known to exist at some specific place or area on the ground).
- GEOPHYSICAL EXPLORATION (OIL AND GAS):** Exploration for oil and gas bearing rock in geologic, stratigraphic, or structural hydrocarbon traps. Geophysical methods used in locating such oil and gas bearing prospects include: seismic, gravity, magnetic, and electromagnetic technologies.
- "GILSONITE":** A solid hydrocarbon with the general appearance of coal; uintaite, a black, lustrous form



of asphalt that, when treated and refined, yields gasoline, fuel oil, and coke.

**GOAL:** The desired state or condition that a plan alternative, or management policy is designed to achieve. A goal is usually not quantifiable and may not have a specific date by which it is to be completed. Goals are the foundations from which objectives and management prescriptions are developed.

**GRANT:** A gift of public lands either in quantity or in place. Also, the document or the action which conveys land or an interest in land.

**GRAZING ALLOTMENT:** An area of land assigned to one or more livestock operators for grazing livestock. Allotments generally consist of public land but may also include state-owned and private land. Livestock numbers and seasons of use are specified for each allotment. An allotment may be subdivided into pastures to improve rangeland values through livestock management.

**GRAZING STRATEGY:** A livestock grazing use plan, not necessarily detailed in an AMP, outlining annual livestock numbers, periods of use, use rotation schedules, etc.

**GROUNDWATER:** Water filling the unblocked pores of underlying geologic material below the water table.

**HABITAT:** A specific set of physical conditions that surround the single species, a group of species, or a large community and to which the species are dependent. In wildlife management, the major components of habitat are considered to be food, water, cover, and living space.

**HABITAT MANAGEMENT PLAN (HMP):** An activity plan for a specific geographic area which identifies wildlife habitat and related objectives, establishes the sequence of actions for achieving objectives and outlines procedures for evaluating accomplishments.

**HAZARDOUS MATERIAL:** Any substance posing a threat to the health or safety of persons or the environment. These include any material that is toxic, ignitable, corrosive or radioactive.

**HIGH PRIORITY WILDLIFE HABITAT:** Wildlife habitat used intensively by one or more wildlife species. Current or potential habitat composition and biological production exists to support wildlife use during the spring, summer, or fall seasons (crucial habitat is generally applied to winter use areas).

**HYDROCARBONS:** Organic chemical compounds of hydrogen and carbon atoms. There are a vast number of these compounds forming the basis of all petroleum products. They may exist as gases, liquids, or solids. An example of each is methane, hexane, and asphalt.

**IMPACT:** Synonymous with effects. Impacts include ecological (such as the impacts on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic, historic, cultural, economic, social, or health, whether direct, indirect, or cumulative. Impacts may also include those resulting from actions which may have both beneficial and detrimental (adverse) effects, even if on balance BLM believes the effect will be beneficial. Impacts may be considered as direct, indirect, or cumulative:

**Direct:** Impacts caused by an action and occurring at the same time and place.

**Indirect:** Impacts caused by the proposed action and occurring later in time or farther removed in distance, but are still reasonably foreseeable.

**Cumulative:** Those which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions.

**INJECTION WELL:** A well used for the disposal of produced water or for enhanced recovery operations.

**INTERIM MANAGEMENT POLICY (IMP):** This policy provides direction in managing Wilderness Study Areas until such time as the areas are designated by Congress or dropped from consideration. Direction is couched in a set of nonimpairment criteria designed to govern surface disturbing activities on WSA, requiring lands be managed so as to not impair their suitability for designation as wilderness. Any authorized activities must be temporary in nature and not degrade the area's wilderness values. Disturbed areas must be capable of being reclaimed so they are substantially unnoticeable by the time the Secretary of the Interior makes his/her recommendation on wilderness areas to the President.

**INTERMITTENT STREAM:** Streams that do not contain water year-round or for the entire length of its course.



**INTRUSION (VISUAL):** A land, vegetation, or structural feature that is generally considered out of context with the characteristic landscape.

**ISSUE (PLANNING):** Significant or important items of concern relating to a proposed action gained through the scoping process to be addressed in the analysis. Issues may be couched in terms of an unrealized opportunity, an unresolved conflict or problem, or a value being lost. For the purposes of this planning document, a planning issue will be related to resource management and will be resolved through the RMP.

**KEY PLANT SPECIES:** A species which is relatively or potentially abundant, can endure moderately close grazing, and serves as an indicator of changes in a vegetation community. More than one key species may be selected on an area; one species may be important for watershed protection, and a different species may be important for livestock or wildlife forage or other values.

**KNOWN PHOSPHATE LEASING AREA (KPLA):** An area classified by the U.S. Geological Survey as having known phosphate values determined by grade and distribution. The purpose is administrative, requiring competitive leasing within the KPLA.

**LEASE:** An authorization to possess and use public land for a fixed period of time (usually long-term). Any contract, profit-share arrangement, joint venture, or other agreement issued or approved by the United States Government under a mineral leasing law that authorizes exploration for, extraction of, or removal of oil and gas resources.

**LEASABLE MINERAL:** A mineral such as coal, oil shale, oil and gas, phosphate, potash, sodium, geothermal resources, and all other minerals that may be developed under the Mineral Leasing Act of 1920, as amended.

**LEGAL DESCRIPTION:** The description of a particular parcel of land according to the official plat of its cadastral survey, including Township, Range and section numbers in reference to its meridian. For example: Township 10 South, Range 19 East, section 25, Salt Lake Base and Meridian.

**LEKS:** Synonymous with strutting ground.

**LIMITED WILDLIFE HABITAT:** Areas only marginally suitable as habitat for a wildlife species.

**LINE:** A visual element considered in determining a visual resource management class that determines how the character of a landscape is perceived, specifically perceivable linear changes in contrast resulting from abrupt differences in form, color, and texture. Refer also to color, form, and texture.

**LISTED SPECIES:** A plant or animal species federally listed as either endangered or threatened under the Endangered Species Act.

**LOCATABLE MINERALS:** Any valuable mineral that is not saleable or leasable, including gold, silver, copper, uranium, etc., that may be developed under the General Mining Law of 1872.

**LONG-TERM:** As used in this document, more than five years.

**MANAGEMENT CONCERN:** Concerns which do not meet the criteria for a planning issue but cannot be resolved administratively. Management concerns result from professional judgment and familiarity with conditions in a resource area and may be further defined by inventory and analysis. Examples might include a fragile watershed or a need to establish special designation.

**MANAGEMENT FRAMEWORK PLAN (MFP):** A planning decision document prepared before the effective date of the regulations implementing the land use planning provisions of FLPMA.

**MANAGEMENT INDICATOR SPECIES (MIS):** A BLM-selected wildlife species affected, or potentially affected, by a change resulting from one or several management actions. Such a species is monitored to indicate the general health of the habitat type(s) the MIS inhabits.

**MANAGEMENT PRESCRIPTIONS:** Synonymous with objectives. The planned actions taken within a stated time period that are measurable to achieve the desired results specified by a goal. Management prescriptions are subordinate to goals.

**MANAGEMENT PRIORITY AREA:** A geographical area which due to its combination of existing and potential resources and existing or potential resource uses is placed into one of four active groupings (or levels) so that compatible and excluded uses are designed to reduce or eliminate conflicts.

**MANAGEMENT SITUATION ANALYSIS (MSA):** A step in the BLM planning process identifying existing management, physical resources and opportunities



to meet the needs, concerns and issues identified through resource management planning. The MSA results in a reference document, which is kept current in the resource area office. This document is open for public inspection, but is not distributed to the public.

**MASTER TITLE PLAT:** The modern land title recordkeeping which shows land status by diagrams.

**MATERIAL SITE:** An area of public lands from which sand and gravel may be taken (with the proper permit and authorization) for construction or maintenance of state or federal-aid highways.

**MINERAL ENTRY:** The location of mining claims by an individual to protect his/her right to a valuable mineral.

**MINERAL POTENTIAL:**

**High:** High mineral potential lands are defined as those lands currently producing oil or gas or having high current industry interest.

**Moderate:** Moderate potential lands are defined as those lands which have had oil and gas shows in favorable geologic environments.

**Low:** Low potential areas are those lands where either the geologic environment appears to be unfavorable for the accumulation of oil and gas, or where little or no information is available to evaluate the oil and gas potential.

**MINERAL WITHDRAWAL:** A withdrawal of public lands which are potentially valuable for leasable minerals. This precludes the disposal of the lands except with a mineral reservation, or unless the lands are found to not be valuable for minerals.

**MINING PLAN OF OPERATIONS:** A plan for mining exploration and development that an operator must submit to BLM for approval when more than 5 acres a year will be disturbed or when an operator plans to work in an area of critical environmental concern, wild and scenic river, wilderness study area, or wilderness. An MPO must document, in detail, all actions the operator plans to take from exploration through reclamation and present all information needed for preparing a National Environmental Policy Act document.

**MITIGATING MEASURES:** Constraints, requirements, or conditions imposed (often included as stipulations or special conditions attached to a lease or permit) to

reduce the significance of or eliminate an anticipated adverse impact to environmental, socioeconomic or other resource value from a proposed land use. Committed mitigating measures are those measures BLM is committed to enforce, i.e., all applicable laws and their implementing regulations.

**MODERN URBAN:** One of the six classes of ROS. In modern urban areas, opportunities to experience recreation in affiliation with individuals and groups are prevalent, as is the convenience of recreation sites and opportunities. Opportunities for wildland challenges, risk taking, and testing of outdoor skills are unimportant. Opportunities for competitive spectator sports are common, as are opportunities to use parks and open spaces highly influenced by people.

**MONITORING:** The orderly collection and analysis of data to evaluate progress in meeting resource management objectives. Monitoring may also include: the collection of data to evaluate progress in complying with laws, regulations, policies, executive orders, and management decisions; and, the collection of data to assist in resource protection. Sampling of data and observation of progress toward plan objectives, the accuracy of impact analysis, and the effectiveness of mitigation measures are also of particular interest in terms of RMP monitoring activities.

**MOUNTAIN BICYCLE:** A nonmotorized, foot-pedal driven bicycle used on paved and unpaved roads and trails.

**MULTIPLE-USE MANAGEMENT:** Management of public lands and their various resource values so they are used in the combination best meeting the present and future needs of the American people. Such a concept allows for the most judicious use of some or all of the resources over areas large enough to provide sufficient latitude for periodic adjustments in use to conform to changing needs and conditions. Relative resource values are considered, not necessarily the combination of uses that would give the greatest potential economic return or the greatest unit output.

**NATIONAL FIRE DANGER RATING SYSTEM:** A uniform national system of rating fire danger and fire behavior to aid in developing current and predicted fire danger conditions.

**NATIONAL WILD AND SCENIC RIVERS SYSTEM:** Established by the Wild and Scenic Rivers Act of 1958 to protect rivers and their immediate



environments that have outstanding scenic, recreation, geologic, fish and wildlife, historic, cultural, and other similar values and are preserved in free-flowing conditions. This system provides for the designation of three types of rivers:

**Recreation:** Rivers or sections of rivers readily accessible by road or railroad that may have some development along their shorelines and may have undergone some impoundment or diversion in the past.

**Scenic:** Rivers or sections of rivers free of impoundments, with shorelines or watersheds still largely undeveloped, but accessible in places by roads.

**Wild:** Rivers or sections of rivers free of impoundments and generally inaccessible except by trails, with essentially primitive watersheds or shorelines and unpolluted waters.

**NATURAL HISTORY RESOURCES:** Fossil remains and knowledge acquired about plants and animals from past geologic periods. Also known as paleontological resources.

**NAVIGABLE WATER:** A river in its natural and ordinary condition is used or susceptible of being used as a channel for commerce over which trade and travel is conducted or may be conducted in customary modes on water. Navigability does not depend upon mode or modes by which trade and travel is conducted upon a stream, but upon whether the stream in its natural condition is one which affords channel for useful commerce. Navigability is not destroyed merely because of water course interruptions, caused by occasional natural obstruction or portages, and it is not essential that the stream be open to navigation at all seasons of year or at all stages of water. (This definition is taken from the 1962 Tenth Circuit Court of Appeals ruling [Cite as 304 F.2d 23 (1962)] regarding ownership of river beds in Utah).

**NONPOINT POLLUTION SOURCE:** Pollution from scattered sources, as opposed to pollution from one location, e.g., a manufacturing plant.

**NO SURFACE OCCUPANCY (NSO):** A condition of surface use attached to a lease or other authorization applied to minerals exploration and development which prohibits occupancy of only the land surface or to protect other identified resource values.

**OBJECTIVES:** See management prescriptions.

**OFF-HIGHWAY VEHICLE (OHV):** Any motorized vehicle capable of, or designed for, travel on or immediately over land, water, snow, or other natural terrain.

#### OFF-HIGHWAY VEHICLE DESIGNATIONS:

**Open:** Designated areas and trails where OHVs may be operated.

**Limited:** Designated areas and trails where the use of an OHV is subject to restrictions, such as limiting the number of types of vehicles, allowed, dates and times of use (seasonal restrictions); limiting use to designated roads and trails. Combinations of restrictions are possible, such as limiting use to certain types of vehicles during certain times of the year.

**Closed:** Designated areas, roads, and trails where the use of an OHV is permanently or temporarily prohibited. Emergency use of vehicles is allowed.

**OIL (CRUDE):** Unrefined liquid petroleum.

#### OIL AND GAS RESOURCE:

**Conventional:** Resources include crude oil, natural gas, and natural gas liquids existing in conventional reservoirs or in a fluid state amenable to extraction techniques employed in traditional development practices.

**Nonconventional:** Oil occurring within extremely viscous and intractable heavy oil deposits, tar deposits, or oil shales; or gas from low-permeability "tight" sandstone and fractured shale reservoirs having low permeabilities, and coal bed methane, which are not amenable to extraction techniques employed in traditional development practices.

**OIL SHALE:** A common term for kerogen-shale containing material neither petroleum nor coal, but an intermediate bitumen material with some of the properties of both. Small amounts of petroleum are usually associated with oil shales, but the bulk of the oil is derived from heating the shale.

**OUTSTANDING NATURAL AREA:** A BLM designation applied to an outstanding natural area containing unusual natural characteristics and is managed primarily for educational and recreational purposes.



This type management designation has been replaced by ACEC designation.

**PATENT:** As it relates to public land laws, a patent is the instrument (or deed) by which the government conveys title to the public lands.

**PAYMENT IN LIEU OF TAXES (PILT):** Payments to local or state governments based on ownership of federal land and not directly dependent on production of outputs or receipt sharing.

**PERENNIAL STREAM:** A stream that flows through the year.

**PERMEABILITY:** A measure of the ease with which fluids can flow through a porous rock, sediment, or soil.

**PERMIT:** A short-term (generally under 3 years), revocable authorization to use public lands for specific purposes.

**PETROLEUM:** A substance occurring naturally in the earth and composed mainly of mixtures of chemical compounds of carbon and hydrogen, with or without other nonmetallic elements such as sulfur, oxygen, and nitrogen. The compounds that compose it may be in the gaseous, liquid, or solid state, depending on their nature and on the existent conditions of temperature and pressure.

**PHOSPHATE:** A natural rock containing one or more phosphate minerals, usually calcium phosphate, of sufficient purity and quantity to permit its use, either directly or after recovery in the manufacture of commercial products.

**PLAN AMENDMENT:** A change in a RMP initiated by the need to consider monitoring and evaluation 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 terms, conditions and decisions of the approved plan. An amendment shall be made through an EA of the proposed change or an EIS, if necessary. If an EIS is prepared, a 90-day public review period is required.

**PLAN OF DEVELOPMENT:** The general outline of how a definitely proposed or authorized project is to be implemented.

**PLAY:** A play is a group of geologically related known oil and/or gas fields or undiscovered fields and/or

prospects having similar reservoirs, traps, source rocks, and geologic histories.

**POROSITY:** The percentage of the volume of rock containing opening or spaces, either connected or unconnected. Pores or open spaces in rocks are usually small and often filled with some fluid (water, oil, gas, or any combination).

**POWERSITE RESERVE:** A reservation of public lands which have potential value for water power development.

**PRESCRIBED FIRE OR BURN:** The skillful application of fire to natural fuels under conditions of weather, fuel moisture, soil moisture, etc., that would allow confinement of the fire to a predetermined area and at the same time produce the intensity of heat and rate of spread required to accomplish certain planned benefits to one or more objectives of wildlife management, livestock management, hazard reduction, etc. Its objective is to employ fire scientifically to realize maximum benefits at minimum damage and acceptable cost.

**PRIMITIVE:** One of the six classes of ROS. Primitive areas offer recreation opportunities for isolation from the sights and sounds of human activities, where a visitor can feel a part of the natural environment, experience a high degree of challenge and risk, and use outdoor skills.

**PRODUCED WATER:** Salt water produced with the hydrocarbons from a well. When hydrocarbons and water are mixed in the production stream, they go into a separator; the water goes to an evaporation pit, the hydrocarbons go to the stock tanks. When large quantities of salt water are produced on an oil and gas lease, the salt water is pumped into a deep disposal (injection) well or a produced water disposal pit.

**PRODUCTION:** The phase of the petroleum industry that deals with bringing the well fluids to the surface and separating them with storing, gauging, and otherwise preparing the product for the pipeline.

**PROPOSED-FOR-LISTING SPECIES:** A plant or animal species formally proposed for listing as threatened or endangered by the USF&WS and published in the *Federal Register* as such. At the time a species is proposed for listing it is afforded the full protection of the Endangered Species Act. Proposed for listing designation lasts up to one calendar year from the published date in the *Federal Register*, at which time, the species is formally listed.



**PROSPECT:** A geologic feature having the potential for trapping and accumulating hydrocarbons.

**PUBLIC LANDS:** Any lands or interest in lands owned by the United States and administered by the Secretary of the Interior through the Bureau of Land Management.

**PUBLIC WATER RESERVES:** Pursuant to, and under the authority of, Sec. 10 of the Act of December 29, 1916, and in aid of pending legislation, issued the Executive Order of April 17, 1926. This reserved for public use every vacant, unappropriated, and unreserved smallest legal subdivision which contains a spring or waterhole. If the lands are unsurveyed, the reservation covers all lands within 1/4 mile of the spring or waterhole.

**RANGELANDS:** Uncultivated lands that are highly diversified and include meadows, grasslands, brushlands, woodlands, and deserts. Rangelands may be treeless or consist of understory plants beneath open forests.

**RANGELAND IMPROVEMENTS:** An authorized on-the-ground project relating to rangelands which is designed to improve production of forage; change vegetation composition; control patterns of use; provide water; stabilize soil and water conditions; and provide habitat for livestock and wildlife using structures and/or land treatment projects to accomplish the desired results.

**RANGELAND MANAGEMENT PRACTICES:** An authorized activity or program action relating to rangelands which is designed to improve the rangeland resources by implementing administrative practices such as limiting class and numbers of livestock, periods of use, development of AMPs, etc., to accomplish the desired results.

**RECLAMATION WITHDRAWAL:** A water development and irrigation project of the Bureau of Reclamation.

**RECORD OF DECISION (ROD):** A required document that concisely reports the decision reached on an action examined through the National Environmental Policy Act process in an environmental assessment or environmental impact statement.

**RECREATION AND PUBLIC PURPOSES ACT (R&PP):** The Act of June 14, 1926, as amended (43 U.S.C. 869, 869-4). Allows the disposal of public lands to any state, local, federal, or political instrumentality or nonprofit organization for any recreational or public purpose, at the discretion of the authorized officer.

**RECREATION OPPORTUNITY SPECTRUM (ROS):** A continuum used to characterize recreation opportunities in terms of setting, activity, and experience opportunities. Six classes are included: primitive, semi-primitive nonmotorized, semi-primitive motorized, roaded natural, rural, and modern urban. Refer to the individual definitions in this glossary and Appendix 5.

**REHABILITATION:** Restoration of damaged or lost environment as nearly as possible to its original state.

**RELICT VEGETATION:** A vegetation community or area within a vegetation community relatively undisturbed by human activities to allow the community to progress towards its natural climax composition. These areas are important as they may serve as comparison areas, allowing management prescriptions in similar communities to be measured as to their overall effectiveness.

**RESERVATION:** A withdrawal of a permanent nature, dedicated to a specific public purpose.

**RESERVOIR (OIL AND GAS):** A volume of rock in the subsurface having properties (such as porosity and permeability) which allow for the accumulation of crude oil or natural gas.

**RESERVOIR ROCK:** Any porous and permeable rock that yields oil and gas. Sandstone, limestone, and dolomite are the most common reservoir rocks.

**RESOURCE AREA:** The smallest administrative subdivision of a BLM district.

**RESOURCE MANAGEMENT PLAN (RMP):** A written land use plan that outlines BLM's decisions and strategies for management of the resources in a particular area. The RMP replaces the MFP in the Bureau's planning system.

**REVOCATION:** The action which cancels a withdrawal. It need not necessarily "open" the lands to application/entry. A restoration would open the lands to operation of the public land laws.

**RIGHT-OF-WAY:** The legal right for use, occupancy, or access across land or water areas for a specified purpose or purposes. Also, the lands covered by such a right. A right-of-way is usually linear, but may include a site such as for communications.

**RIPARIAN HABITAT:** A highly valued wetland vegetation community found along or around streams, lakes,



ponds, and other open water (both perennial and intermittent). This unique habitat is crucial to the continued existence of many fish and wildlife species known to occur in the area; riparian vegetation aids in maintaining high water tables; stabilize pond and streambanks; create quality fish and wildlife habitat; and maintains water quality.

**RIVER:** In reference to the National Wild and Scenic Rivers Act, a river is a flowing body of water or estuary or a section, portion, or tributary thereof, including rivers, streams, creeks, runs, rills, kills, and small lakes.

**ROADED NATURAL:** This is one of the six classes of ROS. This area is characterized by predominantly natural appearing environments with moderate evidences of the sight and sound of humans. Such evidences usually harmonize with the natural environment. Interaction between users may be low to moderate, but with evidence of other users prevalent. Resource modification and utilization practices are evident, but harmonize with the natural environment. Conventional motorized use is provided for in construction standards and design of facilities.

**RURAL:** One of the six classes of the ROS. In rural areas, opportunities to experience recreation in affiliation with individuals and groups are prevalent, as is the convenience of recreation sites. These factors generally are more important than the natural setting. Opportunities for wildland challenges, risk taking, and testing of outdoor skills are unimportant except in activities involving challenge and risk.

**SALEABLE MINERALS:** Minerals that may be sold under the Material Sale Act of 1947, as amended. Included are common varieties of sand, stone, gravel, and clay.

**SALINE SOILS:** A soil containing soluble salts in an amount that impairs the growth of plants.

**SCOPING PROCESS:** An early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to a proposed action. Scoping may involve public meetings, field interviews with representatives of agencies and interest groups, discussions with resource specialists and managers, written comments in response to news releases, direct mailings and articles about the proposed action, and scoping meetings.

**SEGREGATION:** Any action such as a withdrawal or allowed application (eg., exchange), which suspends the operation of the general public land laws. To separate or set apart; to remove lands from the operation of part or all the public land mineral laws.

**SEMI-PRIMITIVE MOTORIZED:** This is one of the six classes of ROS. The area is characterized by a predominantly natural or natural-appearing environment of moderate-to-large size. Concentration of users is low, but there is often evidence of other users. The area is managed in such a way that minimum on-site controls and restrictions may be present, but are subtle. Motorized use is permitted.

**SEMI-PRIMITIVE NONMOTORIZED:** This is one of the six classes of ROS. The area is characterized by a predominantly natural or natural-appearing environment of moderate-to-large size. Interaction between users is low, but there is often evidence of other users. The area is managed in such a way that minimum on-site controls and restrictions may be present, but are subtle. Motorized use is not permitted.

**SENSITIVE SPECIES (PLANT AND ANIMALS):** Species occurring on public lands and requiring special management attention to protect it and to prevent irreparable damage to the important resources or other natural systems or processes on which it depends. The sensitive list is made up of species listed as Category 3C in the *Federal Register*, volume 50 number 188, dated September 27, 1985.

**SHORT-TERM IMPACTS:** As used in this document, impacts lasting less than five (5) years.

**SOURCE ROCKS:** Sedimentary rocks (such as shales, limestones, or dolomites) containing organic material which has been transformed (by heat and pressure) to oil and gas over time.

**SPECIAL EMPHASIS AREAS:** An area containing one or a combination of unique resources or values that receive more intensive management (e.g., ACECs, WSAs, WAs, SRMAs, W&SRs, etc.).

**SPECIAL RECREATION MANAGEMENT AREA (SRMA):** Areas requiring explicit recreation management to achieve BLM's recreation objectives and to provide specific recreation opportunities. SRMAs are listed in this plan which also define SRMA management objectives. BLM's recreation investments are concentrated in these areas.



**SPECIAL STATUS SPECIES:** Wildlife and plant species either federally listed or proposed for listing as endangered or threatened, state-listed or BLM-determined priority species.

**SPECIAL TAR SANDS AREAS (STSA):** An area designated by the Secretarial Orders dated November 20, 1980, and January 21, 1981, and referred to in those orders as Designated Tar Sand Areas, as containing substantial deposits of tar and sand. The Combined Hydrocarbon Leasing Act of 1981 provided for the conversion of existing oil and gas leases in STSAs to Combined Hydrocarbon Leases (CHLs). This act also required competitive leasing for currently unleased lands within STSAs.

**SPLIT ESTATE:** The surface estate and the mineral estate of a parcel of land belong to different owners.

**STATE HISTORIC PRESERVATION OFFICER (SHPO):** A position within state governments responsible for coordinating state participation in the implementation of the National Historic Preservation Act. This officer serves as an assistant and consultant when identifying cultural properties, assessing effects to them, and considering alternatives to avoid or reduce those effects.

**STATE SELECTION:** Lands the state receives as a term of the statehood act. An indemnity selection or in-lieu selection is land owed to the state to replace land that the state would have received as a term of statehood but did not because the land was already appropriated under the public land laws.

**STATUS (LAND):** The information concerning a specific piece of land. The information would include such things as: ownership, claims, or applications outstanding; known minerals (if any); withdrawals; or in general, any information that might affect land ownership.

**STIPULATION:** A requirement, usually dealing with protection of the environment, that is made a part of a lease, grant, or other authorizing document. In the case of oil and gas leases, a provision that modifies standard lease rights and is attached to and made a part of the lease. The following represent the major stipulations on BLM lands:

**No surface occupancy stipulation:** A stipulation in which use or occupancy of the land surface for fluid mineral exploration or development is prohibited to protect identified resource values.

**Seasonal restriction stipulation:** A stipulation which prohibits surface use during specified time periods to protect identified resource values. This stipulation does not apply to the operation and maintenance of production facilities unless the findings of analysis demonstrate the continued need for such mitigation and that less stringent, project specific mitigation measures would be insufficient.

**Controlled surface use stipulation:** A stipulation in which use and occupancy is allowed (unless restricted by another stipulation), but identified resource values require special operational constraints that may modify the lease rights.

**Special administration stipulation:** A stipulation in which a special condition is designed to meet the pre-existing agreements and needs of several agencies.

**STRATIGRAPHIC TRAPS:** Traps for oil and gas that are a result of lateral changes in porosity and permeability in reservoir rocks.

**STRUCTURAL TRAPS:** Hydrocarbon traps that are formed by folding, faulting, or other structural changes of rock layers.

**STRUTTING GROUNDS:** A site used by grouse for courtship display. Also called "leks" or "dancing ground". The strutting ground is the focal point of the annual reproduction cycle.

**SUBSTANTIAL WILDLIFE HABITAT:** Habitat area used moderately by a wildlife species.

**SUSTAINED YIELD:** Achieving and maintaining a permanently high level of annual or regular-period production of renewable land resources without impairing the productivity of the land and its environmental values. As used in woodlands management: a practice in which the volume of wood cut is equal to growth over the long run.

**TAR SANDS:** Native asphalt, soil, and semisolid bitumen, including oil-impregnated rock or sands from which oil is recoverable by special treatment. Processes have been developed for extracting the oil, referred to as synthetic oil.

**TEXTURE:** A visual element considered in determining a visual resource management class that determines how the character of a landscape is perceived,



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specifically the visual result of variation in the surface of an object. Refer also to color, form and line.

**TIGHT GAS RESERVOIRS:** Defined by the Federal Energy Regulatory Commission as those gas-bearing rocks that have low permeabilities (See permeability). These reservoirs are unconventional reservoirs and normally require artificial stimulation for production.

**TRAPS (OIL AND GAS):** Any barrier to the movement of oil or gas allowing either or both to accumulate. The elements of a trap include a reservoir rock and overlying or impermeable roof rock. There are three basic types of hydrocarbon traps: structural traps, stratigraphic traps, and combination traps.

**TRESPASS:** Any occupancy or use of the public lands or resources of the United States without authority.

**UNDERGROUND INJECTION CONTROL PROGRAM:** A program administered by the Environmental Protection Agency (EPA) or the State of Utah under Part C of the Safe Drinking Water Act for the disposal or injection of produced water into a subsurface geologic formation. The quality of the water contained by the subsurface must be equal to, or of lesser quality than the produced water being injected.

**UNIT (SPACING/DRILLING):** Established geographic subdivision defining the number of acres to be allotted to each well drilled in a common reservoir. The spacing of oil or gas wells is determined by the State of Utah.

**USEABLE WATER:** Those subsurface waters which contain less than 10,000 parts per million (ppm) total dissolved solids.

**USE AUTHORIZATION:** Approval of a proposed use for land or resources on the prescribed form or document designated for such use; a document showing permission to use land or the resources thereon; a formalized grant pursuant to a request to use land or resources.

**VALID EXISTING RIGHTS:** For the purposes of this RMP, a valid existing right is any valid lease, permit, patent, right-of-way, or other land use right or authorization existing on the date of approval of this RMP (FLPMA sec. 701).

**VEGETATION TREATMENT:** Alteration of the soil and/or vegetation of an area by mechanical, biological, or chemical means, or by burning. Land

treatments are implemented to reduce erosion or improve vegetation for forage.

**VISITOR DAY:** A unit to quantify recreation use on public lands. Twelve (12) visitor hours which may be aggregated continuously, intermittently, or simultaneously by one or more persons.

**VISUAL RESOURCE MANAGEMENT (VRM) CLASSES:** Classification containing specific objectives for maintaining or enhancing visual resources, including the amount of acceptable change to the existing landscape to meet established visual goals.

**Class I:** Provides for natural, ecological changes only. This class includes wilderness areas, some natural areas, some wild and scenic rivers and other similar sites where landscape modification should be restricted. (DMRA does not contain any VRM Class I areas.)

**Class II:** Includes areas where changes in any of the basic elements (form, line, color or texture), caused by management activities, should not be evident in the characteristic landscape.

**Class III:** Includes areas where changes in the basic elements caused by management activities may be evident in the characteristic landscape. The changes, however, should remain subordinate to the existing landscape character.

**Class IV:** Includes areas where changes may subordinate the original composition and character. They should, however, reflect what could be a natural occurrence in the characteristic landscape.

**WATERPOWER WITHDRAWAL:** Waterpower withdrawals are scientific classifications of federal lands that protect future water and power resource values. The authority to make waterpower withdrawals is established by Federal Statute and are known as powersite reserves and/or classifications. They may have been established to protect hydro-power generation capabilities, reservoir pump storage, or diversion conduit sites.

**WATERSHED:** All land and water within the confines of a drainage divide.

**WETLANDS:** Lands where at least periodic inundation or saturation with water (either from the surface or



subsurface) is the dominant factor determining the nature of the soil development and the types of plant and animal communities living there. These include the entire zones associated with streams, lakes, ponds, springs, canals, seeps, wet meadows, and some aspen stands. Wetlands support all the fish and higher densities and more species of wildlife than any other habitat type in the resource area.

**WILD AND SCENIC RIVERS (W&SR):** See "National Wild and Scenic River System".

**WILDERNESS AREA (WA):** An area officially designated as wilderness by Congress. Wilderness areas will be managed to preserve wilderness characteristics and shall be devoted to the public purposes of conservation and recreational, scenic, scientific, educational and historical uses.

**WILDERNESS STUDY AREA (WSA):** A roadless area which has been found to have wilderness characteristics.

**WITHDRAWAL:** An action which restricts the use or disposal of public lands, segregating the land from the operation of some or all of the public land and/or mineral laws and holding it for specific public purposes. Withdrawals may also be used to transfer jurisdiction of management to other federal agencies.

**WOODLANDS:** Lands producing tree species that are not typically utilized as sawtimber products and sold in units other than board feet (e.g., pinyon and juniper). Woodlands are not included in the commercial forest land allowable cut base.









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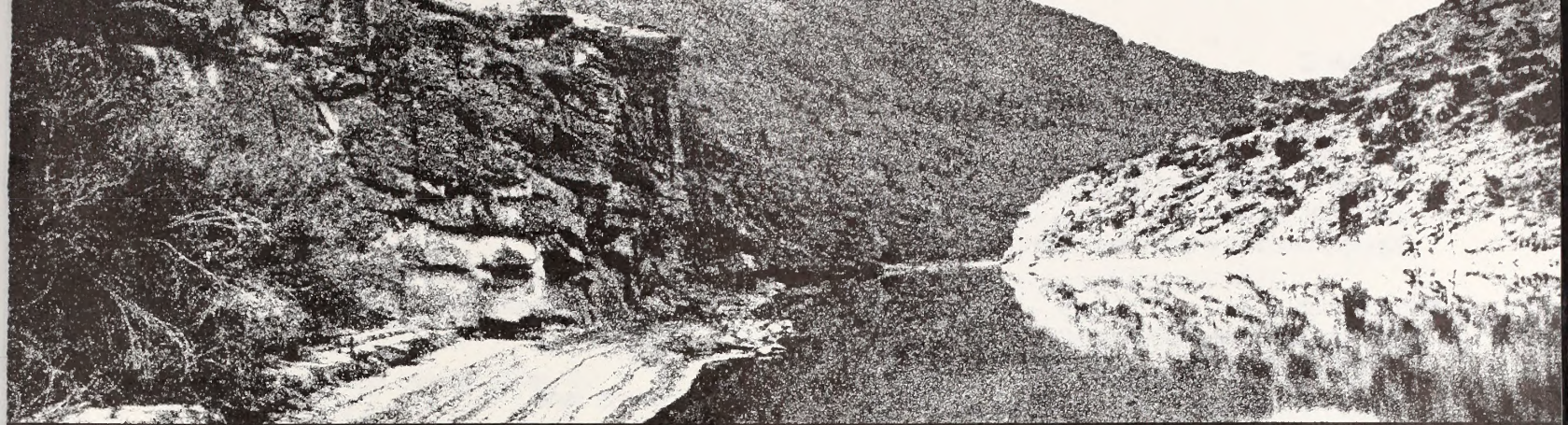
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# **Diamond Mountain Resource Area, Land Status**



# DIAMOND MOUNTAIN RESOURCE AREA

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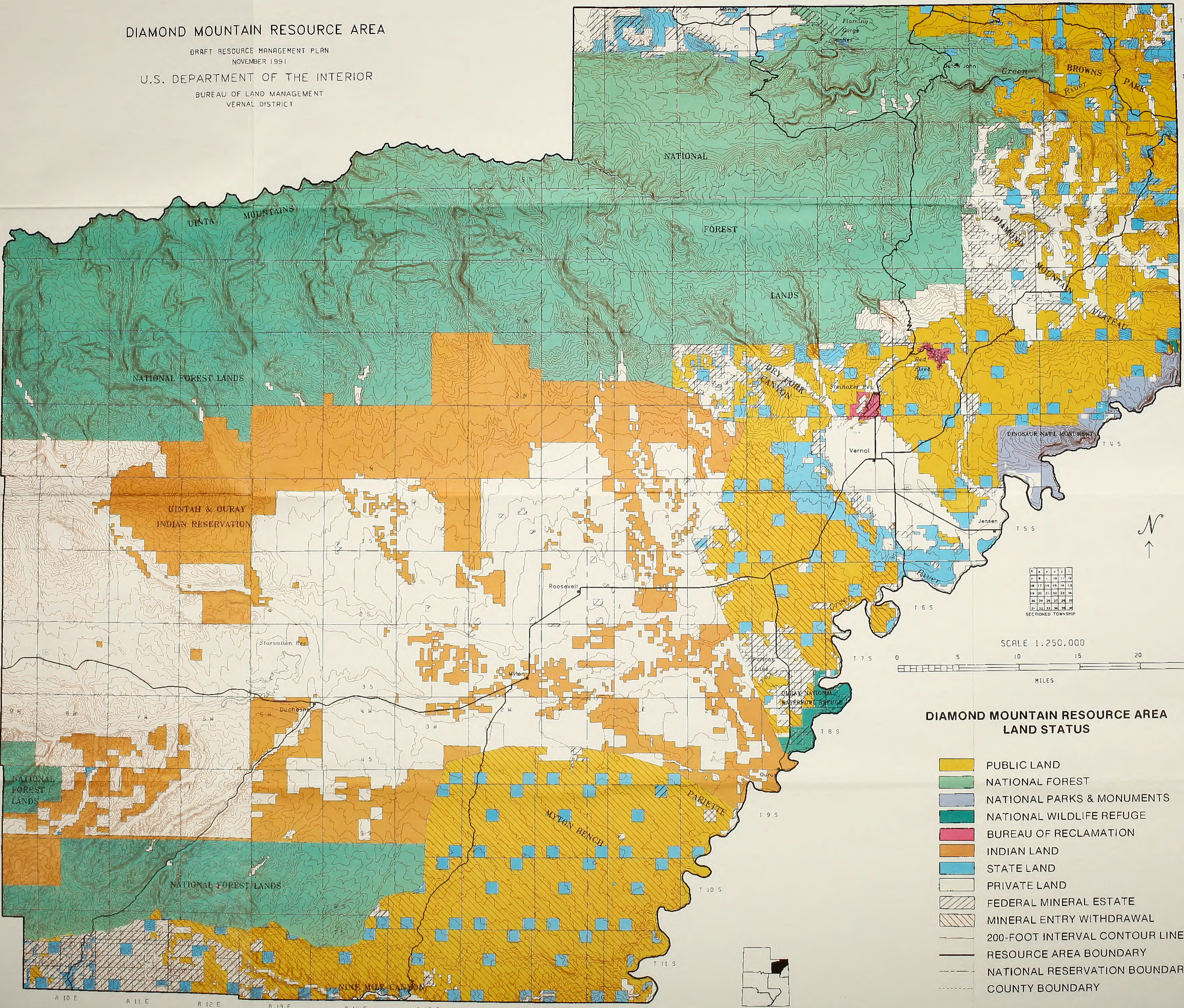
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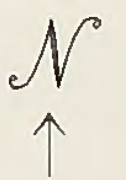
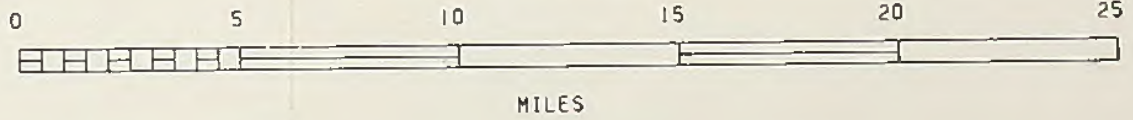
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## DIAMOND MOUNTAIN RESOURCE AREA LAND STATUS

- PUBLIC LAND
- NATIONAL FOREST
- NATIONAL PARKS & MONUMENTS
- NATIONAL WILDLIFE REFUGE
- BUREAU OF RECLAMATION
- INDIAN LAND
- STATE LAND
- PRIVATE LAND
- FEDERAL MINERAL ESTATE
- MINERAL ENTRY WITHDRAWAL
- 200-FOOT INTERVAL CONTOUR LINES
- RESOURCE AREA BOUNDARY
- NATIONAL RESERVATION BOUNDARY
- COUNTY BOUNDARY



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# **Grazing Allotments and Major Roads**

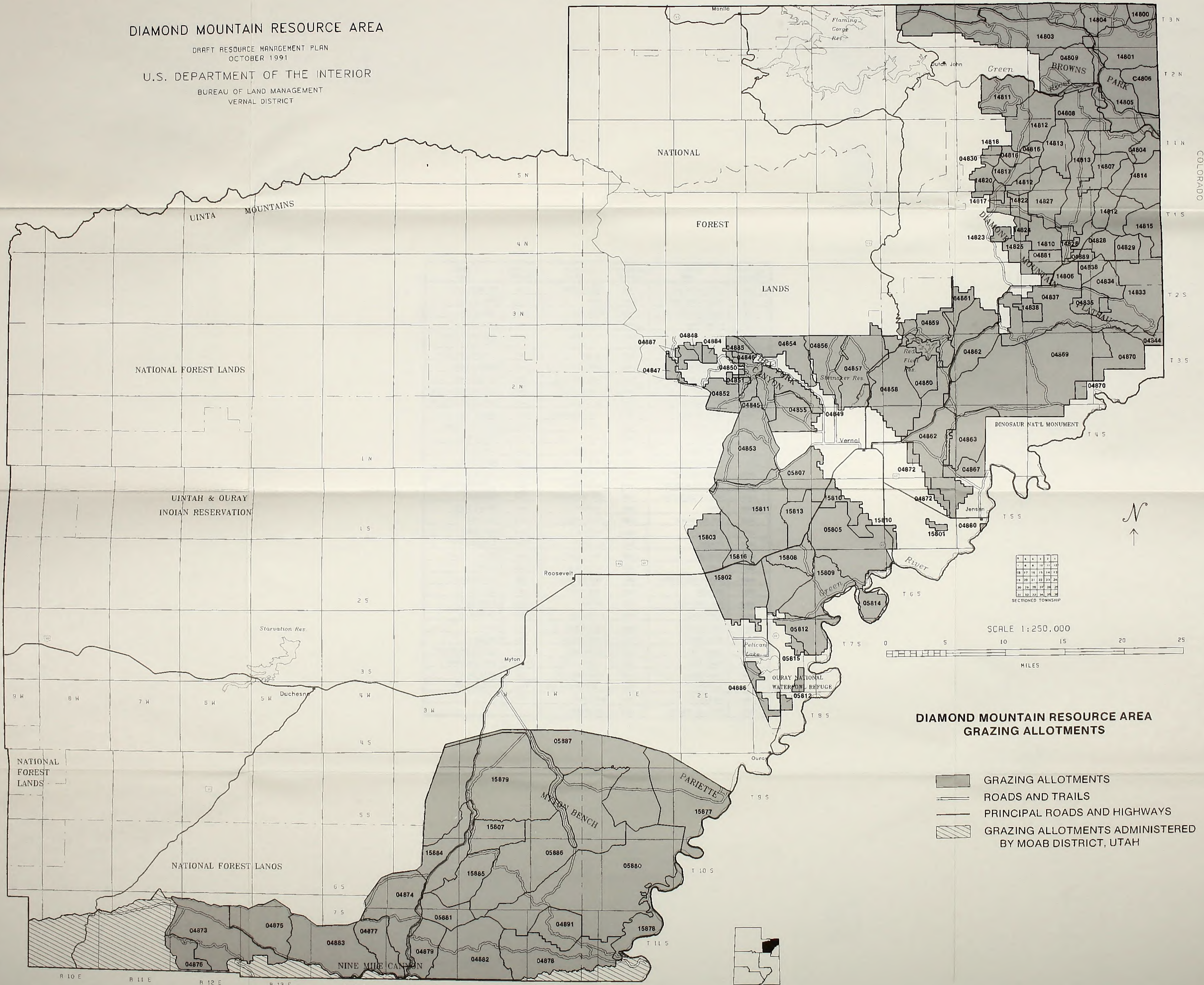


# DIAMOND MOUNTAIN RESOURCE AREA

DRAFT RESOURCE MANAGEMENT PLAN  
OCTOBER 1991

U.S. DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
VERNAL DISTRICT

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## DIAMOND MOUNTAIN RESOURCE AREA GRAZING ALLOTMENTS

- GRAZING ALLOTMENTS
- ROADS AND TRAILS
- PRINCIPAL ROADS AND HIGHWAYS
- GRAZING ALLOTMENTS ADMINISTERED BY MOAB DISTRICT, UTAH



UTAH



ALLOTMENT NUMBER	ALLOTMENT NAME	ALLOTMENT NUMBER	ALLOTMENT NAME	ALLOTMENT NUMBER	ALLOTMENT NAME
04049	GREEN RIVER (PRRA)	04860	DINOSAUR PARK	14804	RYE GRASS
04109	STONE CABIN (PRRA)	04869	SHINER	14829	SEARS CANYON
04111	SULFUR CANYON (PRRA)	04870	ISLAND PARK	14810	GADSEN DRAW
04128	KYUNE I (PRRA)	04872	POWELL/SADLIER	14814	LITTLE HOLE
04804	WATSON	04873	ARGYLE RIDGE	14812	JACKSON-CROUSE-DRY HOLLOW
04828	TAYLOR FLAT	04874	FIVE MILE	14813	NORTH WARREN DRAW
04829	RED CREEK FLAT	04879	LEARS CANYON	14814	MARSHALL DRAW
04816	MAME HOLE-BEAR HOLLOW	04876	WATER CANYON #1	14815	HOY MOUNTAIN
04817	SMOKEM-UP	04877	CURRENT CANYON	14817	COVE & W. COW HOLLOW
04828	SERVICEBERRY SPRING	04876	BULL CANYON	14818	LAMBSON-CROUSE-DAVIS
04829	WEST POT CREEK	04879	WATER CANYON #2	14820	NATURAL LAKE
04830	LOG CABIN	04880	ODEN	14822	EAST COW HOLLOW
04834	HATCH COVE	04881	GADSEN	14826	BATES SPRING
04856	COOPER DRAW	04882	DEVIL CANYON	14824	BLAIR BASIN
04830	DIAMOND MOUNTAIN	04889	PARLEY CANYON	14825	MCKEE SPRING
04834	SCHOOL BUS DRAW	04884	DEEP CREEK	14828	MAIL DRAW
04845	EAST LITTLE MOUNTAIN	04885	WILLOW SPRING	14827	SOUTH WARREN DRAW
04846	WEST LITTLE MOUNTAIN	04882	WEST PELICAN LAKE	14833	RUPLE CABIN
04847	MOSBY	04860	WILKERSON	15801	RICH & STETSON
04848	SMELTER SPRINGS	04889	FLYNNS POINT	15802	OURAY ROAD
04849	SHINDY	04860	TWIN KNOLLS	15803	WEST HUBER
04850	HACKING	05805	MCCOY FLAT	15801	AUNT KNOLL
04851	JOHNSON	05807	ASPHALT RIDGE	15802	HALFWAY HOLLOW
04852	PERRY	05812	PELICAN LAKE	15802	YOUNG
04853	COTTONWOOD SPRINGS	05814	HORSESHOE BEND	15815	HOLMES-PALMER
04856	DRY FORK	05880	LITTLE DESERT	15811	EAST HUBER
04856	COAL MINE BASIN	05887	BIG WASH	15813	TWELVE MILE
04856	SPRING CREEK	05886	CASTLE PEAK	15815	OURAY VALLEY
04857	RED MOUNTAIN	05887	EIGHT MILE FLAT	15815	CANAL
04858	BRUSH CREEK	14800	THREE CORNERS	15877	WETLANDS
04859	DONKEY FLAT	14801	WILLOW CREEK	15812	GREEN RIVER BOTTOMS
04860	PADDYS GAP	14802	CLAY BASIN	15879	ANTELOPE POWERS
04830	DIAMOND RIM	14803	GOSLIN MOUNTAIN	15884	WELLS DRAW
04862	S.J. HATCH	14804	CLAY BASIN MEADOWS	15885	BIG WASH DRAW
04863	MCFARLEY FLAT	14805	BRIDGEPORT		
04865	LITTLE BRUSH CREEK	14806	BEALER BASIN		







# **Alternative A Current Management**



# DIAMOND MOUNTAIN RESOURCE AREA

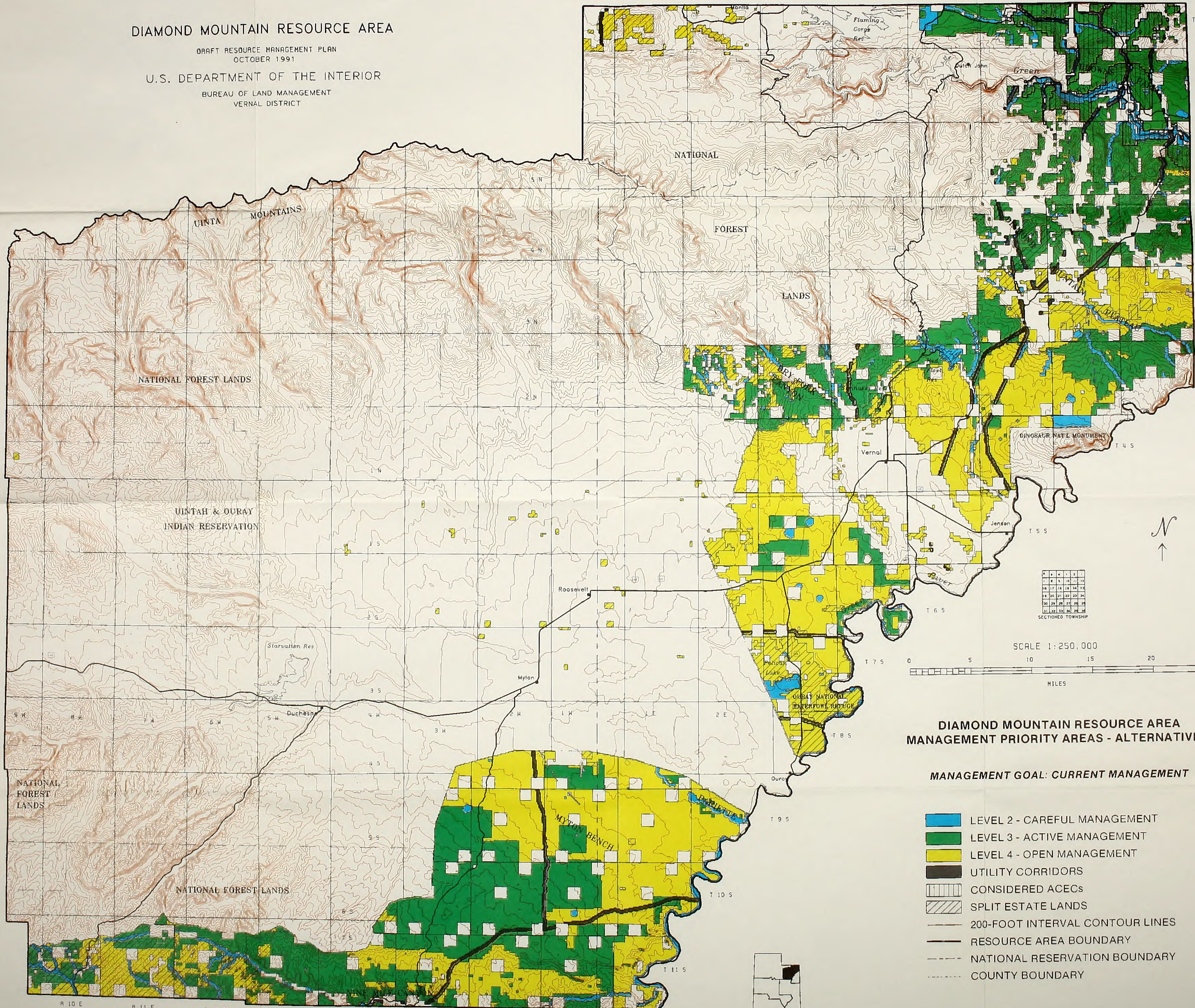
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OCTOBER 1991

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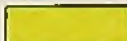
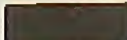

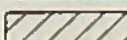
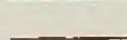

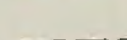
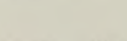


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## DIAMOND MOUNTAIN RESOURCE AREA MANAGEMENT PRIORITY AREAS - ALTERNATIVE A

MANAGEMENT GOAL: CURRENT MANAGEMENT

-  LEVEL 2 - CAREFUL MANAGEMENT
-  LEVEL 3 - ACTIVE MANAGEMENT
-  LEVEL 4 - OPEN MANAGEMENT
-  UTILITY CORRIDORS
-  CONSIDERED ACECs
-  SPLIT ESTATE LANDS
-  200-FOOT INTERVAL CONTOUR LINES
-  RESOURCE AREA BOUNDARY
-  NATIONAL RESERVATION BOUNDARY
-  COUNTY BOUNDARY





# **Alternative B Ecological Systems**



# DIAMOND MOUNTAIN RESOURCE AREA

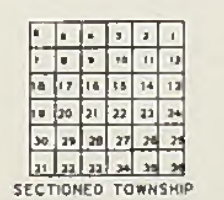
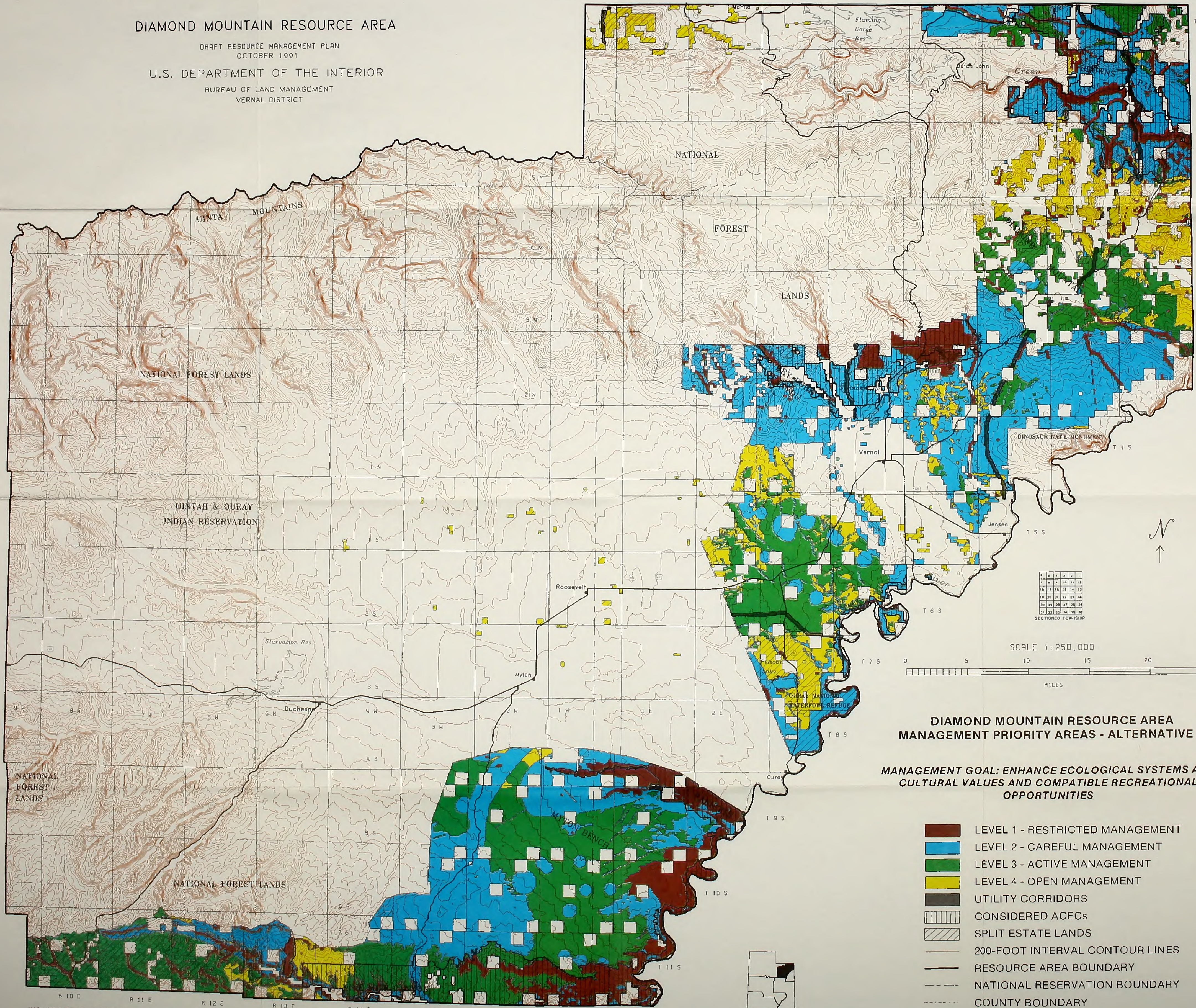
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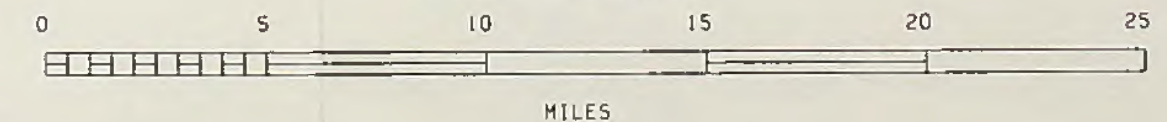
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## DIAMOND MOUNTAIN RESOURCE AREA MANAGEMENT PRIORITY AREAS - ALTERNATIVE B

**MANAGEMENT GOAL: ENHANCE ECOLOGICAL SYSTEMS AND  
CULTURAL VALUES AND COMPATIBLE RECREATIONAL  
OPPORTUNITIES**

- LEVEL 1 - RESTRICTED MANAGEMENT
- LEVEL 2 - CAREFUL MANAGEMENT
- LEVEL 3 - ACTIVE MANAGEMENT
- LEVEL 4 - OPEN MANAGEMENT
- UTILITY CORRIDORS
- CONSIDERED ACECs
- SPLIT ESTATE LANDS
- 200-FOOT INTERVAL CONTOUR LINES
- RESOURCE AREA BOUNDARY
- NATIONAL RESERVATION BOUNDARY
- COUNTY BOUNDARY

MAPS DESIGNED AND EDITED BY BLM VERNAL DISTRICT OFFICE





# **Alternative C Forage Production**



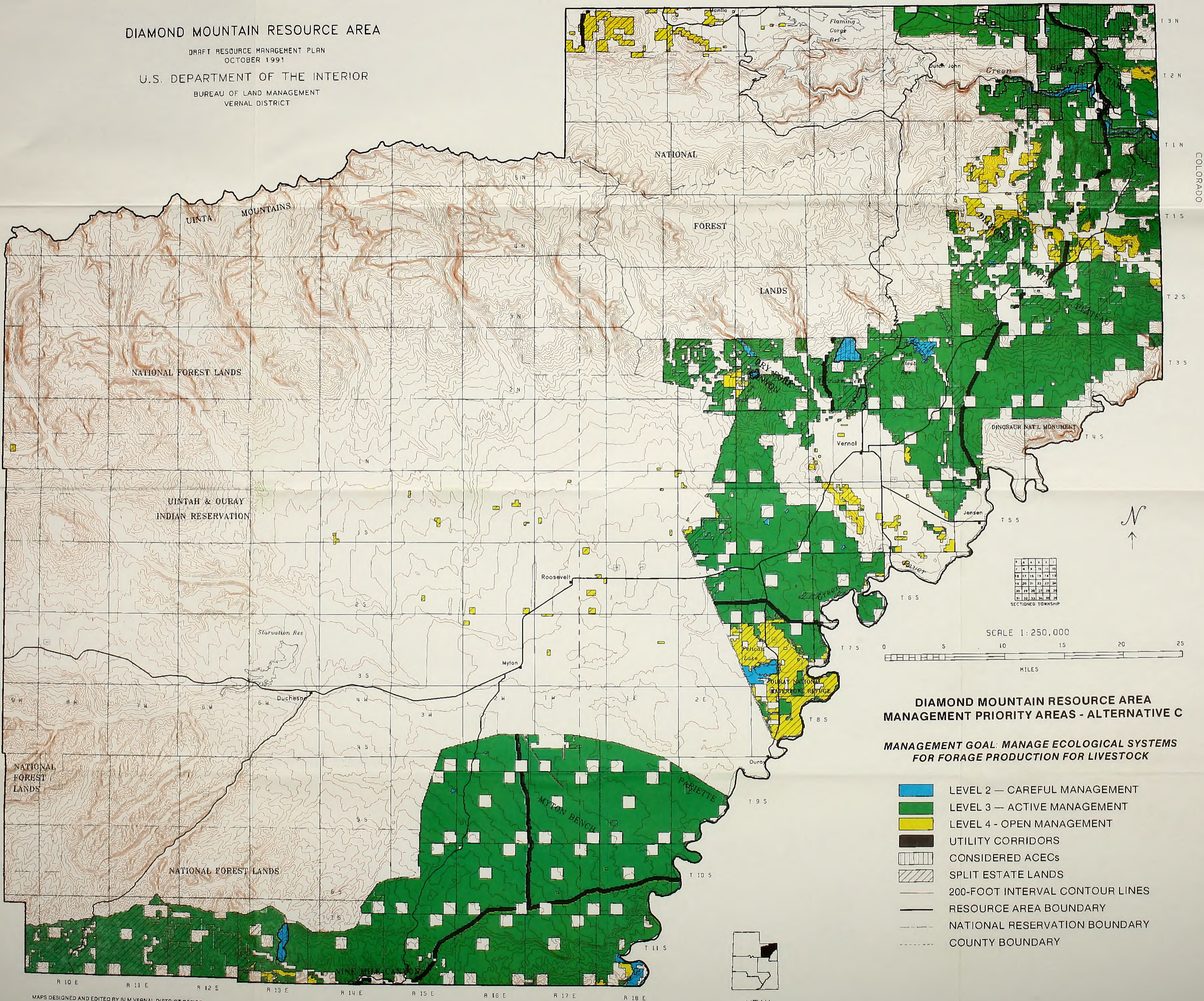
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## DIAMOND MOUNTAIN RESOURCE AREA MANAGEMENT PRIORITY AREAS - ALTERNATIVE C

MANAGEMENT GOAL: MANAGE ECOLOGICAL SYSTEMS  
FOR FORAGE PRODUCTION FOR LIVESTOCK

- LEVEL 2 — CAREFUL MANAGEMENT
- LEVEL 3 — ACTIVE MANAGEMENT
- LEVEL 4 - OPEN MANAGEMENT
- UTILITY CORRIDORS
- CONSIDERED ACECS
- SPLIT ESTATE LANDS
- 200-FOOT INTERVAL CONTOUR LINES
- RESOURCE AREA BOUNDARY
- NATIONAL RESERVATION BOUNDARY
- COUNTY BOUNDARY



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# **Alternative D Development Opportunities**



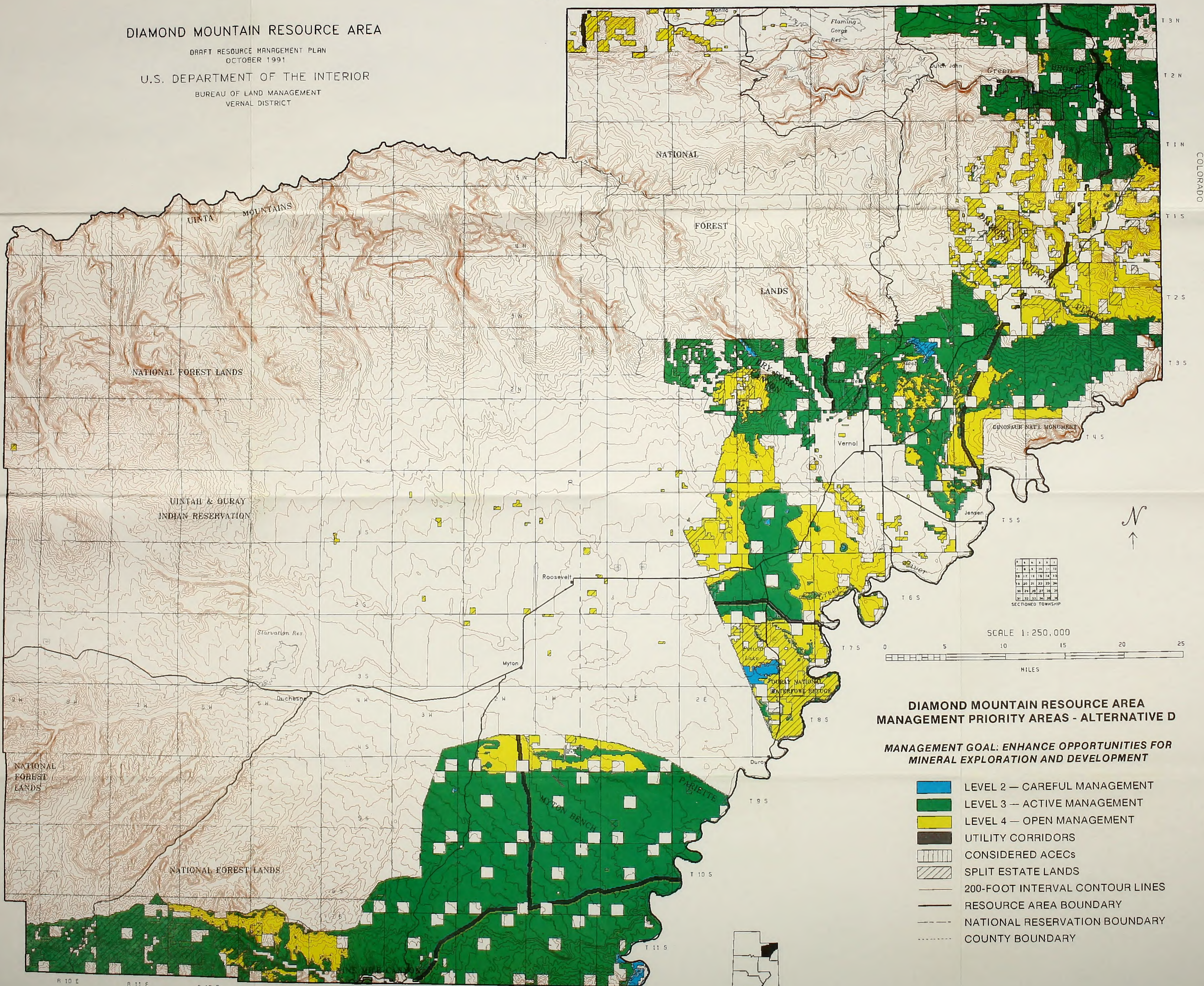
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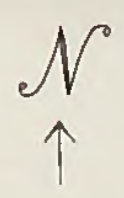
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VERNAL DISTRICT

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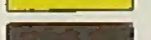
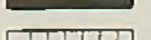

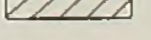
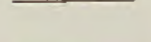
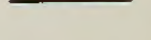
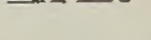
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## DIAMOND MOUNTAIN RESOURCE AREA MANAGEMENT PRIORITY AREAS - ALTERNATIVE D

MANAGEMENT GOAL: ENHANCE OPPORTUNITIES FOR  
MINERAL EXPLORATION AND DEVELOPMENT

-  LEVEL 2 — CAREFUL MANAGEMENT
-  LEVEL 3 — ACTIVE MANAGEMENT
-  LEVEL 4 — OPEN MANAGEMENT
-  UTILITY CORRIDORS
-  CONSIDERED ACCECs
-  SPLIT ESTATE LANDS
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-  RESOURCE AREA BOUNDARY
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**Alternative E  
Preferred Alternative**



# DIAMOND MOUNTAIN RESOURCE AREA

DRAFT RESOURCE MANAGEMENT PLAN  
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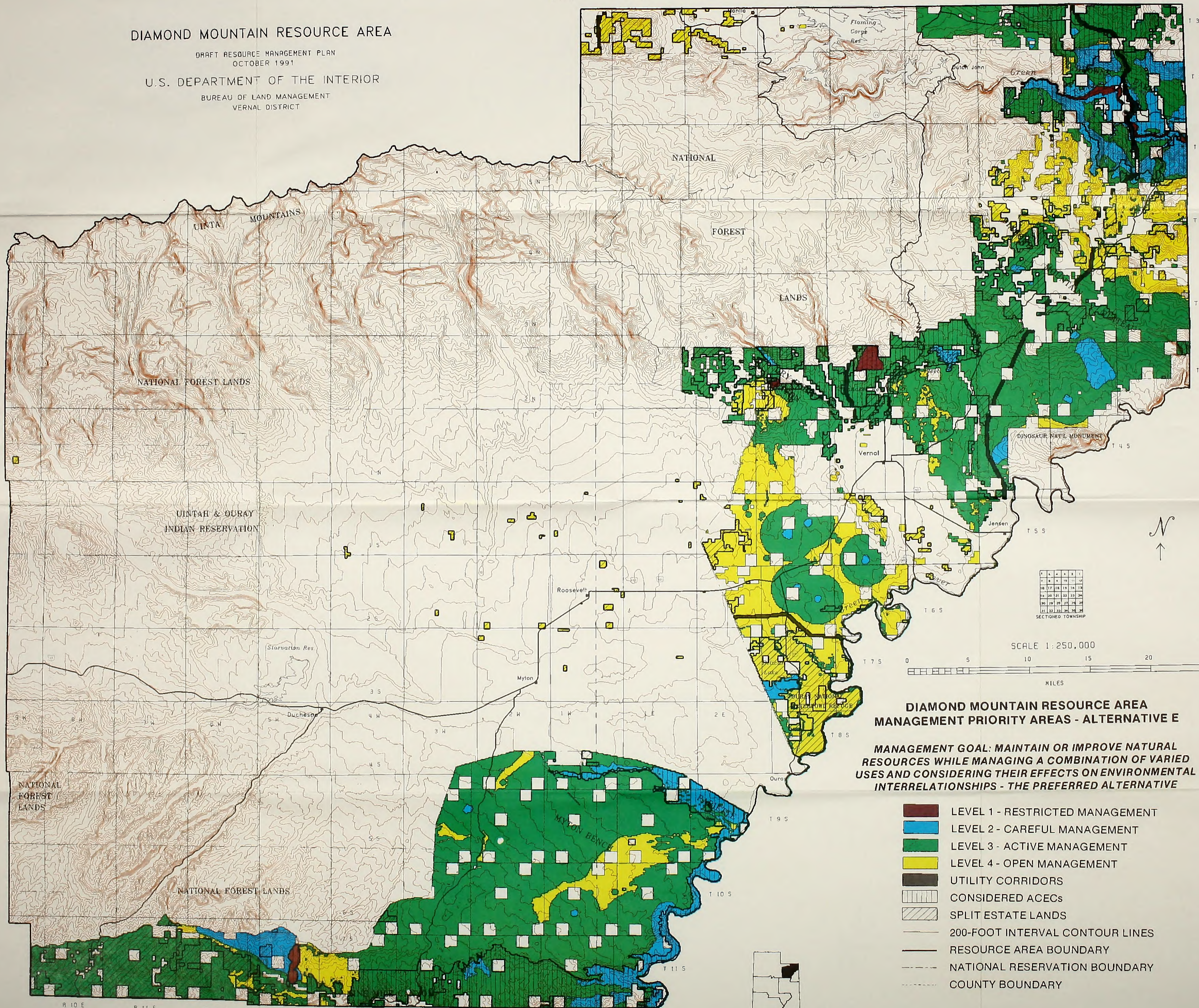
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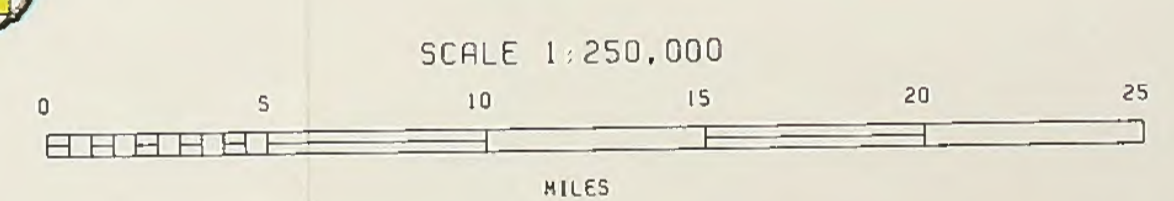
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## DIAMOND MOUNTAIN RESOURCE AREA MANAGEMENT PRIORITY AREAS - ALTERNATIVE E

**MANAGEMENT GOAL: MAINTAIN OR IMPROVE NATURAL RESOURCES WHILE MANAGING A COMBINATION OF VARIED USES AND CONSIDERING THEIR EFFECTS ON ENVIRONMENTAL INTERRELATIONSHIPS - THE PREFERRED ALTERNATIVE**

- LEVEL 1 - RESTRICTED MANAGEMENT
- LEVEL 2 - CAREFUL MANAGEMENT
- LEVEL 3 - ACTIVE MANAGEMENT
- LEVEL 4 - OPEN MANAGEMENT
- UTILITY CORRIDORS
- CONSIDERED ACCECs
- SPLIT ESTATE LANDS
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