Bureau of Land Management
Uncompahgre Field Office
2465 South Townsend Avenue
Montrose, Colorado 81401

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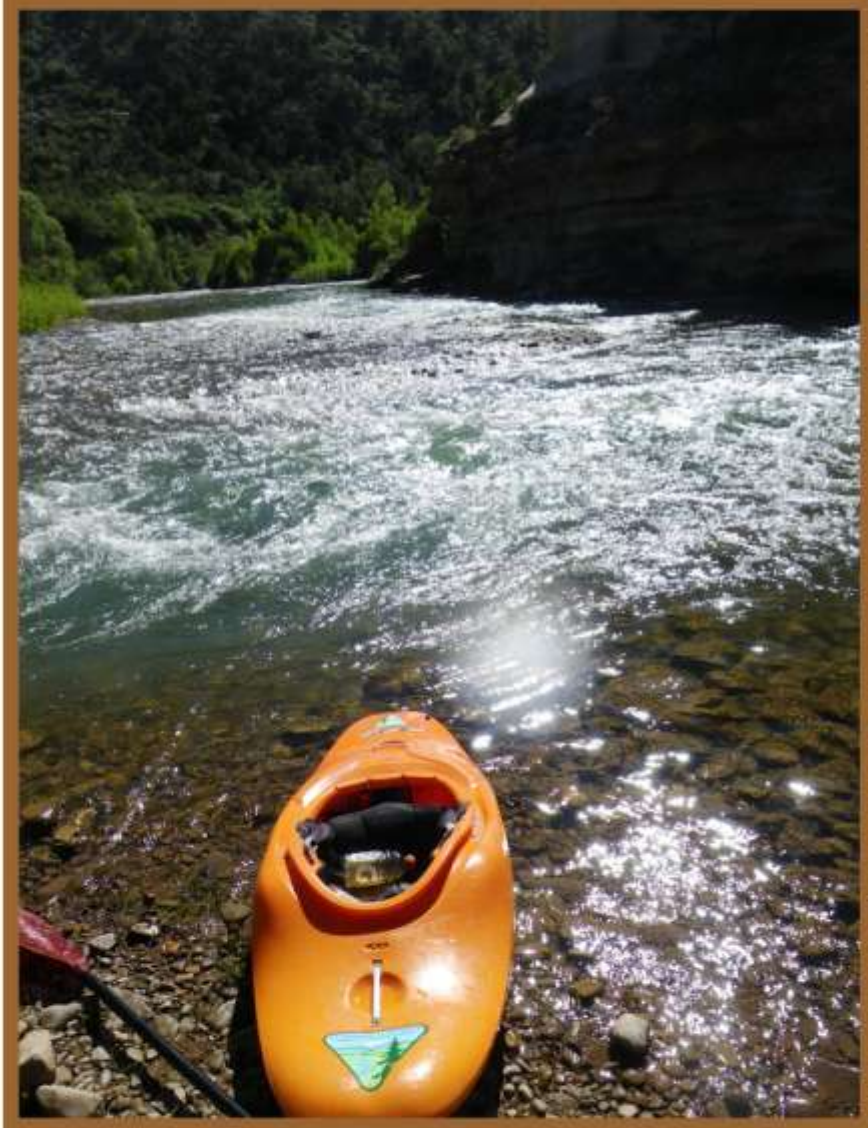

Analysis of the Management Situation

for the BLM Uncompahgre Planning Area

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for the

BLM Uncompahgre Planning Area

Prepared by:
United States Department of the Interior
Bureau of Land Management
Uncompahgre Field Office, Colorado

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Barbara Sharrow
Uncompahgre Field Manager
Montrose, Colorado

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Abbreviations and Acronyms Commonly Used

ABBREVIATION/ ACRONYM	COMPLETE PHRASE
ACEC	area of critical environmental concern
AMP	allotment management plan
AMS	Analysis of the Management Situation
ATV	all-terrain vehicle
AUM	animal unit month
BLM	Bureau of Land Management
BMPs	best management practices
CCR	Colorado Code of Regulations
CDOW	Colorado Division of Wildlife
CDPHE	Colorado Department of Public Health and the Environment
CFR	Code of Federal Regulations
CWQCC	Colorado Water Quality Control Commission
DOE	Department of Energy
DOI	U.S. Department of the Interior
dv	deciview haze index
EA	environmental assessment
EIS	environmental impact statement
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
°F	degrees Fahrenheit
FLPMA	Federal Land Policy and Management Act
FMP	Fire Management Plan
FMU	Fire Management Unit

ABBREVIATION/ ACRONYM	COMPLETE PHRASE
FRCC	Fire Regime Condition Classification System
FWFMP	Federal Wildland Fire Management Policy
FWS	U.S. Fish and Wildlife Service
GGNCA	Gunnison Gorge National Conservation Area
GHG	greenhouse gases
GIS	Geographic Information Systems
IMPROVE	Interagency Monitoring of Protected Visual Environments
LHA	Land Health Assessment
MOU	Memorandum of Understanding
n.d.	no date given
OHV	Off-Highway Vehicle
PSD	prevention of significant deterioration
ROW	right-of-way
SRMA	Special Recreation Management Area
SRP	Special Recreation Permit
TMP	travel management plan
UFO	Uncompahgre Field Office
U.S.	United States
USFS	U.S. Forest Service
USGS	U.S. Geological Survey
VOCs	volatile organic compounds
VRM	visual resource management
WRCC	Western Regional Climatic Center
WSA	Wilderness Study Area
WUI	wildland-urban interface

CHAPTER ONE
Introduction

The United States (U.S.) Department of the Interior (DOI), Bureau of Land Management (BLM) Uncompahgre Field Office (UFO) has initiated the process to develop a resource management plan (RMP) for the Uncompahgre Planning Area (planning area), superseding the two RMPs under which the area is currently managed. The Uncompahgre RMP will govern the use, protection, and enhancement of resources on BLM-administered public lands and federal mineral estate within the planning area by establishing broad land use plan decisions, including goals, objectives, desired outcomes, land use allocations, and standards and guidelines.

An Environmental Impact Statement (EIS) will be prepared as part of the RMP revision. An EIS is a document required by the National Environmental Policy Act for federal government agency actions "significantly affecting the quality of the human environment." A tool for decision making, an EIS describes the positive and negative environmental effects of a proposed agency action and cites alternative actions.

Areas within the planning area administered by other federal agencies, such as the U.S. Forest Service (USFS), U.S. Fish and Wildlife Service (FWS), National Park Service, and other state agencies, such as the Colorado State Land Board, are not the subject of this planning effort. In addition, planning decisions and descriptions in the RMP do not apply to private lands, with the exception of federal minerals that lie beneath private lands (known as split estate).

1.1 Purpose for the Analysis of the Management Situation

This Analysis of the Management Situation (AMS) is a summary document that describes the physical and biological characteristics and condition of resources within the planning area, provides a snapshot of how those resources are currently being managed, and identifies observable and measureable trends in resources and resource uses between past and present.

The AMS represents an early component of the planning process, providing a reference for how a given resource might behave in response to issues presented during RMP development, and should not be regarded as a comprehensive or detailed analysis of specific resources. It is intended to provide a framework from which to resolve planning issues through the development of alternatives.

1.2 Purpose and Need for the RMP Revision

Section 202(a) of FLPMA as amended (43 USC 1701 et seq.) requires the Secretary of the Interior to develop, maintain, and when appropriate, revise land use plans governing the use of public lands. Resource management planning provides the basis for evaluating and communicating public land uses. Using the principles of multiple use and sustained yield, the BLM seeks to maximize resource values for present and future generations.

The UFO currently operates under the guidance of two RMPs. The San Juan/San Miguel RMP was finalized in September 1985, and the Uncompahgre Basin RMP went into effect in July 1989. Since the dissolution of the Montrose District, the San Juan/San Miguel RMP has been in use by both the UFO and the San Juan Public Lands Center (of the BLM Dolores Field Office). The San Juan Public Lands Center is in the draft stages of revising the portion of the San Juan/San Miguel RMP that falls under their jurisdiction.

While the Gunnison Gorge National Conservation Area (GGNCA) lies within the UFO, a separate RMP was completed for this area in 2004. Approximately one-half of the newly designated Dominguez-Escalante National Conservation Area (NCA) lies within the UFO and will also operate under a separate RMP. The two NCAs will not be addressed within the Uncompahgre RMP.

BLM lands managed under the Uncompahgre Basin RMP (excluding those within the GGNCA and Dominguez-Escalante NCA) will be combined with lands managed under the San Juan/San Miguel RMP (excluding those within the BLM Dolores Field Office) to form the Uncompahgre Planning Area (planning area).

The planning area has experienced many changes since the two existing RMPs were first implemented. Management is becoming more complex due to the emergence of new issues of national significance, as well as heightened controversy surrounding certain existing issues. Increased oil, gas, and uranium activity, recreation demands, impacts from a growing population and urban interface, and pressures on wildlife and land health are among the many challenges to be addressed.

1.3 ☀ Overview of Planning Area, Resources, and Programs

The planning area for the Uncompahgre RMP is comprised of the UFO, excluding the GGNCA and the Dominquez-Escalante NCA, and is bordered on the west by the BLM Moab Field Office (in Utah); on the north by the BLM Grand Junction Field Office and the Grand Mesa, Uncompahgre and Gunnison National Forest; on the east by the BLM Gunnison Field Office and Grand Mesa, Uncompahgre and Gunnison National Forest; and on the south by the BLM Dolores Field Office and the San Juan and Grand Mesa, Uncompahgre, and Gunnison national forests. Black Canyon of the Gunnison National Park and Curecanti National Recreation Area lie within the UFO boundary, as do four Colorado state parks. The planning area is shown in Map 1-1 on page 574.

The planning area lies within portions of the Southern Rocky Mountain and Colorado Plateau ecologic provinces. BLM lands within the planning area range from salt-desert shrub (at 4,701 feet) to alpine forest (at 11,449 feet). The area exhibits the varied topography, geology, soil, flora, and fauna of both provinces, including desert scrub, riparian, sagebrush parks, pinyon-juniper woodlands, mountain shrub, ponderosa pine, and spruce-fir forests. Map 1-2 on page 575 provides a land cover classification of vegetation within the planning area.

The planning area encompasses approximately 3,097,500 acres of federal, state, and private land in six southwestern Colorado counties: Montrose, Delta, Mesa, Gunnison, Ouray, and San Miguel. The population in several of these counties is expected to grow faster than the statewide average over the next 25 years, which will contribute to an expanding urban interface zone. Twenty-five distinct and diverse communities with very different economic bases, values, and resources lie within the planning area boundary, including high end resort communities, farm and ranching communities, coal mining towns, and others. Numerous homes and subdivisions are located within the wildland-urban interface (WUI).

In addition, the planning area is crossed by major power transmission lines that are critical for maintaining service to the entire western United States power grid. Mineral development is also expected to continue at a rapid pace over the next decade, adding to the complexity of managing public lands.

The planning area consists of 675,677 acres of BLM-administered public lands (including surface lands and minerals), as well as 669,309 acres of federal minerals under BLM lands, 1,270,401 acres of federal minerals under other federal land, and 294,952 acres of federal minerals under private, state, and city lands. See Table 1.1 for a complete overview of land status and mineral estate within the planning area.

TABLE 1.1 - LAND STATUS AND MINERAL ESTATE IN THE PLANNING AREA

SURFACE OWNERSHIP/MANAGEMENT	APPROXIMATE ACRES (WITHIN PLANNING AREA)	
BLM	675,677	
Forest Service	1,249,066	
National Park Service	27,127	
State (including Colorado Division of Wildlife)	18,413	
City	885	
Private	1,126,330	
Planning Area	**3,097,498**	
LAND AREA BY COUNTY		
	BLM-Administered	**Total Land Area**
Montrose	447,988	1,182,852
Delta	120,696	598,761
San Miguel	57,231	429,793
Ouray	24,461	344,386
Gunnison	13,352	426,779
Mesa	11,936	111,651
Other Counties	14	3,276
BLM-ADMINISTERED FEDERAL MINERAL ESTATE		
No Federal Minerals	862,836	
[1]All Federal Minerals	2,140,718	
Coal Only	55,577	
Oil and Gas Only	10,996	
Oil, Gas and Coal Only	8,965	
[2]Other	18,406	
Total Federal Mineral Estate	2,234,662	
Under BLM-administered Land	669,309	
Under Other Federal Lands (USFS, NPS)	1,270,401	
Under State, City, or Private Lands	294,952	

[1] All Federal Minerals - The federal government owns rights to all minerals (including coal, oil, gas, uranium, gravel, sand, moss rock)
[2] Other - The federal government owns rights to other minerals, either singly or a combination of other minerals. Other minerals includes uranium, moss rock, gravel, sand, and other minerals not listed in this table.

1.4 ☀ Elements Discussed in this AMS

Planning area resources discussed in this AMS include air quality, geology, soil and water, vegetative communities, fish and wildlife, special status species, wild horses and burros, wildland fire ecology and fire management, cultural and heritage resources, paleontological resources, and wilderness characteristics.

Resource uses within the planning area include managing for livestock grazing, forest and woodland products, energy and minerals, recreation, travel and transportation, utility corridors, communications sites, land tenure, land use authorizations, and withdrawals.

In addition, special designations discussed in this AMS include areas of critical environmental concern, scenic byways, wild and scenic rivers, wilderness areas and wilderness study areas, and special recreation management areas.

Social and economic conditions and characterizations are also discussed, including tribal interests, public safety, and social and economic conditions.

1.5 ☀ Organization of this AMS

Chapter Two provides an area profile, which details the existing condition of resources, resource uses, special designations, and social and economic conditions within the planning area.

Chapter Three describes the current management direction (including objectives and decisions) prescribed by the prevailing RMPs and RMP amendments.

Chapter Four outlines the ability of current management direction to achieve desired conditions and address resource demands and describes management opportunities identified by resource specialists and through public scoping. This chapter provides the basis for formulating management alternatives.

Chapters Five and Six list other plans, mandates, and authorities necessary to consider and coordinate and comply with during the RMP revision.

CHAPTER TWO
Area Profile

The area profile describes the existing condition of resources, resource uses, special designations, and social and economic conditions within the planning area. This chapter incorporates information compiled at multiple levels to provide a context for the resources and their various uses. The information provided here becomes the basis for the Affected Environment chapter of the Uncompahgre Resource Management Plan (RMP) and Environmental Impact Statement (EIS).

THE AREA PROFILE CONTAINS FOUR SECTIONS:

- RESOURCES 20
- RESOURCE USES 149
- SPECIAL DESIGNATIONS 196
- SOCIAL AND ECONOMIC CONDITIONS AND CHARACTERIZATIONS 206

2.1

Resources

THE RESOURCES SECTION INCLUDES:

INDICATORS
Identify factors that describe the condition of a resource

CURRENT CONDITION
Describes the location, extent, and current condition of a resource within the planning area

TRENDS
Describe the degree and direction of change in a resource between the present and some point in the past

FORECAST
Describes predicted changes in the condition of a resource given current management

KEY FEATURES
Describe features that guide land use allocation or management decisions

2.1.1 ☀ Climate, Air Quality, and Noise

INDICATORS AND CURRENT CONDITION

This section describes existing air resource conditions in the planning area, focusing on climate, air quality, and noise.

CLIMATE

The planning area is located in a high plateau continental region of mesas, mountains, and high desert. The climate is characterized by dry, sunny days and clear nights with extreme daily temperature changes. Table 2.1 provides a summary of weather records from seven National Cooperative Observer Network weather stations in the planning area compiled by the Western Regional Climatic Center.

Throughout much of the planning area, average daily winter temperatures range from a low of around 10° Fahrenheit (F) to a high of nearly 40° F. In summer, average daily temperatures range from around 50° F up to 90° F. Higher elevation locations are cooler, with extreme minimum temperatures approaching -40° F, while lower locations are warmer, with extreme maximum temperatures near 110° F.

Monthly precipitation is relatively uniform, with minimum precipitation typically occurring during June, followed by a period of maximum precipitation caused by summer convective thunderstorms. Higher elevation monthly precipitation is more uniform, but contains less moisture in mid-winter snow. Snowfall typically occurs from November through April (and October through May at higher elevations), with light accumulation. However, mountain snowpack can become quite deep, and remain well into spring. In general, total accumulated precipitation throughout the planning area was low in 2000, 2002, and 2003 (which were among the ten driest years on record), with 2006 and 2007 among the ten wettest years on record.

As determined by the Jay Remote Automatic Weather Station located about three miles north of Hotchkiss, Colorado, the regional prevailing wind direction (approximately 22 percent of the time) is from the west and west-southwest. Wind speed is typically highest during spring, but averages only 4.4 miles per hour annually. Calm conditions occur nearly 30% of the time.

TABLE 2.1 - CLIMATE SUMMARY FROM STATIONS WITHIN THE PLANNING AREA

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
CIMARRON, COLORADO (Elevation: 6,900 Feet) Period of Record: 9/1951-12/2007													
Avg Maximum Temperature (°F)	33.8	38.3	47.7	58.6	69.3	80.3	85.3	82.8	75.2	64.2	47.5	35.1	**59.8**
Avg Min Temperature (°F)	0.5	6.0	16.8	24.3	30.9	36.7	43.8	43.2	34.3	24.5	15.2	3.6	**23.3**
Avg Total Inches Precipitation	1.17	0.90	1.01	1.00	1.02	0.84	1.27	1.50	1.56	1.34	0.99	0.97	**13.57**
Avg Total Snow Fall in Inches	14.5	12.2	10.8	4.1	0.6	0.0	0.0	0.0	0.0	0.8	7.7	13.6	**64.2**
Avg Snow Depth in Inches	5.0	6.0	2.0	0	0	0	0	0	0	0	0	3.0	**1.0**
MONTROSE 2, COLORADO (Elevation: 5,690 Feet) Period of Record: 10/1895-12/2007													
Avg Maximum Temperature (°F)	37.8	43.9	53.0	62.4	72.5	83.2	88.5	85.7	77.9	65.7	50.3	39.2	**63.3**
Avg Minimum Temperature (°F)	13.5	19.7	26.6	34.0	42.2	49.7	55.6	53.9	45.7	35.0	23.9	15.2	**34.6**
Avg Total Inches Precipitation	0.57	0.53	0.72	0.86	0.87	0.53	0.86	1.25	1.12	1.04	0.66	0.65	**9.67**
Avg Total Snow Fall in Inches	6.6	4.5	3.8	1.9	0.1	0.0	0.0	0.0	0.0	0.7	2.8	6.9	**27.4**
Avg Snow Depth in Inches	1.0	0	0	0	0	0	0	0	0	0	0	1.0	**0**
NORWOOD, COLORADO (Elevation: 7,020 Feet) Period of Record: 4/1924-12/2007													
Avg Maximum Temperature (°F)	37.4	41.5	48.6	58.0	68.2	78.7	83.8	80.7	73.4	62.1	48.0	38.7	**59.9**
Avg Minimum Temperature(°F)	9.6	14.6	21.8	28.3	35.9	43.7	50.0	48.9	41.8	31.9	20.5	11.9	**29.9**
Avg Total Inches Precipitation	0.95	0.93	1.15	1.23	1.13	0.79	1.87	1.99	1.77	1.59	1.11	0.97	**15.47**
Avg Total Snow Fall in Inches	12.7	10.5	9.9	5.4	0.7	0.0	0.0	0.0	0.1	2.3	7.7	10.9	**60.3**
Avg Snow Depth in Inches	4.0	3.0	1.0	0	0	0	0	0	0	0	1.0	2.0	**1.0**
PAONIA 1 SW, COLORADO (Elevation: 5,580 Feet) Period of Record: 1/1893-12/2007													
Avg Maximum Temperature (°F)	38.6	45.0	53.7	63.0	73.1	83.6	89.2	86.4	77.9	66.6	52.3	40.3	**64.1**
Avg Minimum Temperature (°F)	13.8	20.4	27.5	33.9	41.6	49.2	56.0	54.6	46.7	36.5	26.0	16.2	**35.2**
Avg Total Inches Precipitation	1.22	1.19	1.49	1.37	1.37	0.77	1.08	1.31	1.52	1.63	1.28	1.32	**15.56**
Avg Total Snow Fall in Inches	12.1	9.0	6.4	2.3	0.2	0.0	0.0	0.0	0.1	0.7	4.7	11.7	**47.2**
Avg Snow Depth in Inches	4.0	2.0	0	0	0	0	0	0	0	0	0	2.0	**1.0**

PLANNING AREA CLIMATE SUMMARY (CONTINUED)

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
RIDGWAY, COLORADO (Elevation: 7,000 feet) Period of Record: 5/1982-12/2007													
Avg Maximum Temperature (°F)	39.4	42.9	50.3	57.4	67.8	78.2	82.7	80.4	73.5	62.0	48.3	39.1	**60.2**
Avg Minimum Temperature (°F)	4.8	11.1	19.2	26.2	33.0	38.3	45.0	44.1	35.6	25.1	16.2	6.5	**25.4**
Avg Total Inches Precipitation	0.88	0.88	1.42	1.45	1.50	1.03	2.04	2.28	1.90	1.58	1.42	0.86	**17.25**
Avg Total Snow Fall in Inches	12.9	13.2	15.7	7.2	1.8	0.0	0.0	0.0	0.3	3.8	13.7	14.4	**82.9**
Avg Snow Depth in Inches	4.0	4.0	1.0	0	0	0	0	0	0	0	1.0	3.0	**1.0**
TELLURIDE, COLORADO (Elevation: 8,800 feet) Period of Record: 12/1900-12/2007													
Avg Maximum Temperature (°F)	37.2	39.5	43.4	52.0	61.8	72.3	76.9	74.2	68.8	59.1	46.5	38.1	**55.8**
Avg Minimum Temperature (°F)	5.2	8.4	14.2	22.8	29.9	35.6	41.6	40.9	34.3	25.5	14.9	6.8	**23.3**
Avg Total Inches Precipitation	1.63	1.69	2.17	2.20	1.77	1.17	2.45	2.92	2.13	1.94	1.55	1.54	**23.15**
Avg Total Snow Fall in Inches	27.6	25.4	31.1	21.1	6.5	0.7	0.0	0.0	1.0	9.1	20.7	24.2	**167.3**
Avg Snow Depth in Inches	13.0	16.0	12.0	3.0	0	0	0	0	0	0	3.0	8.0	**5.0**
URAVAN, COLORADO (Elevation: 5,010 feet) Period of Record: 11/1960-12/2007													
Avg Maximum Temperature (°F)	42.7	49.9	58.7	67.6	78.6	89.4	95.5	92.2	83.5	71.4	54.9	43.3	**69.0**
Avg Minimum Temperature (°F)	15.5	22.4	29.2	35.7	44.5	52.4	59.4	58.2	48.4	36.9	26.6	17.9	**37.2**
Avg Total Inches Precipitation	0.88	0.77	1.03	1.01	0.94	0.48	1.19	1.36	1.54	1.51	1.03	0.93	**12.68**
Avg Total Snow Fall in Inches	3.8	0.9	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.7	3.5	**9.6**
Avg Snow Depth in Inches	0	0	0	0	0	0	0	0	0	0	0	0	**0**

(Western Regional Climate Center)

CLIMATE CHANGE

The temperature of Earth's atmosphere is regulated by a balance of radiation received from the sun, minus the amount of that radiation absorbed by the planet and atmosphere. In the atmosphere, greenhouse gases, keep the temperature of Earth warmer than it would be otherwise, and allow the planet to sustain life. While these gases and particles have occurred naturally for millennia, there has been an increase in their atmospheric concentration since the start of the industrial age, contributing to observed climate variability beyond the historic norm.

A 2007 U.S. Environmental Protection Agency (EPA) report indicates that increased atmospheric concentrations of greenhouse gases, as well as land use changes, are contributing to an increase in average global temperature or ***global warming***. This warming is associated with climatic variability (commonly known as ***climate change***) that exceeds the historic norm. Temperature changes and climactic variability are not evenly distributed across the globe. Models and observations indicate that average temperature increases in northern latitudes are greater than in other areas, and seasonal low temperatures are generally increasing faster than high temperatures.

According to the Colorado Water Conservation Board, temperatures in Colorado increased by approximately 2° F between 1977 and 2006. As reported in the 2007 Colorado Climate Action Plan developed by the state of Colorado, climate change effects within Colorado have included:

- shorter and warmer winters with a thinner snowpack and earlier spring runoff
- less precipitation overall with more falling as rain
- longer periods of drought
- more and larger wildfires
- widespread beetle infestations
- rapid spread of West Nile virus due to higher summer temperatures.

In relation to a 1950-1999 baseline, climate models project that Colorado will warm 2.5° F by 2025, and 4° F by 2050. The 2050 projection indicates that summers will warm by +5° F, and winters by 3° F (Colorado Water Conservation Board 2008). Future predicted climate change impacts on Colorado include:

- more frequent and longer lasting heat extremes that stress electrical utility demands
- longer and more intense wildfire seasons
- midwinter thawing and earlier melting of snowpack
- lower river flows in summer months
- water shortages for irrigated agriculture
- slower recharge of groundwater aquifers
- migration of plant and animal species to higher elevations
- more insect infestation in forests.

AIR QUALITY

The federal and state governments have established ambient air quality standards for six criteria pollutants: carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO_2), ozone (O_3), particulate matter smaller than 10 microns in effective diameter (PM_{10}), particulate matter smaller than 2.5 microns in effective diameter ($PM_{2.5}$), and sulfur dioxide (SO_2). The EPA also regulates emissions of oxides of nitrogen (NOx) and volatile organic compounds (VOCs). These compounds are precursors for producing photochemical smog (ozone) and

secondary particulate matter. Ozone (including its NOx and VOC precursors), $PM_{2.5}$, and SO_2 are considered regional air pollutants, typically affecting air quality on a regional scale.

Pollutants such as CO and lead are considered local, typically accumulating close to their emission sources. PM_{10} can be considered both a regional and local air pollutant, depending on the particular circumstance. In addition, long-range transport of NO_2, PM_{10}, $PM_{2.5}$, and SO_2 can contribute to regional visibility degradation, as well as atmospheric deposition at sensitive areas (such as national parks and wilderness areas) many miles downwind of individual emission sources.

EXISTING AIR POLLUTANT EMISSIONS

Air quality in the planning area is affected primarily by emissions from agricultural, urban, and industrial sources, which are quantified on a countywide basis. Table 2.2 on the following page shows the average annual regional air pollutant emissions for five counties in and around the planning area (EPA 2008a).

TABLE 2.2 - AVERAGE ANNUAL AIR POLLUTANT EMISSIONS 1996-2001

COUNTY	EMISSIONS (TONS PER YEAR)					
	CO	NOx	PM_{10}	$PM_{2.5}$	SO_2	VOC
Delta	15,745	1,715	5,563	1,307	135	1,849
Gunnison	15,698	1,063	3,210	1,294	108	1,817
Montrose	22,103	2,902	7,198	2,038	1,565	2,327
Ouray	4,509	320	1,126	321	24	540
San Miguel	6,051	515	1,851	609	33	687

NOTE: Most emissions are non-point and mobile sources; Delta County PM_{10} and $PM_{2.5}$ emissions include an industrial storage/transport facility in operation since 1999; Montrose County NOx, $PM_{2.5}$, and SO_2 emissions include an electric utility facility. (EPA 2008a)

EXISTING AIR QUALITY CONCENTRATIONS

Existing air quality conditions in the planning area can be characterized through use of monitoring data collected in the region. CO, PM_{10}, and $PM_{2.5}$ are the only air pollutants monitored within and near the planning area by the Colorado Department of Public Health and the Environment (CDPHE) Air Pollution Control Division. PM_{10} is sampled in Delta and Telluride, Colorado and $PM_{2.5}$ is monitored in Grand Junction, Colorado. Lead, NO_2, ozone, and SO_2 have been measured in the Denver metropolitan area for several years by CDPHE. In addition, CDPHE began monitoring ozone in Cortez, Palisade, and Rifle, Colorado during

2008. As part of the Clean Air Status and Trends Network program (found online at <http://www.epa.gov/castnet/>), the EPA measures gaseous ozone and SO_2 at the Rocky Mountain Biological Laboratory in Gothic, Colorado. Over the course of the week, air is drawn at a controlled flow rate through a three-stage filter pack mounted atop a 10-meter tower to collect particulate and gaseous air pollutants.

PM_{10} and $PM_{2.5}$ (including speciated chemistry, such as lead and SO2) are also sampled at the Aspen Mountain Ski Area (White River National Forest) by the Interagency Monitoring of Protected Visual Environments (IMPROVE) Program. IMPROVE helps federal land managers from the BLM, NPS, USFS, FWS, and EPA, and regional-state organizations protect visibility at 156 Class I Areas (national parks and wilderness areas) as required by the Clean Air Act.

Since most of the planning area is rural, actual air quality is likely to be cleaner than that measured in towns, and especially cleaner than the Denver metropolitan area. The entire planning area is classified as attainment or unclassified (with the exception of the Telluride PM_{10} maintenance area), indicating current compliance with all applicable National Ambient Air Quality Standards. At one time Telluride was in violation of PM_{10} air quality standards, primarily due to smoke emissions from local wood stoves. Those emissions have been reduced so that the town is now in compliance. However, proposed (direct or authorized use) BLM activities within the Telluride PM_{10} maintenance area must be structured to comply with EPA General Conformity Regulations. None of the site-specific air quality monitoring stations has measured any exceedance of National Ambient Air Quality Standards in the past five years.

AIR QUALITY-RELATED VALUES

In addition to stations within and outside the planning area, air quality-related values are monitored by the Clean Air Status and Trends Network, IMPROVE, the National Atmospheric Deposition Network/National Trends Network, and the Mercury Deposition Network. Mesa Verde National Park has the most complete program, including monitoring by each of these networks. Both Clean Air Status and Trends Network and National Atmospheric Deposition Network monitors are located at the Rocky Mountain Biological Laboratory in Gothic, Colorado. Another National Atmospheric Deposition Network sampler is located on Molas Pass in the San Juan National Forest. Additional IMPROVE monitors are located at the Aspen Mountain Ski Area in the White River National Forest and the Weminuche Wilderness Area in the San Juan National Forest.

Individual sensitive lake chemistry samples are taken primarily by the USFS. Sensitive lake chemistry sampling is conducted at three lakes in the Maroon Bells-Snowmass Wilderness Area, eleven lakes in the Weminuche Wilderness Area, and at one lake each in the Raggeds and West Elk wilderness areas.

Atmospheric Deposition Trends

According to the Gothic monitor, there appears to be a slight reduction in total (dry plus wet) sulfur deposition, but no strong trend in total nitrogen deposition. At Mesa Verde National Park, total sulfur deposition is decreasing, while total nitrogen is increasing. In addition, Mesa Verde showed an increase in total mercury deposition (EPA 2008b).

Visibility Trends

IMPROVE groups visibility trends by ***best days*** (20 percent clearest), ***mid days*** (within 20 percent of the mean), and ***worst days*** (20 percent haziest) throughout the monitoring record. Higher optical extinction (haziest) conditions are reflected by higher values on the deciview haze index. Mid and best days at Mesa Verde National Park generally have not changed over time, while days classified as worst have degraded. In the Weminuche Wilderness Area, both mid and worst days have improved, with the best days remaining clean. In the White River National Forest, worst days have improved, with no strong trend in mid and best days. (Overall, the White River site has been clearer than other sites.)

Sensitive Lake Chemistry

Both the U.S. Geological Survey (USGS) and the USFS periodically collect water quality samples from water bodies sensitive to atmospheric deposition. The primary indicator is acid-neutralizing capacity, which represents the ability of a water body to be acidified by precipitation containing sulfuric and nitric acids. Although no sensitive lakes are located in the planning area, several are located in nearby wilderness areas.

NOISE

TABLE 2.3 - NOISE TERMINOLOGY

TERM	DEFINITION
A-Weighted Decibel (dBA)	An overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear
Community Noise Equivalent Level (CNEL)	The energy average of the A-weighted sound levels occurring during a 24-hour period with 5 dB added to the A-weighted sound levels occurring during the period from 7:00 p.m. to 10:00 p.m. and 10 dB added to the A-weighted sound levels occurring during the period from 10:00 p.m. to 7:00 a.m.
Day-Night Level (Ldn)	The energy average of A-weighted sound levels occurring during a 24-hour period, with 10 dB added to the A-weighted sound levels occurring during the period from 10:00 p.m. to 7:00 a.m.
Sound	A disturbance created by a vibrating object, which, when transmitted by pressure waves through a medium such as air, is capable of being detected by a receiving mechanism, such as the human ear or a microphone

Measuring Sound

Noise is unwanted sound, including sound that is loud, unpleasant, unexpected, or otherwise undesirable. Sound measurement equipment has been designed to adjust the actual sound pressure to correspond with human hearing. A-weighted correction factors de-emphasize very low and very high frequencies of sound in a manner similar to the response of the human ear. Therefore, the A-weighted decibel (dBA) is a good correlation to a human's subjective reaction to noise. The dBA measurement is based on a logarithmic scale of sound pressure. Assuming 60 dBA is the noise level experienced in normal conversation with two people standing five feet apart, a noise of 50 dBA would be half as loud, and a noise of 70 dBA would be twice as loud. For humans, a change in sound level of 3 dB is generally just noticeable when the intruding noise is of a similar character to the background noise (such as an increase in existing traffic noise), and a change of ±5 dB would clearly be noticeable. However, when the intruding noise is of a different character than the background noise (such as a motorcycle within existing car traffic), a noise level increase of less than 1.0 dBA could be discernible.

Noise Levels in the Planning Area

The planning area is sparsely populated, with few major towns or industrial facilities. Although ambient noise level measurements are not available, locations such as the planning area typically have relatively low noise levels, in the range of 35 to 50 dBA, depending on wind conditions. As described below, noise levels near roadways, businesses, industrial and construction sites can be considerably louder than natural background levels. Within the planning area, it is anticipated that most noise would occur near major roadways, within communities, and close to industrial operations (especially natural gas pipeline compressor stations.) However, current inventories regarding the types, locations, and ambient noise levels are not currently available.

Noise Sources in the Planning Area

Common sources of noise in the planning area are likely to include:

- vehicular traffic (including the use of off-highway vehicles) on roadways
- recreational use of off-highway vehicles (OHVs)
- stationary equipment used for fluid minerals (oil and gas) exploration and development, including compressors and pumping stations
- heavy trucks hauling supplies to, and removing products and waste from, remote oil and gas wells.

Other noise sources in the planning area include non-motorized recreational use, noise from natural sources (such as wildlife, wind, and thunder), equipment from private agricultural activities, and aircraft overflights. Noise from traffic can vary widely depending on the volume, speed, and size of vehicles. Motorcycles and off-road recreational vehicles traveling on unpaved roads and trails generally produce lower hourly-average noise levels, but the short-term peak noise can be high and disruptive to nearby recreationists and

wildlife. Noise from ATVs and other motorized recreational vehicles varies greatly depending on the age, condition, make, and model. Table 2.4 provides examples of noise levels generated by common sources in the planning area.

TABLE 2.4 - TYPICAL NOISE LEVELS (DBA)

NOISE SOURCE	AVERAGE NOISE	RANGE OF NOISE
Ambulance siren (100 feet)	100	95-105
Motorcycle (25 feet)	90	85-95
Typical construction site	85	80-90
Single truck (25 feet)	80	75-85
Urban shopping center	70	65-75
Single car (25 feet)	65	60-70
Within 100 feet of a highway	60	55-65
Normal conversation (5 feet apart)	60	57-63
Residential area during day	50	47-53
Recreational area	45	40-50
Residential area at night	40	37-43
Rural area during day	40	37-43
Rural area at night	35	32-37
Quiet whisper	30	27-33
Threshold of hearing	20	17-23
Data Source: (Crocker and Kessler 1982)		

2.1.2 Geology

INDICATORS

Geologic resources are defined through descriptions of the surficial and bedrock geology and stratigraphy of the planning area. Geologic information is used to evaluate the potential development of mineral resources, as well as to regulate land uses based upon slope stability and accessibility issues. Several geologic type localities and areas of paleontologic significance occur within the planning area.

CURRENT CONDITION

SURFICIAL AND BEDROCK GEOLOGY

Much of the planning area lies within the Colorado Plateaus physiographic province, which is characterized by dissected plateaus with strong relief. Surface geology consists mainly of sedimentary rocks ranging in age from Paleozoic (230-600 million years) to Cenozoic (present to 63 million years). Map 2-1 (on page 576) depicts the generalized surface geology. Paleozoic and Mesozoic sedimentary rocks are most common in the western third of the planning area, while Mesozoic and Cenozoic sedimentary rocks dominate the northern and central portions. Cretaceous shales are common in the northern and central part of the area, and are generally less resistant to erosion than rocks in the Uncompahgre Plateau.

The structural geology of the planning area consists of the following main features presented from southwest to northeast. Map 2-2 (on page 577) presents the major geologic structures within the western portion of the planning area. Paradox Basin synclines and anticlines transition into the uplifted Uncompahgre Plateau. The Montrose Syncline lies toward the northeast, while the Gunnison Uplift lies to the east. The southern portion of the Piceance Basin lies to the north of these two features.

The northern portion of the planning area lies within the southern Piceance Basin in western Colorado. The Piceance is a broad, southeast-northwest trending structural and topographic basin bordered by the White River Uplift to the east, the West Elk Mountains to the southeast and south, the Uncompaghre Uplift to the southwest, the Douglas Creek Arch to the west-northwest, the Yampa Plateau to the north, and the Axial Basin Uplift to the northeast (Dunn 1972).

The Piceance Basin encompasses 3,900 square miles of exposed Tertiary rocks. The Tertiary-Cretaceous contact forms a nearly continuous outcrop along the basin margins.

The basin is asymmetric, with gently dipping beds along the southwest flank and steeply dipping beds along the northeast flank, which form the Grand Hogback. The axis of the basin parallels the Grand Hogback in the central part of the basin, while in the northern and southern portions of the basin, the axis is bifurcated due to basinward-plunging anticlinal features (Dunn 1972).

Deposition of sediments into this region began with downwarping of the Piceance Basin floor during the Cretaceous, and continued through the Eocene. Low stream gradients and moderate uplift of the marginal mountains prevented significant erosion of the basin's perimeter. This sequence of events resulted in the deposition of the Wasatch, Green River, and Uinta formations in and around a series of landlocked lakes (Bradley 1964). The Tertiary Wasatch Formation is one of the main surface formations along the northern planning area boundary.

The planning area contains stratified rock units ranging in age from late Paleozoic through middle Tertiary. The following discussion of the stratigraphy describes the rock units from youngest to oldest.

Tertiary

Igneous

Several Laramide-age intrusive igneous rock units are located around the planning area. One unit is found in the northeast corner, while others are located towards the southern boundary. These Late Cretaceous-Early Tertiary rocks are generally of granitic composition.

Wasatch Formation

The sedimentary Tertiary section consists of the Wasatch Formation (Paleocene-Eocene), which unconformably overlies the Cretaceous Mesaverde Group throughout the basin. The Wasatch Formation may reach a maximum thickness of 5,500 feet, making this the thickest Tertiary stratigraphic sequence in the planning area. In the southern and eastern portion of the basin, the Wasatch Formation has been subdivided from top to bottom into the Shire, Molina, and Atwell Gulch members. The Shire Member has variegated siltstone, claystone, and sandstones. The Molina Member is dominated by massive, cross-stratified sandstone. The basal Atwell Gulch Member is composed of variegated siltstone and claystone (Donnell 1961).

Basal Conglomerate

The base of the Tertiary section is comprised of a conglomerate formerly called the Ohio Creek Formation, which overlies the Upper Cretaceous Williams Fork (Hunter Canyon) Formation of the Mesaverde Group.

Cretaceous

Cretaceous-age rocks are extensive in the area. Thicknesses range from 6,000 to 10,000 feet. The Cretaceous section is characterized by complex interfingering of marine and continental strata. The environments of deposition were mainly marine in the eastern part

of the Piceance Basin and mainly continental in the western part. Nine principal marine transgressions and regressions have been recognized. The seas were mostly transgressive in the early Cretaceous and early parts of the Late Cretaceous, and then mostly regressive throughout the remaining portion of the Late Cretaceous (Kellogg 1977). Cretaceous units are exposed at the surface and incised by numerous canyons in the UFO.

From youngest to oldest, Cretaceous rocks consist of the Mesaverde Group, Mancos Shale, Dakota Sandstone, and the Burro Canyon Formation.

Mesaverde Group

The Mesaverde Group overlies the Mancos Shale and consists of in descending order: Hunter Canyon Formation, Mount Garfield Formation (Rollins Member, Cozzette Member, and Corcoran Member), and Sego Sandstone (Johnson 1979). The Hunter Canyon Formation and the upper part of the Mount Garfield Formation consist of fluvial channel-formed sandstone that is locally conglomeratic and interbedded with siltstone, claystone, and carbonaceous shale. The members of the Mount Garfield Formation consist of laterally extensive marine sandstone interbedded with paludal organic rich shale, carbonaceous claystone, and coal. The Cozzette Member also contains marine shale. The Sego Sandstone consists of laterally extensive marine sandstone.

Mancos Shale

A thick interval of Mancos Shale, interbedded with natural gas-producing sandstones and sandy siltstones overlies the Dakota Sandstone.

Dakota Sandstone

The Dakota Sandstone varies from 30 to 150 feet thick and consists of brown and yellow fluvial sandstone and conglomerate as well as interbedded green, gray, and black mudstones (Hintze 1988). Some of the sandstones are interbedded with siltstone, claystone, and thin coal seams. These coal seams are commonly impure, bony, and discontinuous. The ash content reaches 30% in many of these coals and individual bed thicknesses range from two to 15 feet (Gloyn and others 1995). Sandstone from this formation may also be locally suitable for building or aggregate for road construction and maintenance.

Burro Canyon Formation

The Burro Canyon Formation is the basal Cretaceous unit found in the area, and varies from 50 to 180 feet thick (Hintze 1988). It consists of brown and gray fluvial sandstone and conglomerate in its lower half, while thin beds of dense gray limestone and variegated green and purple mudstones comprise its upper half (Gloyn and others 1995). It interfaces with the underlying Morrison Formation, but is unconformably overlain by the Dakota Sandstone.

Jurassic

Jurassic sediments in the planning area were deposited in a variety of continental environments, ranging from eolian (massive wind-blown sandstone) to fluvial (interbedded sandstone, shale, and siltstone) to lacustrine (freshwater limestone). From youngest to

oldest, these sediments comprise the Morrison Formation, the San Rafael Group, and the Glen Canyon Group (Hintze 1988).

Morrison Formation

While the Jurassic Morrison Formation consists of various members, not all are present in the planning area. The Morrison Formation is host to extensive uranium deposits. The Salt Wash Member, particularly its upper portion, is the most prolific uranium-producing horizon in the Morrison, and hosts small to large uranium deposits in channel sandstones (Wood 1968; Woodward-Clyde 1982; Gloyn and others 1995). This member consists of brown lenticular fluvial sandstone interbedded with red mudstone, and with thin gray limestone at its base. It varies from zero to 550 feet thick (Hintze 1988). The youngest member of the Morrison Formation is the Brushy Basin Member. It ranges from 200 to 440 feet thick and consists of brown, bentonitic mudstone and brown, conglomeratic sandstone (Hintze 1988). The bentonite is derived from a voluminous amount of volcanic ash, carried to depositional sites by north and northwesterly flowing paleo-streams (Turner-Peterson and others 1986).

San Rafael Group

Within the planning area, the San Rafael Group includes the Entrada Sandstone, and Wanakah Formation (Hintze 1988). The Entrada Sandstone is recognized as a predominantly non-marine, cross-stratified sandstone and siltstone. The Wanakah Formation (formally known as the Curtis and Summerville formations) ranges up to 200 feet thick (O'Sullivan 1996). The lower part of the formation consists of thin-bedded red mudstone and gray and yellow sandstone, while the upper portion is a marine glauconitic sandstone (Gloyn and others 1995).

Glen Canyon Group

In the planning area, the Jurassic Glen Canyon Group consists of Wingate Sandstone, the Kayenta Formation, and Navajo Sandstone. The Wingate consists of massive, gray-orange to red-brown, eolian, cross-bedded sandstone. It overlies the Chinle Formation unconformably and varies from approximately 250 to 650 feet thick (Hintze 1988). The Kayenta Formation varies from 0 to 340 feet thick, thinning to the southeast (Hintze 1988; Gloyn and others 1995). It is a very fine to fine-grained, irregularly bedded, locally conglomeratic, fluvial sandstone, siltstone, and shale. It also contains beds of mudstone and lacustrine limestone (Gloyn and others 1995).

Triassic

Lower Triassic-age sediments in the planning area are characterized by thick, red, clastic sequences deposited in a variety of near-shore environments (Gloyn and others 1995). The Chinle Formation rests unconformably on the Moenkopi Formation.

Chinle Formation

The Chinle Formation's depositional regime ranged from fluvial, floodplain, and lacustrine continental environments (Woodward-Clyde 1982). The formation consists of red, brown, and gray sandstone, conglomerate, and red, purple, and green-gray mudstone (Hahn and Thorson 2002). These deposits form distinctive upper red and lower green units. In Utah, the Moss Back and Shinarump Members of this formation are host to a large number of uranium deposits that have supported small to medium-sized mining operations in the past (Wood 1968; Gloyn and others 1995).

Moenkopi Formation

The Moenkopi Formation consists of chocolate-colored, fluvial, deltaic, and coastal deposits that include silty, micaceous shale interbedded with sandstone and limestone.

Pennsylvanian - Permian

Cutler Formation

The Cutler Formation is a red shale, siltstone, and arkosic sandstone and conglomerate exposed southeast of the Uncompahgre Plateau along Cutler Creek near Ouray and west of Telluride, Colorado. Later workers subdivided the Cutler into a coarse arkosic member near the Uncompahgre Plateau, and a number of the fine-grained members in the Paradox Basin. The Cutler Formation is of late Pennsylvanian to Permian age, and based on stratigraphic relationships and vertebrate fossils, was deposited as an alluvial fan complex along the western margin of the ancestral Uncompahgre Uplift (Wengerd 1958).

Pennsylvanian

Hermosa Formation

The oldest sedimentary formation is found in the western portion of the planning area. Here the Hermosa Formation outcrops in the center of the Paradox Valley. During Pennsylvanian time, sediments filled accommodation space created by the rapidly subsiding Paradox Basin. Thousands of feet of evaporites, carbonates, and black shale constitute the Hermosa. Flowage of these evaporitic rocks formed prominent structural anticlines and fractures in overlying sediments. At depth, these Pennsylvanian strata, particularly the Paradox Member, are potential hosts to potash deposits (Wengerd 1958).

Precambrian

The oldest rocks are located within entrenched drainages in the planning area near the crest of the Uncompahgre Plateau, and within the Black Canyon of the Gunnison and Gunnison Gorge National Conservation Area. These exposures are Precambrian basement rock of granite, quartzitic gneiss, mica schist, amphibolite, and migmatite. In places, granodiorite has intruded these ancient metamorphic rocks. In addition, many light-colored dikes and irregular masses of coarse-grained pegmatite form a conspicuous network of igneous intrusions throughout the canyon areas (Kellogg 2004).

GEOLOGIC HAZARDS

Unstable slopes occur on hillsides and cliffs, and in areas that are susceptible to landslides, mudflows, rockfalls, or accelerated creep of slope-forming materials. Unstable slopes occur naturally and are widespread in the planning area. Most unstable slopes consist of weathered sedimentary strata and/or recent colluvium deposits that move downhill due to gravity. Unstable slopes can be active or inactive. Slope failure can be initiated by natural events or human actions. Natural factors contributing to slope instability include weathering and erosion, changes in the hydrologic characteristics of a hillside, loss of vegetation cover, earthquakes, and the slow natural deterioration of slope strength. Artificial factors that can undermine slope strength include cut and fill operations, blasting, vehicular traffic, excessive irrigation, the alteration of surface drainages, and the removal of vegetation cover.

Mass Movement

Mass movement is a dynamic process that can be activated by earthquakes, rapid snowmelt, intense rainstorms, or gravity. Whereas mass movement plays a major role in the evolution of a hillslope by modifying slope morphology and transporting material from the slope to the valley, it also poses a potential natural hazard. The ability to predict the location and volume of transported mass on potentially unstable slopes is critical in assessing mass movement hazards and hillslope evolution. A promising approach is to examine the relationship of area, volume, length, height, and width of existing movements through ratio quantification (Regmi et al 2008).

The Paonia-McClure Pass area of western Colorado has a zone of mass movement. A technical study using aerial photographs and field surveys mapped 683 movement features covering approximately 600 square kilometers. The area of movement is classified as 29% debris flows, 26% rockslides, 23% debris slides, 15% soil slides, and 7% highway and forest road-influenced landslides (Regmi et al 2008). Future hazard analysis will produce landslide hazard zone maps that the BLM can use in planning efforts.

TRENDS

An increased understanding of area geology can be expected as more knowledge is gained through oil and gas exploration and drilling, as well as from geologic mapping.

FORECAST

The gathering of additional subsurface geologic information should continue at a rapid pace over the next decade in relation to oil, gas, coal, and uranium-vanadium exploration and

development. The BLM, USGS, and Colorado Geological Oil and Gas Conservation Commission will contribute new information to the geologic understanding of the area.

KEY FEATURES

Sound geologic information is critical for effective planning for development of mineral resources. Some areas have been identified as having multiple mineral deposits located at varying subsurface depths. For example, areas designated for potential coal or uranium development also include natural gas reserves. The mineral resources are located closer to the surface and are underlain by natural gas-producing strata. Different operators may pursue development of both of these resources independently. Geologic information should be gathered and shared to improve planning for development of other mineral resources and natural gas production. Two key locales include the North Fork area, where coal, coal bed methane, and natural gas production co-exist, and the west end of Montrose County, where uranium and natural gas may occur together.

2.1.3 Soil Resources

INDICATORS

Soils within the planning area are largely a product of the local geologic parent material, climatic conditions, and topographic position on the landscape. Sedimentary sandstone and shale formations occupy much of the area's surface geology.

SOIL COMPOSITION

The inter-bedded sandstone and shale units of the Dakota and Morrison formations dominate the surface over much of the planning area, and weather to produce sandy and fine sandy loam textured soils. Mancos Shale is the primary shale formation, which characteristically weathers to produce fine-textured, silty clay loam soils. Additionally, the Mancos Shale is a marine-deposited evaporite—a sediment resulting from the evaporation of ancient water bodies—and as a result, often contains excessive levels of selenium (a non-metallic chemical element) and a variety of dissolvable salts, both of which can degrade water quality in receiving streams when mobilized by wind or water processes.

Deeper soils with little rock content are typically found within the interior portion of mesa tops and alluvial valleys, while shallow rocky soils are found along mesa rims and the side slopes of canyons. Classified according to soil order, the soils commonly found within the planning area include:

- ***Aridisols*** (from dry climate regimes) and ***Entisols*** (with very limited soil development), found primarily in low-elevation, more arid portions of the planning area, and containing little organic matter throughout their vertical profile
- ***Alfisols*** (with high levels of subsoil development) and ***Mollisols*** (with darkened, organic matter enriched surfaces), which are predominant at higher elevations.

SOIL SURVEYS

A soil survey describes the characteristics of the soils in a given area, usually as a survey unit within a county within a county. Soils are classified according to a standardized system, and soil boundaries are plotted on a map, using aerial photographs as a base. Soil surveys help to make predictions about how a particular soil might behave, as well as its potential uses. The information collected in a soil survey aids in evaluating and predicting the effects of various land uses on the environment when developing land use plans. Order 3 soil surveys have been completed for the planning area, which describe and assess soil resources down to the phases of a soil series and delineations on the ground ranging from six to 640 acres.

Three surveys conducted by the U.S. Department of Agriculture Natural Resources Conservation Service describe soil resources in the planning area: ***Soil Survey of Paonia Area, Colorado*** (including parts of Delta, Gunnison, and Montrose counties), ***Soil Survey of Ridgway Area, Colorado*** (including parts of Delta, Montrose, Gunnison and Ouray counties), and ***Soil Survey of San Miguel Area, Colorado*** (including parts of Dolores, Montrose and San Miguel counties). Two public land parcels within the planning area have not been surveyed. Soils in a 12,000-acre parcel adjoining USFS lands along the northern planning area boundary on the west side of the Uncompahgre Plateau in Mesa County have been field surveyed but not yet compiled and finalized into a soil survey report. The second parcel is 1,000 to 1,500 acres, and is located in the vicinity of High Park Lake in the Big Cimarron drainage. An issue limiting access to this area has prevented field work necessary to complete the survey.

FRAGILE SOILS

For the purposes of this RMP, ***fragile soils*** include soils with a high potential for supporting biological soil crust, soils with elevated levels of salinity (dissolvable salts) and/or selenium, soils prone to erosion by wind or water, and soils prone to impacts from drought conditions.

The local climate, landscape position, land uses, and soil properties largely dictate the density and composition of vegetation cover over most of the planning area. Vegetation cover and plant litter are important components for maintaining a healthy soil surface. At higher elevations in the planning area, mountain shrub and ponderosa pine vegetation communities provide soil surface cover, usually at relatively high densities. At lower elevations, pinyon-juniper and sagebrush communities dominate coarser-textured, non-saline soils, while salt desert shrub communities occur on saline, shale-derived soils.

Biological Soil Crust (BSC)

In lower elevation areas with sparse plant cover, BSC provides another important soil cover component. BSC is comprised of a complex mosaic of green algae, lichens, mosses, cyanobacteria, and other bacteria (BLM 2001), and serves many beneficial functions to protect and enhance soil productivity, including acting as a stabilizer to inhibit erosion of surface soils. BSC is most prevalent in portions of the planning area that receive below 14 inches of annual precipitation, and on terrain with less than a 25% slope. In areas receiving higher than 14 inches of annual precipitation, competition from vascular plants reduces the occurrence of BSC, and on terrain with greater than a 25% slope, erosional forces act to minimize the establishment of BSC. While soil texture and chemistry can also be factors in determining the density and composition of BSC communities, field inventories to define these differences have not been completed, and were not used to identify soils having a high potential for BSC. Within the planning area, approximately 254,853 acres of soil have been identified as having a high potential for supporting BSC (as shown in Table 2.5 and Map 2-3 on page 578).

Saline Soils

Map 2-4 (on page 579) shows the occurrence of 107,175 acres of saline geologic units (primarily of Mancos Shale and the Paradox Formation) in the planning area. Saline soils are commonly coincident with these strata. However, salinity concentrations in the surface soils vary according to site-specific topography, local climate, and the geologic member that weathered to produce the soil. Shale in steep badland areas generally exhibits higher surface salinity concentrations than valley fill or outwash, shale-derived soils. Within badland areas, southerly and westerly hill slope aspects have higher surface salinity levels than more northerly aspects. Salinity concentrations also tend to be higher in more arid portions of the planning area.

Wind and Water-Eroded Soils

As shown in Table 2.5, the potential for soil erosion from wind or water action varies across the planning area. While less than 1% of soils in the planning area have a high potential to be eroded through wind action, about 18% have high potential for erosion by water, due to steep topography and the physical characteristics of the soil. Known as the "K" or erodibility factor, it represents both the susceptibility of soil to erosion, as well as the rate of runoff. Map 2-5 on page 580 shows areas susceptible to wind erosion, while Map 2-6 on page 581 shows areas susceptible to water erosion.

Drought-Affected Soils

Drought-affected soils have a low capacity to retain water in the root zone of the soil profile (calculated as a soil depth of 40 inches or a limiting layer). Within the planning area, approximately 15% of soils have a high potential to be affected by drought conditions as shown in Table 2.5 and Map 2-7 on page 578. The criteria used to determine these fragile soil delineations were developed in 2008 by William Ypsilantis.

TABLE 2.5 - FRAGILE SOILS IN THE PLANNING AREA

SOIL ATTRIBUTE	LOW POTENTIAL	MODERATE POTENTIAL	HIGH POTENTIAL
Wind Erosion	249,749	375,942	1,125
Water Erosion	285,898	140,389	120,406
Drought Affected	207,122	319,283	100,429
Saline			107,175
Biological Soil Crust			254,853

Total acreage within and between each soil attribute and under BLM management varies as a result of the specific set of soil units rated by the Natural Resources Conservation Service.

COLORADO STANDARDS FOR PUBLIC LAND HEALTH

BLM Colorado finalized ***Standards for Public Land Health and Guidelines for Livestock Grazing in Colorado*** in March 1997. The BLM applies these standards to public lands on a landscape scale to help describe a landscape's potential, various uses, and the conditions needed to sustain land health. The five Colorado Standards (shown in Appendix A) are described in two parts: 1) A statement that describes conditions relating to the potential of a landscape, followed by 2) a series of indicators that help define the standard and are observable on the land. ***Colorado Land Health Standard 1*** identifies the characteristics and standards for healthy soil resources.

FIGURE 2.1 - COLORADO PUBLIC LAND HEALTH STANDARD 1

Upland soils exhibit infiltration and permeability rates that are appropriate to soil type, climate, land form, and geologic processes. Adequate soil infiltration and permeability allows for the accumulation of soil moisture necessary for optimal plant growth and vigor, and minimizes surface runoff.

Indicators:

- Expression of rills and soil pedestals is minimal
- Evidence of actively eroding gullies (eroding channels) is minimal.
- Canopy and ground cover are appropriate.
- There is litter accumulating in place and is not sorted by normal overland water flow.
- There is appropriate organic matter in the soil.
- There is a diversity of plant species with a variety of root depths.
- Upland swales have vegetation cover or density greater than that of adjacent uplands.
- There are vigorous, desirable plants.

Beginning in 1998, the BLM directed its field offices to assess all public lands within their jurisdiction against these standards over a ten-year period. The findings are documented in annual reports known as ***land health assessments*** (LHA). BLM staff completed the first ten-year cycle of LHAs for the UFO during the winter of 2008-2009. Soil results for the planning area are summarized in Table 2.6 in the Current Conditions section. Site-specific soil evaluations for each LHA are on file at the Montrose Public Lands Center.

The BLM has developed guidelines or Best Management Practice (BMPs) for both recreational activities (BLM 2000) and livestock grazing (BLM 1997) to help achieve conditions expressed by the land health standards. LHA findings and livestock management guidelines are used to develop terms and conditions for grazing permit renewals, with the

intention of achieving healthier soil resources where problem areas exist. Some of the more common conditions used to benefit soils include:

- Manage livestock to prevent the establishment of invasive weeds (many invasive weeds are annual plants that provide poor soil surface protection).
- Conduct regular use supervision checks (allowing for quick identification and action to reverse livestock management problems).
- Defer livestock use for the first two years following vegetation treatments.
- Limit grazing use to 50% of annual forage production.
- Limit grazing duration to fifteen days on spring and summer pastures.
- Require permittees to submit actual use grazing records within fifteen days of off date. (Actual use can vary significantly from permitted use, and knowing actual use will allow for improved livestock management in the future.)
- Limit grazing to spring or fall use, and preferably alternate the season of use in successive years.
- Manage ongoing recreational activities in the UFO, including outcomes from draft travel management plans, in accordance with established recreation guidelines (BLM 2000). Recreation guidelines for achieving healthy soils include:
    - Manage recreational activities to maintain sufficient vegetation on upland areas to protect the soil from wind and water erosion and to buffer temperature extremes.
    - Minimize disturbances and manage recreation use in riparian areas to protect vegetation, fragile soils, springs, and wetlands.
    - Plan and locate routes, trails, and developments away from riparian and wetland areas, and highly erosive soils.
    - Reduce stream crossings to the minimal number dictated by topography. Reduce sedimentation and compaction associated with stream crossings.

BMPs to benefit soil health are also found in the ***San Juan/San Miguel Resource Management Plan*** Oil and Gas Plan Amendment, Controlled Surface Use Stipulations, which include:

> Prior to surface disturbance on slopes of or greater than 40 percent, an engineering/ reclamation plan must be approved by the Authorized Officer. Such plans must demonstrate how the following will be accomplished:

- Site productivity will be restored.
- Surface runoff will be adequately controlled.
- Off-site areas will be protected from accelerated erosion such as drilling, gullying, piping, and mass wasting.

- Surface-disturbing activities will not be conducted during extended wet periods
- Construction will not be allowed when soils are frozen.

CURRENT CONDITIONS

LAND HEALTH ASSESSMENTS

Soil resources on lands within the planning area were rated in one of three categories based upon Land Health Standard 1: 1) Meeting the standard, 2) Meeting the standard with problems, or 3) Not meeting the standard. The soil rating for each LHA unit is shown in Table 2.6 below.

The ***meeting the standard with problems*** category implies that less than half of the assessment sites within a soil polygon had a soil indicator rating of less than satisfactory, but overall, the soil condition in the polygon was meeting the standard.

The most common soil indicators resulting in rankings of ***meeting the standard (but) with problems*** or ***not meeting the standard*** were:

- high levels of bare-exposed soil surface
- low densities of live-perennial plant basal cover
- low amounts of plant litter cover
- high levels of annual-invasive weed species
- the presence of gullied (incised) stream channels.

The causal factors for not meeting the soil standard were also numerous, but often were determined to be caused by:

- poor follow-up management of vegetation treatments
- historic livestock grazing
- historic wildfire suppression
- proximity to private lands.

TABLE 2.6 - LHA SOIL SUMMARY RATINGS FOR THE PLANNING AREA

LAND HEALTH ASSESSMENT[1]	YEAR	AREA SOILS (IN ACRES)		
		Meeting	Meeting but with Problems	Not Meeting
East Paradox	1999	70,354	6,115	1,559
North Delta	2002	39,896	30,132	1,554
Mesa Creek	2004	59,931	50,507	1,005
Roubideau	2005	45,905	45,186	9,616

LAND HEALTH ASSESSMENT[1]	YEAR	AREA SOILS (IN ACRES)		
		Meeting	Meeting but with Problems	Not Meeting
Norwood	2006	82,971	15,768	730
North Fork	2007	31,833	28,399	1,472
Colona	2008	39,754	8,864	2,394
West Paradox	2009	53,281	15,240	0
TOTAL ACRES		**423,925**	**200,211**	**18,330**

[1]Gunnison Gorge National Conservation Area was surveyed in 2001, but is not part of the planning area.

SALINITY AND SELENIUM

The Colorado River Basin Salinity Control Act (Colorado River Water Quality Office, Bureau of Reclamation) directs the BLM to minimize salt contributions to the Colorado River system from BLM-administered lands. The UFO has been managing some areas dominated by Mancos Shale to minimize salinity yields since the early 1980s. The Elephant Skin Wash Salinity Control Pilot Project was implemented by the BLM in 1984, in what was then part of the UFO. The project site is now managed as part of the Gunnison Gorge National Conservation Area (GGNCA). The purpose of the project was to test the effectiveness of off-channel storage structures in capturing and retaining salinity, and preventing it from entering larger receiving streams. Two of four sites targeted for structures were completed and maintained into the early 1990s, at which time monitoring data was compiled and evaluated. Conclusions from this effort were that although the structures were effective at capturing and retaining salinity, the initial project cost and required, frequent maintenance exceeded the salinity benefits. Additionally, sites suitable for structural projects are limited, and without routine monitoring and treatment, invasive weeds become a problem.

Most recent salinity management efforts in the UFO have concentrated on non-structural controls, such as managing soil surface-disturbing activities such as livestock grazing and OHV use to minimize salinity yields. Additionally, potential salinity yields from realty actions such as land exchanges are assessed and minimized. Recently completed LHAs identify areas where soils are meeting (but) with problems or not meeting Public Land Health Standard I (as shown in Table 2.6). The LHAs also identify causal factors for less than satisfactory soil ratings, and specify actions needed to correct problem areas. Adding terms and conditions to grazing permit renewals has been the most commonly used tool aimed at improving surface conditions on saline soils.

The Gunnison Basin Selenium Task Force is a group of private, local, state, and federal interests committed to finding ways to reduce selenium in affected waterways in the Gunnison Basin, while maintaining the economic viability and lifestyle of the Lower

Gunnison River basin of Western Colorado. The ***Water Resources*** section of this AMS explains the water quality implications of excessive selenium levels in the Gunnison Basin. Since high concentrations of selenium occur in Mancos Shale and soils derived from this formation, land management practices and actions that reduce soil surface disturbance and deep-water percolation minimize the yield of selenium offsite, much like salinity management. The UFO has been coordinating with the Selenium Task Force to develop BMPs to minimize selenium yields from management activities on public lands.

FLOOD HAZARD AREAS AND CONTROL MEASURES

Prime or Unique Farmlands and Residential Development

Four categories of farmlands are federally regulated by the U.S. Department of Agriculture under the Farmland Protection Policy Act: (1) Prime farmlands, (2) Unique farmlands, (3) Farmlands of statewide importance, and (4) Farmlands of local importance. Impacts from federal actions on public lands to farmlands identified as prime or unique are required to be analyzed and disclosed to the public during development of an RMP/EIS. In addition, the USDA delineates ***important farmlands*** as those having soils that support the crops necessary for the preservation of the nation's domestic food and other supplies, specifically the capacity to preserve high yields of food, seed, forage, fiber, and oilseed with minimal agricultural amendment of the soil, adequate water, and a sufficient growing season.

There are no farmlands of national or statewide importance on public lands within the planning area. However, according to a 1980 report by the Soil Conservation Service, irrigated and prime irrigated lands of statewide importance occur in the Uncompahgre, North Fork, Surface Creek, and Smith Fork drainage basins, most of which are situated at low elevations on valley floors. In several locations, tributaries that drain onto these farmlands have their headwaters on public lands within the planning area. Historically, flood events originating on public lands within the planning area have resulted in damage to farmland and associated canals and laterals operated by the Uncompahgre Valley Water Users Association.

Within the planning area, two flood control retention structures are located in the Shavano Valley and in the Roatcap drainage west of Olathe. These structures currently function to help mitigate flood damage to valley bottom farmland. Although these two facilities provide flood protection for their respective drainages, other drainages in the planning area remain free flowing. The soil surface and hydrologic condition of these watersheds influences the amount of runoff and sediment produced during flood events. A recent effort by Montrose County and the Colorado Geological Survey to identify flood/debris flow hazard areas on private lands in eastern Montrose County was conducted in part to help assess future land use proposals. Map 2-8 (on page 583) shows flood hazard areas within the planning area.

Population growth and the subdividing and development of historic farmland and rangeland along the lower boundaries of the planning area have created an additional and progressively increasing problem, especially in the Uncompahgre Valley. Occasionally, residential

developments occur in outwash areas or on alluvial fans, and may experience rare flood and debris events of high magnitude from intermittent drainages with headwaters on public land. Since most of these flood hazard areas have not been identified as floodplains, the county land use department has allowed such development to occur. The recent identification of these areas should aid Montrose County in making land use decisions with this flood potential in mind, and provide the BLM with locations of high priority watersheds that should be managed in the future to meet Public Land Health Standards.

TRENDS AND FORECAST

Effectiveness monitoring of areas reveals that soil problems will be an important part of the adaptive management approach, ensuring that land management actions are appropriate for a particular site. At present, guidelines for both recreation and livestock grazing are used to develop appropriate site management activities. LHAs identify causal factors (including activities in addition to grazing and recreation) responsible for soils not meeting Public Land Health Standard 1. In the future, management guidelines or BMPs should be developed for all significant land use activities that have the potential to prevent soils from meeting Public Land Health Standards.

While BMPs for mineral and energy development activities help to minimize soil surface disturbance, projected increases in both uranium (concentrated in the western portions of the planning area) and natural gas extraction (concentrated in the northeastern and western portions of the planning area) indicate that there is potential for additional soil disturbance and accelerated rates of erosion.

BLACK SHALE TERRAINS

A five-year scientific research effort conducted in the GGNCA by the USGS in partnership with the BLM and Bureau of Reclamation has resulted in a broad array of scientific findings about Mancos Shale. The primary focus was to assess how soil surface-disturbing activities affect physical, chemical, and biological processes on the diverse terrain. The research included examining and describing the stratigraphy and chemistry of individual members of the Mancos Shale, soil chemistry (including salinity and selenium), hill slope erosion processes, and area botany, as well as completing a rainfall/runoff analysis in a variety of landscape positions. Although the research was conducted in the GGNCA, the intent of the effort was to identify attributes of Mancos Shale that were applicable to similar black shale landscapes outside of the GGNCA. These areas could include all or portions of public land in the planning area dominated by Mancos Shale (as shown in Map 2-1 on page 576). Soil resources are not depicted for the GGNCA, which operates under its own RMP.

Ongoing and future land management actions aimed at reducing salinity, selenium, and erosion emanating from areas dominated by Mancos Shale include:

- developing and implementing BMPs from the BLM/USGS Mancos Shale research findings applicable to livestock management, recreation management (e.g. location and limitations of OHV use areas), rights-of-way, and other surface disturbing activities
- continuing efforts to locate, assess, and remove hundreds of non-functional, eroding earthen check dams in Mancos Shale areas north of Delta
- continuing to identify and minimize potential salinity and selenium yield increases from future land uses that could occur on exchanged or disposed of parcels of BLM-administered land.
- continuing to collaborate and coordinate salinity and selenium management activities with both the Colorado River Basin Salinity Control Forum and the Gunnison Basin Selenium Task Force.

TRAVEL MANAGEMENT PLANNING

Soil resources across the planning area should benefit from the ongoing preparation and implementation of travel management plans (TMP). Both the Dry Creek and UFO-wide TMPs propose to eliminate open, off-route travel with motorized and mechanized vehicles. With current and projected increases in OHV use in the planning area, eliminating off-route use would benefit the condition of soil surfaces, protective vegetation, and soil supports such as BSC. While limiting OHV use to existing travel routes as proposed in the UFO-wide TMP would provide some protection to soil resources, the Dry Creek TMP will provide an even greater benefit by identifying designated OHV routes. Not only will some existing routes be closed and rehabilitated, but a trail maintenance plan and seasonal restrictions will be implemented when drought or excessively wet conditions occur. Benefits to resources will be realized by enforcing allowed uses on designated routes, implementing more intensive site management of rock crawling areas, and promoting ethics of responsible land use through public education programs.

PREDICTED CHANGES IN CLIMATE

Many prominent climatologists are predicting some change to the near term future climate of Colorado. A recent report, ***Climate Change in Colorado 2008***, analyzes past and present climate data, and makes a forecast that southwestern Colorado will experience warmer temperatures in the coming decades. The report summarizes potential issues for land and water managers in response to the forecast, concluding that increasing temperatures would:

- raise evapotranspiration by plants
- lower soil moisture
- alter growing seasons
- alter disturbances such as wildland fire and insect outbreaks
- shift existing plant communities to higher elevations.

Although difficult to predict, impacts to the health of the soil surfaces could occur from a changing climate, and could include reduced vigor of native plant communities that provide needed soil surface protection, higher levels of bare, exposed surface soil, and higher densities of annual invasive weed species (which are unreliable for providing a protective soil cover). These changes could affect most if not all of the soil resources in the planning area, but would likely be most pronounced for the drought-affected soils shown in Map 2-7 (on page 582).

KEY FEATURES

FUTURE PLANNING CONSIDERATIONS

Several soil-related issues in the planning area should be considered in future land management planning, including land management activities where soil surface disturbance could result in onsite loss of plant productivity and off-site water quality impacts from sediment.

Minimize Erosion and Concentrations of Selenium and Salinity

Some soil units have a higher erosion capacity than others, typically resulting from physical characteristics of the soil and landscape position. Map 2-6 on page 581 shows the location of soils throughout the planning area that have either a low, moderate, or high capacity to erode from water. Most Mancos Shale soil units have high erosion potential, but also contain excessive levels of salinity and selenium, which can be transported to local streams and rivers from deep-water percolation and the same processes that erode these soils. Selenium is a Gunnison Valley/Grand Valley water quality issue due to its potential impact on the reproductive capacity of certain warm water, native fishes. Salinity is a Colorado River Basin-wide water quality issue that impacts many water uses (including irrigation, industrial, and municipal) primarily in the lower Colorado River basin.

Reduce Disturbance of BSC

Impacts to the soil surface can also disturb and reduce the occurrence of BSC, an important erosion protection component of soils throughout the planning area. Map 2-3 (on page 578) shows locations within the planning area with potential for BSC. BSC are most prolific on soils that receive less than 14 inches of annual precipitation and have a high component of sand in their texture. However, the USGS/BLM research effort found a significant BSC component on soils derived from Mancos shale, including the harsh environment of south aspect hill slopes. The BSC potential of affected soils should be assessed in future management decisions regarding activities such as livestock grazing, OHV use, and realty actions to minimize impacts where possible.

Minimize Flood Potential

Additionally, many small, low order drainages throughout the planning area discharge from public onto private lands—commonly farm or rangeland, but occasionally residential developments. Future management of these watersheds should consider minimizing the flood potential by maintaining adequate watershed cover (vegetation, vegetation litter, and BSC) and a healthy soil surface.

Minimize Drought Impacts

Soils with low water holding capacity and high potential for impact from dry and droughty conditions constitute approximately 15% of the UFO (as shown in Map 2-7 on page 582). During drought conditions, land uses in these areas should be modified in order to minimize impacts to vegetation and soil surfaces. These areas should also be a priority when monitoring for drought-impacted resources.

2.1.4 Water Resources

INDICATORS

WATER QUANTITY

The planning area includes portions of seven major hydrologic units (as shown in Table 2.7 below and Map 2-9 on page 584). Over 66% of the planning area is within the Lower Gunnison, San Miguel, and Uncompahgre river basins.

TABLE 2.7 - MAJOR HYDROLOGIC UNITS IN THE PLANNING AREA

HYDROLOGIC UNIT	4TH LEVEL HUC[1]	BLM ACRES	PERCENTAGE OF AREA
Lower Dolores River	14030004	55,681	8%
Upper Dolores River	14030002	95,999	14%
San Miguel River	14030003	211,790	31%
North Fork Gunnison River	14020004	59,084	9%
Uncompahgre River	14020006	127,916	19%
Lower Gunnison River	14020005	108,208	16%
Upper Gunnison River	14020002	15,841	2%

[1]HUC – Hydrologic Unit Code developed by the U.S. Water Resources Council to delineate and catalog the drainage basins of the United States.

Climate

The planning area is situated within portions of two ecoregions: the Colorado Plateaus and the Southern Rockies (EPA 2005). About 90% of BLM-managed public land in the planning area lies within the Colorado Plateaus Ecoregion. Most area streams originating in this ecoregion exhibit intermittent or ephemeral flow regimes, due to the semi-arid climate. Many higher order streams that headwater at high elevations in the Southern Rockies Ecoregion exhibit perennial flow. Additionally, much of the planning area in the Colorado Plateaus Ecoregion is dominated by sedimentary sandstones and shales, which characteristically intercept stream flow, resulting in a losing stream (a stream that gradually loses flow as it progresses downstream). Stream flow records for a number of planning area streams are on file at the Montrose Public Lands Center.

The annual precipitation over the planning area varies from less than eight inches on lands around Delta, Colorado to more than 25 inches on higher elevation lands at the headwaters

of the North Fork of the Gunnison, Uncompahgre, and San Miguel River Basins. Table 2.8 below and Map 2-10 (on page 585) show public land distribution across the planning area by amount of annual precipitation. The data indicates that 68% of the planning area receives 15 inches or less of precipitation annually, and less than 0.5% of the area receives more than 25 inches.

TABLE 2.8 - ANNUAL PRECIPITATION IN THE PLANNING AREA

FOURTH LEVEL HYDROLOGIC UNITS	ANNUAL PRECIPITATION (IN INCHES)				
	<10	10 - 15	>15 - 20	>20 - 25	>25
Lower Dolores River		43,091	8,820	3,496	274
Upper Dolores River		87,180	8,750		
San Miguel River		156,482	36,417	18,261	631
North Fork Gunnison River		10,336	40,078	7,240	1,430
Uncompahgre River		68,915	55,792	3,137	72
Lower Gunnison River	18,366	69,334	17,372	2,440	517
Upper Gunnison River		1581	11254	2694	312
Total Acres	18,366	436,919	178,483	37,268	3,236

Source: PRISM Group at Oregon State University. June 2006.

Runoff and Flood Potential

Large drainages with headwaters at higher elevations experience high flows from spring snowmelt, which can last for several weeks. Baseflow in these drainages occurs from late summer through February or March. In all area drainages, high magnitude, short duration floods can occur in summer months due to high intensity, short duration precipitation events associated with southwest monsoonal airflow. The frequency and magnitude of these events is highly variable from year to year. Localized flooding from these events can be significant in ephemeral channels, as floodwaters commonly contain large amounts of accumulated vegetation debris and sediment. Additionally, watershed characteristics such as size, shape, slope, orientation, watershed cover condition, and soils can affect the magnitude of flood peaks produced by localized summer storms.

Planning area soils have been evaluated by the Natural Resources Conservation Service for their capacity to infiltrate water, and categorized into one of four Hydrologic Soil Groups (as shown in Map 2-11 on page 586 and Table 2.9). Category A and B soil groups have higher infiltration capacities and produce low amounts of runoff during storm events, while the inverse occurs with categories C and D. Over 73% of planning area soils falls into Categories C and D, having high runoff potential.

TABLE 2.9 - HYDROLOGIC SOIL GROUP RATINGS FOR THE PLANNING AREA

HYDROLOGIC SOIL GROUP	DESCRIPTION	BLM ACRES
A	Soils having a high infiltration rate even when thoroughly wetted (estimated range of water infiltration 1.00 – 8.30 inches/hour)	1,564
B	Soils have a moderate infiltration rate when thoroughly wetted (estimated range of water infiltration 0.50 – 1.00 inches/hour)	169,767
C	Soils have a slow infiltration rate when thoroughly wetted (estimated range of water infiltration 0.17 – 0.50 inches/hour)	115,841
D	Soils have a very slow infiltration rate when thoroughly wetted (estimated range of water infiltration 0.02 – 0.17 inches/hour)	339,645

Source: Natural Resources Conservation Service

High magnitude flood events commonly originate from public lands on the eastern side of the Uncompahgre Plateau, due to the northeast drainage orientation, direction of storm travel, and soils with high runoff potential, as well as small watershed size and linear shape, which allow for rapid runoff concentration. Map 2-8 on page 583 shows areas of private land along the boundary with public land in eastern Montrose County that experience flooding, some of which originates on public lands. This flooding situation and related issues are further addressed in the preceding Soils section of this AMS.

Floodplains along some reaches of higher order rivers, such as the San Miguel, Dolores, Uncompahgre, North Fork of the Gunnison, and Lower Gunnison, are mapped by the Federal Emergency Management Agency. In reaches that are not incised, lower order streams without a delineated floodplain are commonly considered to include the extent of the riparian zone bordering the channel. The floodplain width on these streams is partially determined by the degree of valley confinement, but even at downstream locations within the planning area, floodplains typically extend less than 50 feet from active channel banks.

Water Rights

Water on public lands managed by the BLM is protected by several means. The State of Colorado produces monthly resumes listing all new applications for water rights. These resumes are reviewed by BLM staff to ensure that waters on public land are not impacted. In some cases, legal opposition to water rights is filed with the state through the U.S. Department of Justice in order to minimize or prevent harm to resources. Additionally, in cases where valid and existing rights-of-way involve privately held water rights on public lands, terms and conditions are commonly implemented to protect resources and values.

WATER QUALITY

Federal and State Guidelines

The Colorado Water Quality Control Act gives authority to the Colorado Water Quality Control Commission (CWQCC) to classify and assign numeric standards to state waters.

State waters are classified according to present beneficial uses, or beneficial uses that may be reasonably expected in the future. Beneficial use classifications include aquatic life, recreation, agriculture, and various uses of water supplies. Numeric standards are assigned in order to define allowable concentrations of various parameters under the following categories: physical and biological, inorganic and metals. Water quality classifications and numeric standards for surface and downstream receiving waters in the planning area are contained in the Commission's Regulation No. 35, ***Classifications and Numeric Standards for Gunnison and Lower Dolores River Basins*** (CWQCC 2007). It is BLM policy that agency projects shall meet or exceed water quality standards established by the State of Colorado for all water bodies located on or influenced by BLM-administered lands.

Surface waters where water quality standards are not being met are identified on Colorado's 303(d) list of impaired waters or on the Monitoring and Evaluation list (CWQCC 2008). The Monitoring and Evaluation list identifies river and stream segments that are suspected of being impaired, but existing data is insufficient to make an absolute determination. Several stream segments within the planning area appear on both lists (as shown in Tables 2.10 and 2.11).

Compliance with the Clean Water Act requires Colorado to prioritize 303(d) listed waters, and prepare a Total Maximum Daily Load Assessment calculating the maximum quantity of a pollutant that may be added to a water body from all sources, including point sources, nonpoint sources, and natural background sources, without exceeding the applicable water quality criteria for that pollutant. The assessment quantifies the amount of a pollutant that an impaired water body can assimilate from future sources without violating applicable water quality standards.

In addition to state water quality classifications and numeric standards, all surface waters in Colorado are subject to ***The Basic Standards and Methodologies for Surface Water*** (CWQCC 2007), which states in part that: state surface waters shall be free from substances attributable to human-caused point or nonpoint source discharge in amounts, concentrations or combinations that:

- can settle to form bottom deposits (such as silt and mud) detrimental to the beneficial uses.
- are harmful to the beneficial uses or toxic to humans, animals, plants, or aquatic life.
- produce a predominance of aquatic life.

The intention of this narrative standard is to address and prohibit water quality degradation from excessive sediment, nutrients, or toxic compounds.

TABLE 2.10 - COLORADO 303(D) LIST OF IMPAIRED WATERS IN THE UFO

WATER SOURCE	IMPAIRMENT	PRIORITY
Gunnison River, Uncompaghre River to Colorado River	Selenium	High
North Fork of Gunnison from Black Bridge above Paonia to confluence with Gunnison River	Selenium	High
Leroux Creek, Jay Creek	Selenium	High
Big Creek, Short Draw	Selenium	High
Cottonwood Creek, Big Gulch	Selenium	High
Uncompahgre River, Red Mountain Creek to Montrose	Cadmium, Copper, and Iron	High
Uncompaghre River, La Salle Road to Confluence Park	Selenium	High
Uncompaghre River, Confluence Park to Gunnison River	Selenium	High
Tributaries to Uncompahgre River, South Canal to Gunnison River	Selenium	High
Dolores River from Little Gypsum Valley bridge to Colorado/Utah border	Iron	High
Sweitzer Lake	Selenium and Dissolved Oxygen	High

TABLE 2.11 - STATE-MONITORED UFO WATERS WITH SUSPECTED IMPAIRMENTS

WATER SOURCE	SUSPECTED IMPAIRMENT
Gunnison River from confluence with Uncompaghre River to Colorado River	Sediment
Tongue Creek and Ward Creek	Selenium
Surface Creek, Coal Gulch, Hawksnest Creek, Gribble Gulch, and Cottonwood Creek (tributary to North Fork of Gunnison)	Iron
Ridgway Reservoir	Temperature/Dissolved Oxygen
Uncompaghre River Highway 90 to confluence with Gunnison River	Sediment
Billy Creek, Onion Creek, and Alkali Creek (tributary to Uncompahgre River)	Selenium
Dry Creek Watershed (from East and West Forks to Coalbank Canyon Creek)	Sediment

BLM Colorado Standards for Public Land Health

In March 1997, the BLM Colorado finalized ***Standards for Public Land Health and Guidelines for Livestock Management***. The standards were developed to describe conditions needed to sustain health of the landscape, and were intended to apply to all uses of public land. The five Colorado standards contain two parts: 1) a statement describing the conditions of a landscape's potential, followed by 2) a series of indicators that help to define the standard, and are observable on the land. Colorado Public Land Health Standard 5 pertains to water quality:

FIGURE 2.2 - COLORADO PUBLIC LAND HEALTH STANDARD 5

The water quality of all water bodies, including ground water where applicable, located on or influenced by BLM lands will achieve or exceed the Water Quality Standards established by the State of Colorado. Water Quality Standards for surface and ground waters include the designated beneficial uses, numeric criteria, narrative criteria, and antidegradation requirements set forth under State law as found in 5 Code of Colorado Regulations (CCR) 1002-81, as required by Section 303(c) of the Clean Water Act.

Indicators:

- Appropriate populations of macroinvertebrates, vertebrates, and algae are present.
- Surface and ground waters contain only substances (such as sediment, scum, floating debris, odor, and heavy metal precipitates on channel substrate) attributable to humans, within amounts, concentrations, or combinations directed by Water Quality Standards established by the State of Colorado (5CCR 1002-8).

Best Management Practices

Guidelines or BMPs have been developed by the BLM to help achieve conditions expressed by the land health standards for both recreational activities (BLM 2000) and livestock grazing (BLM 1997). LHA findings and livestock management guidelines have been used to develop terms and conditions for grazing permit renewals, with the intention of achieving healthier water resources where present problem areas occur. Some of the more common stipulations used to benefit water resources include:

- Manage livestock to prevent the establishment of invasive weeds (many of which are annual plants that provide poor watershed surface protection).
- Conduct regular reviews and inspections of grazing permit conditions (allowing for quick identification and action to reverse livestock management problems).
- Defer livestock use for the first two years on vegetation treatments.
- Limit grazing use to 50% of annual forage production.
- Limit grazing duration to fifteen days on spring and summer pastures.

- Require permittees to submit actual use grazing records within fifteen days of off date. (Actual use can vary significantly from permitted use, and knowing actual use will allow for improved livestock management in the future.)
- Limit grazing use to spring or fall, and preferably alternated in successive years.
- Manage ongoing recreational activities in the UFO, including outcomes from draft travel management plans in accordance with recreation guidelines (BLM 2000). Recreation guidelines to achieve and maintain healthy water resources include:
- Manage recreational activities to maintain sufficient vegetation on upland areas to protect the soil from water erosion.
- Minimize disturbances and manage recreation use in riparian areas to protect vegetation, fragile soils, springs, and wetlands.
- Plan and locate routes, trails, and developments away from riparian and wetland areas, and highly erosive soils.
- Reduce stream crossings to the minimal number dictated by the topography. Reduce sedimentation and compaction associated with stream crossings.
- BMPs that benefit water resources also occur in the San Juan/San Miguel RMP Oil and Gas Plan Amendment, Controlled Surface Use Stipulations, including the following stipulation:
- Prior to surface disturbance on slopes of, or greater than, 40 percent, an engineering/reclamation plan must be approved by the Authorized Officer. Such plans must demonstrate how the following will be accomplished:
- Site productivity will be restored.
- Surface runoff will be adequately controlled.
- Off-site areas will be protected from accelerated erosion such as drilling, gullying, piping, and mass wasting.
- Surface-disturbing activities will not be conducted during extended wet periods
- Construction will not be allowed when soils are frozen.

CURRENT CONDITION

WATER QUANTITY

When the United States sets aside public land, it also implicitly reserves sufficient water to satisfy the purposes for which the reservation was created. Both reservations made by presidential executive order and those made by act of Congress have implied reserved rights. The date of priority of a federal reserved right is the date the reservation was established. In 1952, the McCarren Amendment returned substantial power for managing water to the states, resulting in the BLM being served by Colorado to join in state water adjudications. The Colorado Supreme Court recognizes water uses on public lands dating back to land acquisitions in the late 1800s.

The BLM pursues legal and valid water rights from various sources in amounts necessary to achieve resource management objectives throughout the planning area (as shown in Table 2.12). Common uses include domestic, wildlife, livestock, fire suppression, and recreation. The BLM applies to the state for both ground and surface water rights, which are administered by the Colorado Division of Water Resources.

TABLE 2.12 - CONSUMPTIVE WATER RIGHTS IN THE PLANNING AREA BY SOURCE

WATER SOURCE TYPE	NUMBER[1]
Ditches	2
Wells	1
Federal Appropriative Water Rights	47
Springs	120
Reservoirs	15

[1]Water source data comes from a UFO water source inventory database.

Approximately 64 of 161 spring water rights in the planning area are federal reserved water rights claimed under Public Water Reserves No. 107. The purpose of this 1926 executive order was to reserve natural springs and water holes yielding amounts in excess of homesteading requirements. The order states that "legal subdivision(s) of public land surveys which is vacant, not appropriated, unreserved public land and contains a spring or water hole, and all land within one quarter of a mile of every spring or water be reserved for public use."

Livestock Tanks

In addition to water rights, the BLM applies to the State of Colorado for permits to construct livestock water tanks (ponds). Livestock tanks are permitted through the Colorado Division of Water Resources and typically have storage capacities of less than one acre-foot. They are required to be located on intermittent or ephemerally flowing channels, and typically contain water only after snowmelt or large precipitation events. BLM records show between 375 and 600 existing livestock tanks in the UFO. However, because many livestock tanks were constructed prior to state permit filings or being cataloged in BLM databases, the actual number is considered to be much higher. Many of the tanks are poorly maintained or non-functional, and cause accelerated levels of erosion and sedimentation. Invasive weed species commonly become established on areas disturbed by livestock tanks, which can degrade watershed conditions.

Instream Flow

Instream flow water rights to protect aquatic resources are secured for a number of streams in the planning area (as shown in Table 2.13). While only the Colorado Water

Conservation Board can hold an instream flow water right in Colorado, BLM staff makes recommendations to the state for candidate streams and provides the channel surveys and assessments necessary for quantifying the flow. Instream flow water rights are secured to protect habitat for both warm and cold water fish species, and can vary in amount throughout the year.

TABLE 2.13 - STREAM REACHES PROTECTED BY INSTREAM FLOW RIGHTS

HUC[1]	STREAM[2]	CASE NUMBER	REACH LENGTH (IN MILES)	RECOMMENDING PARTY
14020004	Anthracite Creek	06CW230	8.0	other
14030003	Upper Beaver Creek	84CW439	4.6	BLM
14030003	Lower Beaver Creek	93CW268	10.6	BLM
14020002	Cimarron River	84CW398	3.7	other
14030003	Cottonwood Creek	05CW149	3.2	BLM
14020006	East Fork Dry Creek	05CW151	10.0	BLM
14020002	Gunnison River	92CW107	28.9	other
14020002	Gunnison River	03CW265	28.9	other
14030003	Horsefly Creek	05CW215	5.2	BLM
14030002	La Sal Creek	02CW271	6.0	BLM
14030004	Mesa Creek	06CW168	2.0	BLM
14020004	North Fork Gunnison River	84CW400	6.2	other
14030004	North Fork Mesa Creek	02CW274	5.9	BLM
14020002	North Fork Smith Fork	05CW203	9.4	other
14020005	Potter Creek	04CW161	9.0	BLM
14030004	Roc Creek	02CW275	10.0	BLM
14020005	Roubideau Creek	04CW162	14.4	BLM
14030003	Saltado Creek	93CW267	8.3	BLM
14030003	San Miguel River (Upper)	84CW429	8.4	other
14030003	San Miguel River (Mid)	02CW277	24.1	BLM
14030003	Specie Creek	02CW279	3.2	BLM
14020006	Spring Creek	04CW163	5.5	BLM
14020006	West Fork Dry Creek	05CW155	5.9	BLM

[1]4th level Hydrologic Unit Code - see Table 2.7 above for the corresponding drainage basin.
[2]Some stream reaches include segments of land not managed by the BLM.

Groundwater and Aquifers

Groundwater in the planning area ranges from local, unconsolidated aquifers to extensive, bedrock (consolidated) aquifers, and is most common in coarse sedimentary rock formations. The unconsolidated aquifers are most common in alluvial deposits along perennial watercourses and on higher elevation mesa tops. Water yields in these aquifers can vary seasonally and in response to long term climatic variations. The more extensive, bedrock aquifers are often interrupted by deeply incised topography over much of the planning area. The bedrock aquifers typically have lower water yields and are higher in dissolved salts compared with water contained in unconsolidated aquifers. Groundwater recharge typically originates from higher elevations, and is limited by a semi-arid climate over much of the planning area.

WATER QUALITY

Achieving high quality water is an important component to an effective water resource management program to ensure both on and offsite water uses are satisfied. The water quality of the UFO surface waters are assessed and monitored by several means. LHAs conducted over the most recent 10-year period, assessed water quality against BLM Colorado Land Health Standard 5. Data assessed for LHAs includes water chemistry, bacteriological analyses, density, and composition of aquatic macroinvertebrates, and the potential for accelerated levels of sediment, salinity, selenium. UFO land management actions also consider potential affects to water quality-impaired rivers and streams on the Colorado's 303(d) and Monitoring and Evaluations lists.

The BLM uses Land Health Standard 5 for water quality to rate watercourses within the planning area in three categories: ***meeting the standard***, ***meeting the standard with problems***, and ***not meeting the standard***. Table 2.14 (on the following page) shows the ratings for stream miles within each LHA unit. The potential for streams to experience accelerated levels of sediment was the most common cause for not meeting the standard. The sediment yield entering streams from any given watershed in the planning area is difficult to quantify, as much of the sediment is derived from uplands and is detached and transported during intense, short duration rainfall events during summer months. In order to assess the potential for an area to introduce accelerated levels of sediment into receiving streams, surrogate indicators (such as upland soil surface conditions) were used in place of water quality analyses. The specific surrogate indicators used for assessing water quality include the amount of bare soil surface, live plant basal coverage, and the degree of soil pedestal formation. In areas where no more than two of these three indicators showed problems, the meeting but with problems rating applied.

Because soil surface indicators were used for the water quality assessment, the causal factors for not meeting the water quality standard would be the same as those described in the soils; poor follow-up management on vegetation treatments, historic livestock grazing, historic wildfire suppression, and proximity to private lands.

TABLE 2.14 - LAND HEALTH STANDARD 5 SUMMARY RATING FOR THE PLANNING AREA

STANDARD 5 WATER QUALITY (STREAMS IN MILES)			
LHA	MEETING STANDARD	MEETING (BUT) WITH PROBLEMS	NOT MEETING STANDARD
Colona	22.2	16.4	5.6
East Paradox	11.8	36.9	0
Roubideau	91.7	24.2	8.2
Norwood	92.0	22.3	15.5
North Fork	43.2	13.8	1.9
North Delta	50.2	19.7	0
Mesa Creek	95.1	50.8	0
West Paradox	16.1	9.7	7.0
TOTAL MILES	422.3	193.8	38.2

Primary Water Quality Issues

The primary water quality issues for the waters in the planning area include elevated levels of sediment, salinity, and selenium.

Sediment

There are many sources for excessive sediment loading of surface waters on public lands. Soil surface-disturbing activities have the potential to accelerate the rate of soil erosion, which is strongly correlated with sediment production. Excess sediment has both on and off site impacts, lowering soil productivity at its source and affecting downstream uses of water, including instream riverine values.

Salinity and Selenium

Salinity and selenium are yielded from areas dominated by Mancos Shale and can be accelerated by the same processes that increase sediment, but additionally can be mobilized and transported by deep water percolation from activities such as irrigation and land development, especially in more arid portions of the planning area. Selenium is a Gunnison Basin issue, as elevated levels are suspected in causing reproductive failure of select species of warm water fishes in the Lower Gunnison River. Salinity is a Colorado River Basin issue and affects many water uses, especially in the Lower Basin and Mexico. In 2009, the FWS issued a Programmatic Biological Opinion under the Endangered Species Act (ESA), requiring a selenium management program for which the UFO is a participatory agent. The UFO will sign a Memorandum of Understanding with the Bureau of Reclamation to assist with developing a long-range plan for the program.

Other Water Quality Issues

Other less widespread water quality issues include excessive heavy metal loading, radium isotopes Ra-226 and Ra-228, and biological pathogens. Little of the planning area is directly affected by metal pollutants. Heavy or toxic metal issues affecting water quality are primarily associated with high elevation, hard rock mining areas in the San Juan Mountains. Ra-226 and Ra-228 are occasionally elevated in waters associated with the Uravan Mineral Belt, especially water discharges from uranium mine and waste rock areas.

Biologic pathogens, including several types of bacteria and protozoan, potentially occur in water bodies in the planning area, and can increase in relation to the density and activities of warm-blooded animals, including humans. As part of the LHA process, several UFO streams with primary contact recreation activities were monitored for Fecal and *Esherichia coliform* bacteria concentrations. There is a strong correlation between these bacteria and the occurrence of other pathogens. Based on a limited number of samples per site (usually one or two samples collected in spring or summer months), none of the sampled streams exceeded state criteria for bacteria as defined in ***The Basic Standards and Methodologies for Surface Water***. However, because of the temporal and spatial variability of bacteria in surface waters, a more intensive sampling regime would be required to determine conclusively whether planning area streams comply with state criteria for bacteria. Overall, the data show that bacterial concentrations are highest in planning area waters during warm months and following rainfall events that produce runoff.

Macroinvertebrates and Stream Health

Aquatic macroinvertebrate population density and composition are used as another tool to assess stream health in the planning area. Macroinvertebrates are good indicators of water quality and overall stream health, as there are many relatively immobile species in the stream environment. Many aquatic invertebrates are sensitive to pollutants and, because of their year-round presence in a stream, are susceptible to intermittent flow changes and discharges of pollutants.

Instream factors controlling the composition and abundance of stream invertebrates include:

- water flow rate and velocity
- water chemistry
- channel substrate size
- concentration of suspended solids
- winter processes such as river icing
- composition and density of aquatic and riparian vegetation

Twenty-six sites along perennial watercourses throughout the UFO were inventoried for aquatic macroinvertebrate composition and density during a ten-year period between 1998 and 2007. Table 2.15 provides a summary of invertebrate metrics for planning area streams in relation to average values within the Colorado Plateau Ecoregion. Some of the monitoring sites were sampled during water years 2000 and 2002, which experienced

extremely warm and dry climatic conditions. These extreme conditions could have significantly altered both the abundance and species composition of aquatic macroinvertebrates as a result of reduced water flow, increased water temperature, and higher levels of total dissolved solids.

Many higher order streams in the planning area are significantly dewatered during the irrigation season, which can restrict the invertebrate population of a watercourse. An example of the impact of stream dewatering on aquatic macroinvertebrate populations can be seen in Figure 2-3, which shows the longitudinal variation in aquatic macroinvertebrates in the San Miguel River. The results show that the water sample taken at the San Miguel River above Pinon has the lowest overall health rating of four San Miguel sites (lowest abundance of preferred macroinvertebrates, and the highest number of disturbance-tolerant macroinvertebrates). The values at the Pinon site reflect channel dewatering caused by the upstream CC Ditch Diversion. All aquatic macroinvertebrate data for waters in the planning area are on file at the Montrose Public Lands Center.

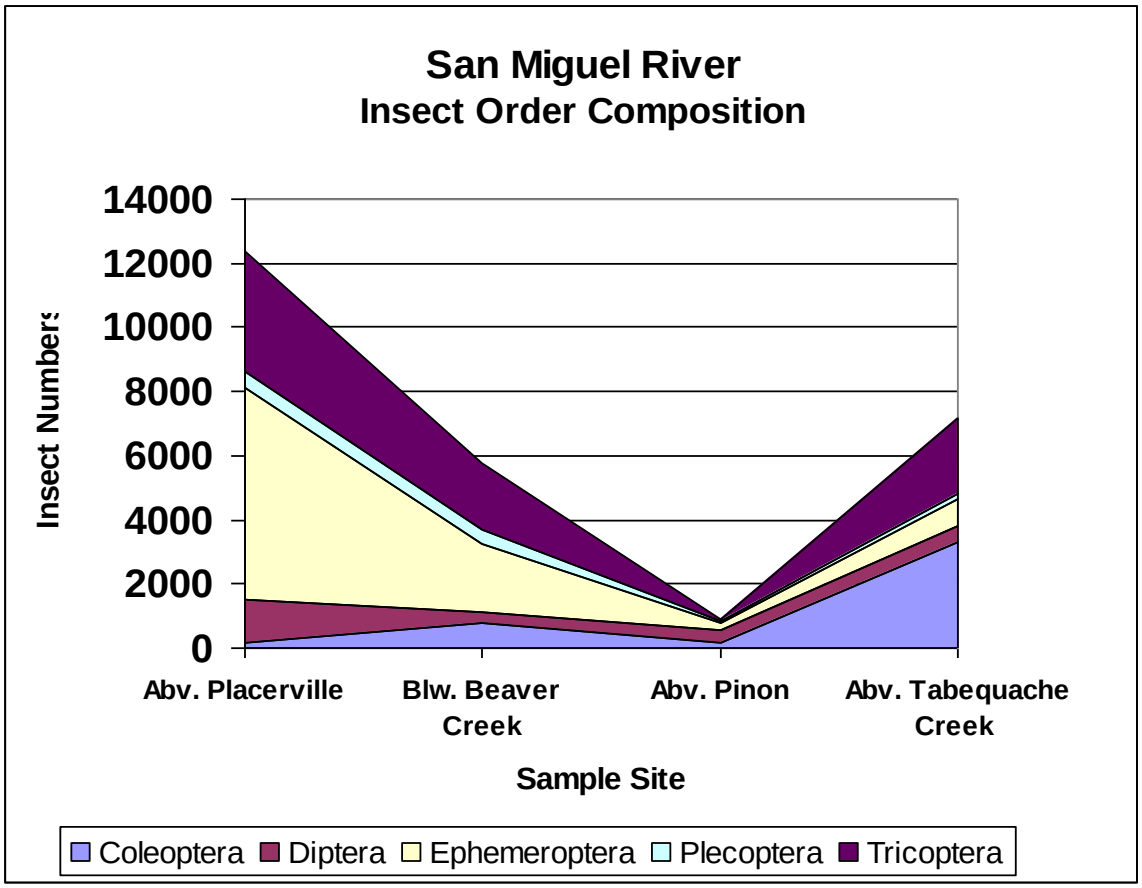
TABLE 2.15 - AQUATIC MACROINVERTEBRATES IN PLANNING AREA STREAMS[1]

STREAM	LATITUDE	LONGITUDE	SAMPLE NUMBER	TOTAL[2] ABUNDANCE	EPT[3] TAXA	EPT[4] ABUNDANCE	INTOLERANT[5] ABUNDANCE	TOLERANT[6] ABUNDANCE
Cow Creek	38.1491	107.6444	1	789	13	645	39	0
Dry Creek	38.5353	108.0644	2	3,135	6	1,830	0	0
Hubbard Creek	38.9333	107.5186	1	63	6	23	7	0
La Sal Creek Lower	38.2785	108.9328	1	293	8	258	11	0
La Sal Creek Upper	38.3234	108.9856	1	858	12	380	39	3
Leroux Creek	38.8789	107.7850	1	2,004	17	772	23	0
Lion Canyon	38.3334	109.0553	1	430	10	261	32	1
Maverick Draw	38.2256	108.5061	1	3,522	2	397	0	0
Mesa Creek	38.4508	108.8225	1	1,297	2	20	1	0
Minnesota Creek	38.8625	107.5411	1	394	11	81	16	0
Monitor Creek	38.6217	108.2089	2	5,112	4	1,916	0	8
Naturita Creek	38.1475	108.3353	1	61,279	3	21,798	0	88
Naturita Creek	38.1594	108.4033	2	2,436	4	542	0	1
Naturita Creek	38.2244	108.5047	2	7,197	4	665	3	0
North Fork Mesa Creek	38.5036	108.7903	1	3,358	7	178	0	0

STREAM	LATITUDE	LONGITUDE	SAMPLE NUMBER	TOTAL[2] ABUNDANCE	EPT[3] TAXA	EPT[4] ABUNDANCE	INTOLERANT[5] ABUNDANCE	TOLERANT[6] ABUNDANCE
Potter Creek	38.6339	108.1944	3	2,270	5	1,001	1	5
Roatcap Creek	38.8833	107.6436	1	3	0	0	0	0
Roubideau Creek above Potter Creek	38.6378	108.1936	3	1,475	5	827	0	1
San Miguel River at Tabeguache Ck	38.3578	108.7083	1	23	3	4	3	0
San Miguel River below Beaver Creek	38.1060	108.1866	2	8,201	22	6,480	2,758	0
San Miguel River near mouth	38.3881	108.7872	2	884	8	397	46	0
San Miguel River above Pinon	38.2496	108.3867	2	1,308	13	392	46	0
San Miguel River above Placerville	38.0060	108.0459	2	11,753	19	7,574	3,683	0
San Miguel River above Tabeguache	38.3392	108.7015	4	2,520	5	848	48	0
South Fork Mesa Creek	38.4500	108.8028	1	355	5	27	1	0
Spring Creek	38.3808	107.9539	3	2,306	10	431	35	0
Williams Creek	38.9733	107.3350	1	4,169	9	2,208	257	5

1. Values in RED rate higher than the average of 524 samples at 245 sites across the Colorado Plateaus Ecoregion. Tolerant Abundance rates with lower values are higher.
2. Number of invertebrates per 0.74 square meters of stream bottom.
3. Number of invertebrate families within orders Ephemeroptera (mayflies), Plecoptera (stoneflies), and Tricoptera (caddisflies)
4. Total number of invertebrates within orders Ephemeroptera (mayflies), Plecoptera (stoneflies), and Tricoptera (caddisflies)
5. Total number of invertebrates rated as intolerant to pollution.
6. Total number of invertebrates rated as tolerant to pollution.

FIGURE 2.3 - LONGITUDINAL VARIATION IN AQUATIC MACROINVERTEBRATE ON SAN MIGUEL RIVER



Summer 2000

Selenium

The most widespread impairment to area water quality is excessive selenium. Elevated levels of selenium have been shown to cause reproductive failure and deformities in fish and aquatic birds. The stream segments in Table 2.10 are on the 2008 Colorado 303(d) list of impaired waters and include reaches of, or receive drainage from, public lands within the planning area. In July 1997, the CWQCC amended the Classifications and Numeric Standards for the Gunnison and Lower Dolores River Basins (Regulation No. 35). These amendments included the adoption of new standards for selenium and the adoption of temporary modifications for selenium standards in four segments of the basin. These segments are now included in the Colorado 303(d) list.

The Colorado Water Quality Control Division has prepared a draft Total Maximum Daily Load, which identifies both point and non-point sources of selenium loading and establishes safe levels of selenium for the Gunnison River Basin. Developed under Section 303(d) of the Clean Water Act, these are pollutant-specific, identify pollution sources and a waterbody's capacity to assimilate pollutants, and allocate assimilative capacity among those sources.

Selenium loading of waters on planning area lands primarily originates from diffuse, non-point sources associated with natural runoff and erosion process. Assessments made by the local National Resources Conservation Service office determined that areas dominated by Mancos shale in its natural state contain up to 34 times the concentration of selenium in comparison to similar irrigated lands. On public lands, accelerated yields of selenium can occur from activities that result in soil surface disturbance and increased runoff and erosion. Management of surface disturbing land uses such as livestock and OHV use on Mancos Shale dominated areas has been to apply stipulations, or terms and conditions that reduce accelerated selenium yields.

Another process resulting in excessive yields of selenium is the application of added amounts of water from activities such as agricultural irrigation and land developments (including golf courses and septic systems). Adding water to unaltered Mancos Shale commonly results in deep water percolation through the shale, and the dissolving and transporting of selenium to receiving streams. Management actions in the planning area that could result in accelerated selenium yields from deep-water percolation include rights-of-way involving open water sources (such as irrigation ditches and canals), and land sales or exchanges that involve lands dominated by Mancos Shale. Once land is transferred from public to private ownership, future land uses allowed by local governments could result in accelerated selenium yields. These land actions are assessed through the NEPA process, during which potential impacts are identified and mitigated where possible.

Salinity

Accelerated levels of salinity in surface waters are also an issue for the planning area. The processes that cause salinity loading of waters are similar to those discussed above for selenium. As with selenium, areas dominated by Mancos Shale have the highest potential to yield dissolvable salts to surface waters. The State of Colorado develops and adopts water quality standards for salinity as part of a seven-state Colorado River Basin Salinity Control Forum. The Forum gathers and reviews information relevant to the complex problem of salinity standards and implementation of controls by the basin states. Through this basin-wide effort, Colorado works with the other basin states and the federal government to manage salinity and its effects.

The BLM is mandated by the Colorado River Basin Salinity Control Act (Colorado River Water Quality Office) to manage lands to minimize salinity yields to surface waters. Because of the semi-arid climate throughout much of the planning area, most of the salinity yielded from public lands is episodic, and only occurs during rainfall events that produce runoff. Maintaining adequate watershed cover and healthy soil surface conditions are important for minimizing runoff, sediment, and salinity from areas dominated by Mancos Shale. Through the LHA process, the BLM has identified areas where watershed conditions are less than adequate, and developed corrective actions.

The stream segments in Table 2.11 (on page 53) are on the 2008 Colorado Monitoring and Evaluation List of waters suspected of being water quality impaired and either include

reaches of, or receive drainage from, public lands within the planning area. As sufficient water quality data is collected and analyzed for these stream reaches, they will ultimately be either removed from the Monitoring and Evaluation List or transferred to the 303(d) of impaired waters. While on the Monitoring and Evaluation List, the BLM recognizes the potential water quality impairment and manages lands draining into these streams to minimize further water quality degradation.

SOURCE WATER PROTECTION OF PUBLIC WATER SUPPLIES

While the BLM has no statewide policy for managing public water supplies or source water areas, the agency is required to comply with the Safe Drinking Water Act. In 1996, the Safe Drinking Water Act was amended to include requirements that each state develop a Source Water Assessment and Protection Program to ensure safe public drinking water supplies. Spearheaded by the Colorado Water Quality Control Division, the BLM, along with other agencies and citizen groups, is involved in developing the program. The first phase of the plan is to assess all public water supplies to identify existing and potential pollution sources. Following the assessment phase, a Protection Phase plan is developed in a collaborative effort involving state and local governments, water providers, and citizens to identify actions to address the problems and risks identified in the assessments. As Protection Plans are completed for public water supply areas on public lands in the planning area, it is anticipated that agreements will be prepared between the BLM and water providers to ensure that BLM management activities provide adequate protection of public water supplies.

Source Water Area - Assessment Phase

The Water Quality Control Division has completed initial source water assessments for over 1700 public water systems in Colorado. Table 2.16 (on page 66) lists public water supplies, including assessment reports for counties with lands in the planning area. The Assessment Phase involves understanding where each public water system's source water comes from, the potential contaminant sources that threaten the water source(s), and how susceptible each water source is to potential contamination. A high, medium, or low ranking of risk is identified for each potential source of contamination. Assessment results are provided as a starting point for public water suppliers to evaluate a system's potential contaminant risks, and develop protection plans to minimize these risks.

The state has established buffer zones to categorize the distance from a potential source of contamination to the drainage network and water supply intake. The drainage network includes all perennial, intermittent, and ephemeral tributaries to the stream segment on which the intake is located. The State distinguishes between three zones of distance from the source to the drainage network; the premise being that the further away a source is from the intake, the lower the contamination risk (SWAP 2000). ***Near-field*** and ***far-field*** areas are used to identify potential risks of contamination from activities within a watershed. Similar zone concepts were applied to groundwater and reservoir sources as described in

the Source Water Assessment Methodologies for both surface and ground water (CDPHE 2004).

- ***Zone 1*** is defined as either a 1,000-foot wide band on each side of a stream, lake, or shallow alluvial aquifer (where groundwater is under the influence of surface water) or the 100-year floodplain. Land use activities in Zone 1 occur closest to the drainage network, and are of greatest concern to the quality of public water supplies.
- ***Zone 2*** extends one-quarter mile (1,320 feet) beyond each side of the boundaries for Zone 1; moreover, zones 1 and 2 constitute a 2,320-foot buffer on each side of the stream, lake, or alluvial aquifer.
- ***Zone 3*** encompasses the remainder of the source water area up to the watershed boundary, and has the lowest contamination risk of the three zones.
- ***Near-Fields and Far-Fields*** define the source water or watershed area ***near*** (within) or ***far*** (outside of) a 15-mile radius of a water supply, with activities in near areas presenting a higher risk to a water supply than far areas.

TABLE 2.16 - PUBLIC WATER SOURCES WITH POTENTIAL INFLUENCE IN THE PLANNING AREA

NAME	PUBLIC WATER SYSTEM ID NUMBER	WATER SOURCE[1]	COUNTY
Bowie Mine #2	215202	Surface	Delta
Camp Cedaredge	215166	Ground	Delta
Crawford Mesa Water Authority	115189	Ground	Delta
Gunnison River Pleasure Park	215325	Ground	Delta
Hotchkiss, Town of	115352	Surface	Delta
Lazear Domestic Water Commission	115467	Ground	Delta
Paonia, Town of	115601	Ground	Delta
Sunshine Mesa Domestic Water Commission	115725	Ground	Delta
Beaver Lake Campground	326140	Ground	Gunnison
Crystal Meadows Resort Inc	226189	Ground	Gunnison
Curecanti NRA Ponderosa RA	326009	Ground	Gunnison
Erickson Springs Campground	326502	Ground	Gunnison
Mountain Coal Company, LLC	226838	Surface	Gunnison
Silver Jack Campground	326710	Ground	Gunnison

NAME	PUBLIC WATER SYSTEM ID NUMBER	WATER SOURCE[1]	COUNTY
Fruitland Domestic Water Commission	115288	Surface	Montrose
Cimarron Inn	243176	Ground	Montrose
Curecanti – East Portal	326011	Ground	Montrose
Earls Subdivision Water Commission	143233	Ground	Montrose
Elk Ridge Restaurant	257505	Ground	Montrose
Millard's Mobile Home Park	143510	Ground	Montrose
Naturita, Town of	143533	Surface	Montrose
Nucla, Town of	143559	Surface	Montrose
Project 7 Water Authority	143621	Surface	Montrose
Riverwood Subdivision Water Commission	143676	Ground	Montrose
Spring View Trailer Park	143719	Ground	Montrose
Sunrise Trailer Park	143725	Ground	Montrose
The River Meadows	143505	Ground	Montrose
Tri State G and T Nucla Station	243185	Surface	Montrose
Ouray - Switzerland KOA	246452	Ground	Ouray
Ouray, City of	146588	Ground	Ouray
Ilium Valley Water System	157250	Ground	San Miguel
Norwood Water Commission	157500	Surface	San Miguel
Sawpit, Town of	15770	Ground	San Miguel
Telluride Regional Airport	257050	Ground	San Miguel

[1]Indicates whether a water source is *ground* (typically from a well or spring source) or *surface* (typically from the diversion of a stream or reservoir).

Within the planning area, the Source Water Assessment area for surface water totals 480,104 acres of public land, while the Source Water Assessment area for groundwater totals 22,101 acres. These figures may change when public water suppliers complete a source water protection plan. A confidentiality agreement to withhold the spatial information of public water systems from public disclosure exists between the BLM and the CDPHE, Water Quality Control Division, due to homeland security concerns.

Source Water Areas - Protection Plan Phase

The second phase of a SWAP is the protection plan phase. Protection plans are collaboratively developed by cities, towns, and municipalities to further identify drinking water protection measures, and involve stakeholders in the process. This phase is voluntary, but the state strongly encourages municipalities to develop plans. Currently, there are no known, completed protection plans that affect public lands in the planning area, although the Town of Norwood has formulated a draft plan. However, as protection plans are completed, land use activities on affected public lands would be managed to provide adequate protection to public water supplies in coordination with public water supply managers.

UFO COORDINATION AND COLLABORATION WITH PARTNERS

The UFO continues to coordinate and collaborate with several external groups in managing soil and water resources within the planning area. The UFO has been active in the San Miguel Watershed Coalition since its inception in the early 1990s, and assisted in preparing and implementing the coalition's watershed plan. The coalition's accomplishments include:

- securing an instream flow water right on a 24-mile reach of the San Miguel River
- collecting survey data to allow instream flow recommendations on other river reaches
- preparing a draft San Miguel Instream Flow Water Needs Assessment
- implementing two in-channel river stabilization projects in the San Miguel near Placerville, Colorado, requiring close coordination with the Colorado Department of Transportation
- plans to improve fish migration and boater safety for the Highline Canal Diversion, and represent the coalition on the ongoing Ames Hydroelectric Power Plant, Federal Energy Regulatory Commissions relicensing process.

Other outreach efforts include:

- participating in the local Water Roundtable for the Gunnison Basin, a state-based effort to identify, coordinate, and collaborate on water issues throughout the state
- providing water resources education to local public schools (including 15 years of presentations to over 6,000 students at the Children's Water Festival)
- collaborating with the USGS during the Mancos Shale research effort, which will benefit future management of Mancos Shale areas in the planning area.
- participating in a watershed coalition group formed in the Uncompahgre Valley
- participating in the development of a watershed action plan for the Uncompahgre River through the Uncompahgre Watershed Planning Partnership.

TRENDS AND FORECAST

Future land management actions and resource conditions that would reduce salinity, selenium and sediment yields from areas dominated by Mancos Shale are discussed under the Trends and Forecast section for Soil Resources.

EFFECTIVENESS MONITORING

Effectiveness monitoring of areas identified as having impaired water quality during LHAs will be an important part of the "adaptive management" process to ensure that land management actions are appropriate for the site. At present, guidelines for both recreation and livestock grazing are used to develop appropriate site management activities. LHAs help to reveal causal factors responsible for water quality not meeting Public Land health Standard 5, which include activities in addition to grazing and recreation.

BEST MANAGEMENT PRACTICES

BMPs for mineral and energy development, livestock grazing, recreation, and other activities help to minimize water quality degradation, and should be developed for all significant land use activities with potential for degrading water quality.

TRAVEL MANAGEMENT PLANNING

Water resources throughout the planning area should benefit from the implementation of TMPs. Both the Dry Creek and UFO-wide TMPs propose to eliminate open, off-route travel by motorized vehicles. Given current and projected increases in OHV use in the planning area, eliminating off-route use would benefit water quality primarily by reducing potential sources of sediment.

The UFO-wide plan proposes to limit OHV use to existing travel routes, which would provide some benefits to water resources, while the Dry Creek plan, by designating routes, will provide even greater water quality protection. In addition, some existing routes will be closed and rehabilitated. Benefits to water quality and stream channel stability will be further enhanced by:

- implementing a trail maintenance plan and seasonal restrictions when conditions are excessively wet or droughty
- enforcing allowed uses along designated routes
- implementing more intensive site management of rock crawling areas
- implementing public education programs to promote responsible land use ethics.

PREDICTED CHANGES IN CLIMATE

Many prominent climatologists are predicting some change to the near term, future climate of Colorado. An analysis of past and present climate data in the 2008 report ***Climate Change in Colorado*** leads climatologists to forecast warmer temperatures in southwestern Colorado over the upcoming decades. The report summarizes potential issues for land and water managers given the forecast. Potential issues and impacts affecting resources in the planning area include:

- Rising temperatures could raise evapotranspiration by plants, reduce soil moisture, and alter growing seasons, requiring adjustments to vegetation-based programs such as livestock management.
- Earlier runoff could complicate prior appropriation systems and interstate water compacts, affecting which rights holders and irrigation operations receive water.
- Increased water temperatures and changes in precipitation patterns could affect aquatic resources on public lands and downstream water uses.
- Increasing temperature and soil moisture changes could shift mountain habitats toward higher elevations, requiring the BLM to alter management of species dependent upon these habitats.
- Stream temperatures are expected to increase as the climate warms, which could have direct and indirect effects on aquatic ecosystems, including the spread of instream non-native species and diseases to higher elevations, and the potential for non-native plant species to invade riparian areas. Changes in streamflow intensity and timing may also affect riparian ecosystems.
- Changes in reservoir water storage affect river recreation activities; changes in streamflow intensity and timing will continue to affect rafting directly and trout fishing indirectly.

Changes in long-term precipitation and soil moisture can affect groundwater recharge rates, which could diminish spring and well discharge rates on public lands needed to support a variety of resources.

KEY FEATURES

The following key features are seen as critical to effectively manage water resources on public lands within the planning area. In addition, key features for reducing salinity, selenium, and sediment yields from areas dominated by Mancos Shale are discussed under Key Features for Soil Resources in Section 2.1.3.

- Secure water rights or permits for all water sources on public lands, including ponds, wells, seeps, and springs for flora, fauna, livestock, fire suppression, and

recreation uses. The importance of obtaining, maintaining, and protecting the water rights necessary to effectively accomplish management objectives on public lands will increase in response to projected changes in climate and increasing water demand locally and throughout the Colorado River Basin.

- Quantify and recommend instream flow water rights to the Colorado Water Conservation Board as soon as possible, as increasing water demands will make these more difficult to obtain.
- Monitor and manage instream flow water rights to provide the intended benefits. As an example, many tributaries of the Lower Gunnison, San Miguel, and Dolores rivers provide habitat to warm water fishes for spring spawning. When year-round instream flow rights cannot be obtained, fisheries can benefit from high flow periods in the spring.
- Assist the board in monitoring instream flows to ensure that these water rights are administered to provide the intended instream flow benefits in accordance with state law. Many planning area streams with instream flow water right protections are relatively small tributaries, with few having stream flow monitoring gages. Even though the board is the primary instream flow water right holder, they have little capacity to monitor the hundreds of streams statewide, especially those without stream gages. Additionally, to claim injury to an instream flow water right requires proof by the board that upstream out-of-priority water uses are occurring.
- Manage river projects and rights-of-way to preserve channel conditions protecting aquatic habitat. The BLM is a signatory to the Colorado River Fish and Wildlife Council's ***Range-Wide Conservation Agreement and Strategy for Roundtail Chub (Gila robusta), Bluehead Sucker (Catostomus discobolus), and Flannelmouth Sucker (Catostomus latipinnis)***, an inter-agency effort to define both the impacts to, and fish habitat needs for, subject streams.
- As landscape units are revisited for effectiveness monitoring, assess livestock water facilities and implement appropriate follow-up actions. The UFO has approximately 600 recorded livestock ponds/reservoirs, along with a number that have not been recorded. Historically, the UFO has been remiss at adequately maintaining many of these facilities. Reliable water sources have been a priority for maintenance, while those deemed unreliable often become sources of accelerated sediment yield and vectors for invasive weed establishment.
- Ensure that current and future livestock grazers obtain necessary permits and comply with Colorado's Livestock Tank policy. This will provide a level of protection for livestock water use on public lands, even as water demand increases regionally in the future.
- Collaborate with public water supply providers and water users during assessments for potential pollution sources and development of source water area protection plans to ensure that management actions are compatible. As population in the

region continues to grow, domestic and municipal water sources will become more common in the planning area.

2.1.5 ☀ Vegetative Communities

INDICATORS

Vegetative communities are complex and interdependent groups of plant species that capture energy, cycle nutrients, fix carbon, and influence the atmosphere, water, and soil. They are a critical component of, and contribute valuable services to, a healthy ecosystem. Healthy communities are self-perpetuating, and resilient to change. In addition, they provide for many of the more commonly recognized resource uses on public lands, including livestock grazing, wildlife habitat, recreation, and scenic qualities.

The following indicators for evaluating the health of vegetative communities were identified in the 1997 BLM Colorado Public Land Health Standards:

- Noxious weeds and undesirable species are minimal in the overall plant community
- Native plant communities are spatially distributed across the landscape with a density, composition, and frequency of species suitable to ensure reproductive capability and sustainability
- Plants are present in mixed age classes sufficient to sustain recruitment and mortality fluctuations
- Landscapes exhibit connectivity of habitat or presence of corridors to prevent habitat fragmentation
- Photosynthetic activity is evident throughout the growing season
- Diversity and density of plant species are in balance with habitat/landscape potential and exhibit resilience to human activities
- Appropriate plant litter accumulates and is evenly distributed across the landscape
- Landscapes are composed of several plant communities that may be in a variety of successional stages and patterns

The following indicators relate to riparian and wetland vegetation:

- Vigorous, desirable plants are present
- There is vegetation with diverse age class structure, appropriate vertical structure, and adequate composition, cover, and density
- Streambank vegetation is present and is comprised of species and communities that have root systems capable of withstanding high streamflow events
- Plant species present indicate maintenance of riparian moisture characteristics
- Vegetation indicates high water tables
- Vegetation colonizes point bars with a range of age classes and successional stages

- Residual floodplain vegetation is available to capture and retain sediment and dissipate flood energies

CURRENT CONDITION

BLM COLORADO STANDARDS FOR LAND HEALTH

As part of implementing the ***BLM Colorado Standards for Public Land Health***, BLM employees conducted LHAs in ten landscape units across the UFO between 1999 and 2008, in which they assessed the current condition of vegetation and overall land health.

FIGURE 2.4 - COLORADO PUBLIC LAND HEALTH STANDARD 3

Healthy, productive plant and animal communities of native and other desirable species are maintained at viable population levels commensurate with the species and habitat's potential. Plants and animals at both the community and population level are productive, resilient, diverse, vigorous, and able to reproduce and sustain natural fluctuation and ecological processes.

Indicators:

- Noxious weeds and undesirable species are minimal in the overall plant community.
- Native plant and animal communities are spatially distributed across the landscape with a density, composition, and frequency of species suitable to ensure reproductive capability and sustainability.
- Plants and animals are present in mixed age classes sufficient to sustain recruitment and mortality fluctuations.
- Landscapes exhibit connectivity of habitat or presence of corridors to prevent habitat fragmentation.
- Photosynthetic activity is evident throughout the growing season.
- Diversity and density of plant and animal species are in balance with habitat/landscape potential and exhibit resilience to human activities.
- Appropriate plant litter accumulates, and is evenly distributed across the landscape.
- Landscapes composed of several plant communities that may be in a variety of successional stages and patterns.

Healthy Plant Species and Communities

The planning area was assessed for adherence to Land Health Standard 3:

- 45% was rated as fully meeting the standard

- 38% met the standard, with some problems
- 13% had problems of enough significance to not meet the standard
- The remaining 4% was not assessed or was not classified as upland.

FIGURE 2.5 - COLORADO PUBLIC LAND HEALTH STANDARD 2

Riparian systems associated with both running and standing water function properly and have the ability to recover from major disturbance such as fire, severe grazing, or 100-year floods. Riparian vegetation captures sediment, and provides forage, habitat, and bio-diversity. Water quality is improved or maintained. Stable soils store and release water slowly.

Indicators:

- Vegetation is dominated by an appropriate mix of native or desirable introduced species.
- Vigorous, desirable plants are present.
- There is vegetation with diverse age class structure, appropriate vertical structure, and adequate composition, cover, and density.
- Streambank vegetation is present and is comprised of species and communities that have root systems capable of withstanding high streamflow events.
- Plant species present indicate maintenance of riparian moisture characteristics.
- Stream is in balance with the water and sediment being supplied by the watershed (e.g., no headcutting, no excessive erosion, or deposition).
- Vegetation and free water indicate high water tables.
- Vegetation colonizes point bars with a range of age classes and successional stages.
- An active floodplain is present.
- Residual floodplain vegetation is available to capture and retain sediment and dissipate flood energies.
- Stream channels with size and meander pattern appropriate for the stream's position in the landscape, and parent materials.
- Woody debris contributes to the character of the stream channel morphology.

Riparian Vegetation

Riparian vegetation along nearly all of the streams in the planning area was evaluated for adherence to Land Health Standard 2. Of approximately 449 miles of perennial and intermittent streams in the planning area evaluated:

- 67% were rated as fully meeting the standard

- 26% met the standard, with some problems
- 6% did not meet Standard 2
- The remaining 1% have not been evaluated.

A vegetative community is commonly described according to the individual plant species of which it is composed. Over 1,100 plant species occur in and near the planning area. Of these, more than 1,000 species are native. These species range in distribution from widespread to extremely localized, and in abundance from scarce to extremely common. LHA data enables us to estimate that over 40% of the plant species in the planning area could be considered scarce, while less than 10% could be considered extremely common. Those that are particularly scarce or rare are discussed under the Special Status Species section.

Additional species of concern are those that are nonnative in origin, with invasive and highly competitive characteristics. A number of these exist in the planning area and compete with native vegetation for space, light, and limited nutrients. When an individual species is identified as a substantial economic threat, it is designated by the State of Colorado as a noxious species or by the BLM as a species of concern. Both exotic and noxious weeds are further discussed in the weed section below.

Vegetation in the planning area can also be described in terms of assemblages of native species, and classified based on ecoregions, which are large geographic areas sharing similar patterns of climate, elevation, and geology. The majority of the planning area falls into the Colorado Plateaus Ecoregion, with the remainder in the Southern Rockies Ecoregion (EPA 2005). These are further subdivided based upon topography and landform. Table 2.17 provides the acreages of ecoregion subdivisions on BLM lands within the planning area, and the proportions of each vegetation community within them. A description of each of the major vegetation communities follows.

TABLE 2.17 - VEGETATION COMMUNITIES IN THE PLANNING AREA

ECOREGION	ECOREGION SUBDIVISION	TOTAL ACRES	VEGETATION COMMUNITY	% OF SUBDIVISION
Colorado Plateaus	Sedimentary Mid-Elevation Forests and Shrublands	601,249	Grass-Forb	10
			Montane Forest	2
			Mountain Shrub	2
			Pinyon-Juniper	61
			Riparian	1
			Sagebrush	19
			Salt-Desert Shrub	4
			Unvegetated	1
	Shale and Sedimentary Basins	101,951	Grass-Forb	29
			Pinyon-Juniper	20
			Riparian	0.5

ECOREGION	ECOREGION SUBDIVISION	TOTAL ACRES	VEGETATION COMMUNITY	% OF SUBDIVISION
			Sagebrush	18
			Salt-Desert Shrub	30
			Unvegetated	3
Southern Rockies	Sedimentary Mid-Elevation Forests and Shrublands	57,172	Grass-Forb	4
			Montane Forest	10
			Mountain Shrub	42
			Pinyon-Juniper	22
			Riparian	1
			Sagebrush	7
			Subalpine Forest	12
			Unvegetated	2
	Sedimentary Subalpine Forests	8,079	Alpine	1
			Grass-Forb	8
			Montane Forest	11
			Mountain Shrub	16
			Pinyon-Juniper	3
			Sagebrush	0.5
			Subalpine Forest	56
			Unvegetated	5
	Volcanic Subalpine Forests	1,488	Alpine	11
			Grass-Forb	1
			Montane Forest	6
			Mountain Shrub	1
			Sagebrush	1
			Subalpine Forest	74
			Unvegetated	6
	Volcanic Mid-Elevation Forests and Shrublands	90	Grass-Forb	2
			Montane Forest	84
			Mountain Shrub	11
			Sagebrush	3
	Alpine Zone	13	Alpine	30
			Subalpine Forest	3
			Unvegetated	66

VEGETATION TYPES WITHIN THE PLANNING AREA

Alpine

Alpine vegetation is typically found above 11,000 feet in elevation. It is defined as vegetation that occurs above the elevation at which forests can grow, and is shaped by the harsh growing conditions of cold, long winters, heavy snows, and intensive solar radiation found in high mountains. Alpine vegetation occurs in only a tiny fraction of the planning area. It is characterized by low growing shrubs like arctic willow *(Salix arctica)*, numerous sedge (genus *Carex*) species, grasses such as alpine bluegrass *(Poa alpina)*, and a variety of highly specialized forb species.

Grass-Forb

The grass-forb vegetation type is a significant component of the planning area, and occurs across a range of elevations. In some cases, it is related to soil characteristics, while in others it is a result of disturbances such as fire, avalanche, or drought, and is a successional stage to other vegetation types. The dominant grasses and forbs are dependent primarily upon elevation and secondarily upon soil type, and are made up of species found in each of the different vegetation types described below.

Subalpine Forest

The subalpine forest vegetation type occupies only a minor portion of the planning area above 9,500 feet elevation. Engelmann spruce *(Picea engelmannii)* and subalpine fir *(Abies lasiocarpa)* characterize this vegetation type. Aspen may be present in some areas as well, but is typically successional to the spruce and fir. The understory in this vegetation type is generally sparse and dominated by sedges, whortleberry *(Vaccinium myrtillus)* and arnica *(Arnica cordifolia)*. Mountain brome *(Bromus marginatus)*, Thurber fescue *(Festuca thurberi)*, slender wheatgrass *(Elymus trachycaulus)*, wild strawberry (*Fragaris* spp.), and an abundance of other forbs may occur where the tree canopy lets light through.

Montane Forest

The montane forest vegetation type generally occurs between 7,500 and 9,500 feet in elevation, and makes up a small component of the planning area. This vegetation type typically includes ponderosa pine *(Pinus ponderosa)*, Douglas fir, *(Pseudotsuga menziesii)*, and aspen *(Populus tremuloides)*, both singularly and in combination with one another. Soils and fire history influence where and in what combinations these species occur. They also influence the understory vegetation. Many of the mountain shrub species are also found in montane forest. The more common species include birchleaf mountain mahogany *(Cercocarpus montanus)*, Utah serviceberry *(Amelanchier utahensis)*, Gambel oak *(Quercus gambelii)*, Rocky Mountain juniper *(Juniperus scopulorum)*, black chokecherry *(Prunus virginiana)*, and roundleaf snowberry *(Symphoricarpos rotundifolius)*. The herbaceous component is generally sparse, but contains many of the same grasses and forbs found in the mountain shrub vegetation type described below.

Mountain Shrub

The mountain shrub vegetation type occurs at elevations ranging from 7,000-9000 feet, and makes up a significant proportion of the planning area. Birchleaf mountain mahogany, Utah serviceberry, and Gambel oak are prominent components. Soils, slope aspect, and fire history influence the character and distribution of this vegetation type, resulting in several diverse communities. These communities are distinguished by one or a combination of the prominent shrub species, along with one or more of the following species: black chokecherry *(Prunus virginiana)*, mountain big sage *(Artemisia tridentata vaseyena)*, wild crabapple *(Peraphyllum ramosisissimum)*, Fendlerbush *(Fendlera rupicola)*, roundleaf snowberry *(Symphoricarpos rotundifolius)*, Utah juniper *(Juniperus osteosperma)*, Rocky Mountain juniper *(Juniperus scopulorum)*, and Colorado pinyon *(Pinus edulis)*. Common herbaceous species include elk sedge *(Carex geyeri)*, Letterman's needlegrass *(Acnatherum lettermanii)*, Kentucky bluegrass *(Poa pratensis)*, muttongrass *(Poa fendleriana)*, Sandberg bluegrass *(Poa secunda)*, bottlebrush squirreltail *(Elymus elymoides)*, western wheatgrass *(Pascopyrum smithii)*, slender wheatgrass *(Elymus trachycaulus)*, and nodding brome *(Bromus anomalus)*. Forbs are numerous, with many species. Among the most widespread and dominant are western yarrow *(Achillea millefolium)*, lupine (*Lupinus* spp.), biscuitroot (*Lomatium* spp.), and aspen peavine *(Lathyrus lanzwertii)*.

Pinyon-Juniper

The pinyon-juniper vegetation type occurs between 5,800 and 7,500 feet, and occupies more of the planning area than any other vegetation type. The pinyon-juniper woodland is dominated by Utah juniper and Colorado pinyon in varying proportions depending on soil, slope aspect, and elevation. There is typically a sparse and variable understory that may contain remnant shrubs like Wyoming big sagebrush *(Artemisia tridentata wyomingensis)*, birchleaf mountain mahogany, Utah serviceberry, snakeweed *(Gutierrezia sarothrae)*, yucca *(Yucca harrimaniae)*, potato cactus *(Opuntia fragilis)*, muttongrass, Indian ricegrass *(Achnatherum hymenoides)*, and bottlebrush squirreltail. Primary forbs in this type are western tansy mustard *(Descurainia pinnata)*, scarlet globemallow *(Sphaeralcea coccinea)*, rock goldenrod *(Petradoria pumila)*, lobeleaf groundsel *(Packera multilobata)*, and numerous species of Penstemon, Arabis, Astragalus, Lomatium, Erigeron, and Machaeranthera.

Riparian

The riparian vegetation type extends from the lowest to highest elevations within the planning area. Although small in area, it is a significant type because of its productive and diverse plant communities. Within the broad category of riparian vegetation are many distinct, interwoven plant communities. Among the most widespread are communities dominated by narrowleaf cottonwood *(Populus angustifolia)* above 5,800 feet in elevation, and Fremont cottonwood *(Populous fremontii)* below. These are distinguished by various associated shrubs and trees, including thinleaf alder *(Alnus tenuifolia)*, blue spruce *(Picea pungens)*, Douglas fir, sandbar willow *(Salix exigua)*, skunkbush sumac *(Rhus trilobata)*, Wood's rose *(Rosa woodsii)*, and red osier dogwood *(Cornus sericea)*. Some willow-dominated

communities are also present, with sandbar willow occurring alone or in combination with strapleaf willow *(Salix ligulifolia)*, or other willow species. Thinleaf alder forms a common community along the water's edge of many streams. Shrub-dominated communities are found along some higher stream terraces, including skunkbush sumac, seep willow *(Baccharis salicina)*, New Mexico privet *(Forestiera pubescens)*, and silver buffaloberry. Small pockets of scouringrush horsetail *(Equisetum hyemale)* can be found at lower elevations. Ephemeral and lower elevation drainages are often dominated by black greasewood *(Sarcobatus vermiculatus)* and alien tamarisk *(Tamarix chinensis)*. Detailed descriptions of these communities can be found in the Field Guide to the Wetland and Riparian Plant Associations of Colorado (CNHP 2003).

Sagebrush

The sagebrush type is widespread and occupies a significant portion of the planning area. This vegetation type typically occurs on deeper soils at elevations ranging from 5,000 to 7,500 feet. The sagebrush community is dominated by Basin big sagebrush *(Artemisia tridentata tridentata)* at the lowest elevations, Wyoming big sagebrush at mid elevations, and mountain big sagebrush at the highest elevations. Black sagebrush *(Artemisia nova)* also occurs as a dominant shrub on some soils across this elevation range. The sagebrush type can also occur on steeper, rockier sites, where it is usually successional to woodland types and has resulted from removal of the tree canopy by fire or other natural disturbances. Snakeweed, Utah serviceberry, rabbitbrush (genus *Ericamera* or *Chrysothamnus*), and four-wing saltbush *(Atriplex canescens)* can be secondary shrubs in the sagebrush vegetation type. The sagebrush vegetation type contains a variable understory that can include western wheatgrass, galleta grass *(Pleuraphis jamesii)*, bottlebrush squirreltail, Indian ricegrass *(Achnatherum hymenoides)*, blue grama *(Bouteloua gracilis)*, Sandberg bluegrass, muttongrass, needleandthread grass *(Heterostipa comata)*, prairie junegrass *(Koeleria macrantha)*, and many forbs. Among the most prominent are scarlet globemallow *(Sphaeralcea coccinea)* and longleaf phlox *(Phlox longifolia)*.

Salt-Desert Shrub

The salt-desert shrub vegetation type commonly occurs on saline and other droughty soils in the driest portions of the planning area below 6,000 feet. The following shrubs characterize this drought-tolerant vegetation type: shadscale *(Atriplex confertifolia)*, Gardner saltbush *(Atriplex gardneri)*, mat saltbush *(Atriplex corrugata)*, black greasewood, four-wing saltbush, black sagebrush *(Artemisia nova)*, winterfat *(Krascheninnikovia lanata)*, snakeweed, and prickly pear cactus *(Opuntia polycantha)*. These occur in varying amounts, and in various combinations depending on the soil type and disturbance history of the area. Native grasses in this vegetation type include western wheatgrass, galleta grass, bottlebrush squirreltail, Salina wildrye *(Leymus salinus)*, and Indian ricegrass on better condition sites. Many different forbs occur, with some of the most common including wild buckwheats (Eriogonum spp.), wild onions (Alium spp.), and biscuitroots (Lomatium and Cymopterus spp.)

Vegetation problems identified during the LHAs relate to the indicators listed above. Problems occurred throughout the planning area, and were not clearly associated with a particular region. Table 2.18 lists the major vegetation problems in order of prevalence. The column indicating the percentage of the planning area affected represents a high estimate, including lands where problems are widespread or serious, as well as lands where problems are isolated, localized, or minor.

TABLE 2.18 - MAJOR VEGETATION ISSUES IN THE PLANNING AREA

IDENTIFIED PROBLEM OR ISSUE	PERCENTAGE AFFECTED
UPLAND	
Not enough cool season perennial grass	44%
Exotic plants in community	40%
Not enough perennial forbs	40%
Low plant diversity in community	25%
Shrubs in low vigor	21%
Not enough warm season perennial grass	16%
Browse shrubs heavily hedged	12%
Noxious weeds within or nearby community	10%
Plant spacing too great	7%
RIPARIAN	
Not enough riparian vegetation to protect banks	17%
Riparian plant root structure will not withstand flooding	17%
Streamside plants are not wetland species	15%
Riparian vegetation in poor vigor	13%
Riparian vegetation does not have diverse age classes	12%
Riparian vegetation not supplying enough woody debris	11%
Riparian vegetation does not have diverse composition	11%
Riparian vegetation not establishing on point bars	8%

NOXIOUS WEEDS

Weed Control Guidance and Programs

A June 2007 programmatic EIS, ***Vegetation Treatments using Herbicides on Bureau of Land Management Lands in 17 Western States,*** discusses how herbicides will be applied to BLM-administered lands, including mitigation measures, standard operating procedures, and analysis of active and inactive ingredients by herbicide. The UFO subsequently created an Integrated Weed Management program for control of weeds on the Colorado Noxious Weed List and on the BLM National List of Invasive Weed Species of Concern within the Uncompahgre Field Office.

The BLM coordinates with counties and other entities in and around the planning area in implementing the Integrated Weed Management program. This cooperative effort supports the Integrated Weed Management program and promotes the success of Early Detection/Rapid Response, and the treatment and re-treatment of small and large patches of noxious weeds. A coordinated strategy means that there are more people looking for and treating noxious weeds in a strategic manner on public lands. Support for Integrated Weed Management comes from executive orders, legislation, and strategic documents, including:

- Colorado Noxious Weed Act 8 CCR 1203-15 (2003)
- Presidents Executive Order 13112 (1999)
- Federal Noxious Weed Act of 1974, Public Law 93-692
- BLM Partners Against Weed Plan (BLM's strategic plan)
- Colorado Governor's Executive Order D 00699
- UFO Weed Management Strategy (2007)
- Record of Decision Vegetation Treatments Using Herbicides on BLM Lands in 17 Western States (September 2007)

Systematic Weed Surveys

Since 2001, the UFO has completed a systematic weed survey on about 70% (or 473,000 acres) of the planning area. Thus far, 6,600 associated noxious weed infestations affecting 8,600 acres have been identified. The estimate is conservative and not comprehensive, as the entire planning area has not been surveyed, much of the survey is linear, and part of the survey was completed over ten years ago.

The average size of an infestation patch is 1.3 acres, making it relatively small and easy to treat using . This patch size supports the LHA finding that noxious weeds have not become a prominent feature in most of the planning area, and presents an opportunity to continue this trend. Large patches of weeds will need to be treated for years to come, and linear infestations always pose a threat due to ease of seed transportation, whether along a trail, road, irrigation ditch, or stream/river. The UFO will continue to survey for about 40 weed species, including all weeds on the Colorado Noxious Weed list and the BLM species of

concern. The UFO has noxious weed species from all categories of the Colorado list and several from the BLM list. Table 2.19 lists some of the most troublesome weeds in the UFO, along with associated data.

TABLE 2.19 - NOXIOUS WEEDS IN THE PLANNING AREA

WEED SPECIES	LISTING	NUMBER OF INFESTATIONS	ACRES INFESTED	AVERAGE INFESTATION (BY ACRE)	POTENTIAL AVERAGE RATE OF SPREAD %
Russian knapweed *Acroptilon repens*	State Noxious BLM Concern	1,920	2,280.0	1.2	8-14%
Spotted knapweed *Centaurea maculosa*	State Noxious BLM Concern	85	725.0	8.5	10-24%
Diffuse knapweed *Centaurea diffusa*	State Noxious BLM Concern	26	31.0	1.2	16%
Oxeye daisy *Chrysanthemum leucanthemum*	State Noxious BLM Concern	35 (does not include San Miguel River watershed)	115.0	3.3	
Yellow toadflax *Linaria vulgaris*	State Noxious BLM Concern	2	5.0	5.0	8-29%
Dalmation toadflax *Linaria dalmatica*	State Noxious BLM Concern	1	1.0	1.0	8-29%
Purple loosestrife *Lythrum salicaria*	State Noxious BLM Concern	8	4.0	0.5	15%
Hoary Cress (Whitetop) *Cadaria draba*	State Noxious BLM Concern	340	288.0	1.0	11-18%
Absinth wormwood *Artemisia absinthium*	State Noxious	4	2.0	0.5	
Yellow starthistle *Centaurea solstitialis*	State Noxious BLM Concern	4	20.0	10.0	13-17%
Sulfur cinquefoil *Potentilla recta*	State Noxious BLM Concern	2	2.0	1.0	
Canada thistle *Cirsium arvense*	State Noxious BLM Concern	1,253	1,264.0	1.0	10-12%
Bull thistle *Cirsium vulgare*	State Noxious BLM Concern	399	296.0	1.0	
Musk thistle *Carduus nutans*	State Noxious BLM Concern	659	1,104.0	1.5	12-22%
Russian olive *Elaeagnum angustifolia*	State Noxious BLM Concern	24	7.5	0.5	
Tamarisk *Tamarix* spp.	State Noxious BLM Concern	907	1,508.0	1.7	12%

WEED SPECIES	LISTING	NUMBER OF INFESTATIONS	ACRES INFESTED	AVERAGE INFESTATION (BY ACRE)	POTENTIAL AVERAGE RATE OF SPREAD %
Chinese clematis *Clematis orientalis*	State Noxious BLM Concern	2	2.0	0.3	
Jointed goatgrass *Aegilops cylindrica*	State Noxious BLM Concern	6	11.0	1.8	14% (traits similar to cheatgrass)
Burdock *Arctium minus*	State Noxious BLM Concern	113	222.0	2.0	
Plumeless thistle *Carduus acanthoides*	State Noxious BLM Concern	5	5.3	1.0	
Chicory *Cichorium intybus*	State Noxious BLM Concern	18	7.3	0.4	
Field bindweed *Convolvulus arvensis*	State Noxious BLM Concern	73	133.0	1.8	
Hounds tongue *Hieracium cynoglossoides*	State Noxious BLM Concern	63	83.5	1.3	
Leafy spurge *Euphorbia esula*	State Noxious BLM Concern	1	89.0	89.0	12-16%
Halogeton *Halogeton glomeratus*	State Noxious BLM Concern	47	90.0	1.9	
Scotch thistle *Onopordum acanthium*	State Noxious BLM Concern	2	0.4	0.2	
Siberian elm *Ulmus pumila*	State Noxious BLM Concern	4	5.6	1.4	
Common mullein *Verbascum thapsus*	State Noxious BLM Concern	263	58.0	0.3	

NOTE: Data for the planning area is not comprehensive.

LHA data reveals the current scope of the weed establishment on uplands: 92% of the 2,170 upland sites evaluated had no noxious weeds, 6% had small infestations, and only 1.5% had noxious weeds as a dominant part of the vegetation. LHA data also shows that 37% of upland sites had no exotics, 21% had isolated growth, 29% had exotics growing within native vegetation, while 12% had exotics dominating a plant community.

Treating Problem Weeds

Approximately 970 UFO weed treatments have been conducted on BLM lands, not including those done by the county. Of these, about 75% were carried out with herbicide or a combination of herbicide, mechanical, and manual treatments. The majority of the most troublesome weeds in the planning area are perennial, and the most effective option for

long-term success and eradication is continued implementation of Early Detection and Rapid Response, as well as the application of herbicides on small infestations.

Herbicides

The appropriate use of approved herbicides in moderation:

- reduces the cost of treatment
- insures a reduction in infestation size
- potentially eradicates weeds in a location
- reduces herbicide use in native systems (compared with having to treat large patches over several years)
- promotes land health.

Biological Controls

There are several biological controls (using living organisms) in development that may help with some of the more troublesome weed species. For instance, biological agents to control Russian knapweed are currently being tested, and may be released in 2011. As biological controls become more available, they could be used in conjunction with chemical and mechanical treatments. Some biological agents currently approved for release are effective against certain weed species in the planning area, including Canada, musk, bull and scotch thistles, field bindweed, Dalmatian toadflax, spotted knapweed, puncturevine, and tamarisk.

The size of infestation and type of noxious weed drives whether or not to use a biological control agent. Noxious weed patches need to be of a large enough size to support the biological agent, the noxious weed can't be on a state directive not to let the plant flower and reproduce, and there must be state and federal consensus that there will always be a small/medium amount of the weed present in the ecosystem. *Diorhabda elongata* (known as the Tamarisk Leaf Beetle) is a prime example of a biological control agent being used in riparian areas, which enables a small amount of tamarisk to remain, but not enough to compromise the ecosystem.

Other Common Exotic Species

Other common weedy exotic species in the planning area which are not considered noxious include cheatgrass *(Bromus tectorum)*, annual wheatgrass *(Eremopyrum triticeum)*, clasping pepperweed *(Lepidium perfoliatum)*, Russian thistle *(Salsola tragus)*, filaree *(Erodium cicutarium)*, burr buttercup *(Ceratocephala testiculata)*, spreading wallflower *(Erysimum repandum)*, blue mustard *(Chorispora tenella)*, and European madwort *(Alyssum simplex)*.

TRENDS

Vegetation trends and forecasts are discussed separately for various vegetation indicators.

NOXIOUS WEEDS AND EXOTIC SPECIES

Spread of New and Existing Weed Species

Noxious weeds continue to increase at alarming rates across the western United States. The UFO is no exception, with creeping perennials like hoary cress, oxeye daisy, Russian knapweed, and spotted knapweed spreading at rates of 8- 24% per year (Weed Science Society of America 2005). Evidence of this spread includes the recent appearance of noxious weed species that were previously absent from this area:

- yellow star thistle near Colona and Paonia, and along P12 Road in Montrose County
- spotted knapweed along Highway 90
- diffuse knapweed in an old woodcut
- jointed goatgrass along county roads
- absinth wormwood in and around Ouray
- meadow knapweed in the Owl Creek Pass area
- oxeye daisy throughout riparian areas in the San Miguel and upper North Fork watersheds.

The BLM also has anecdotal evidence that existing populations of noxious weeds have spread and increased in size. However, LHA data indicates that noxious weeds have not yet become a dominant feature of vegetation within the planning area. Systematic weed surveys support the idea that weeds spread at alarming rates if not controlled. This spread will continue to threaten native systems, slowly compromising native vegetation and altering these systems until they can no longer support native plant, aquatic, or wildlife populations.

Competition with Native Vegetation

Other exotic species are increasing within native vegetation. Estimates from a sampling of 190 twenty to thirty-year old trend studies on BLM lands in the planning area, indicate that 46% had no exotic species, either at the time the study was initiated, or at the last reading of the study, while 40% had increasing levels of exotics, and 14% had declines in exotics. This has generally been substantiated and further clarified by LHA data. There is concern that some winter annuals like cheatgrass have the potential to overtake native vegetation, alter fuel and fire regimes, and ultimately displace entire native communities as has happened in other ecoregions. There is little evidence that this is happening on a large scale yet, as we have not experienced dramatic increases in fire frequency or fires fueled by invasive annuals. Some cheatgrass-fueled burns have occurred, indicating that it is happening in localized areas.

Landscape Disturbances

Many weed invasions are tied to disturbances on the landscape. Based on partially completed road and weed inventories, about 58% of travel routes in the planning area have noxious weed infestations within 15 feet, while an estimated 70% of ponds have noxious

weeds associated with them. Weeds are also commonly found in riparian areas and drainages, with 46% of riparian areas sampled having exotic or noxious species at some level within native vegetation. Past vegetation treatments have included seeding of non-native species, contributing to high levels of undesirable plants such as crested wheatgrass. Based on observation, the scale of disturbances infested with exotic annuals is probably even greater.

It is likely that noxious weeds and exotic plants will continue to stay at high levels and increase in some locations in the planning area. Development trends on private lands, increasing recreation use, increasing mineral and oil and gas development, irrigation ditches, wildlife corridors, and sustained livestock grazing are all factors that will promote weeds and exotic species to the detriment of native plant communities.

The phenomenon of climate change is also likely to favor weeds over natives, as mountain climates move upward in elevation and desert southwest climates move into western valleys, causing disruptions in native plant communities (Ray et al 2008). However, the risk that exotics and noxious weeds will overtake native vegetation across substantial amounts of the planning area seems unlikely over the next twenty years due to active an integrated weed management program.

HEALTH OF NATIVE PLANT COMMUNITIES

Spatial Distribution, Diversity, and Density

Plant community distribution and the health of constituent species show a weak upward trend on public lands in the planning area. Soil and climate largely determine whether a plant community can grow on a particular site (known as site potential). Data from recent LHAs indicates that appropriate plant communities occur on appropriate sites in the planning area. However, the amount of land supporting native plant communities in the region has declined, resulting in the reduced spatial distribution and frequency of native vegetation within the planning area. The majority of this decline is due to changes in land use and the development of private lands.

On 5% of public lands in the planning area, the loss of native plant communities is the result of past vegetation treatments in which native species were supplanted by introduced exotic grasses and forbs. An estimated additional 2% of this area has converted to exotic weed infestations through poorly revegetated fires and disturbances such as heavy OHV use and grazing. These converted areas on public land are being reduced over time, as natural successional processes return native vegetation to treated areas. In addition, many historic treatment locations are being retreated and seeded with native species in small patches, as are large disturbances such as wildfires.

Within plant communities, there is some indication that diversity, composition, and frequency are degraded, and may pose a threat to sustainability of native species in some areas. LHA data shows that 25% of 2,170 upland sites evaluated had low native plant

diversity, while 31% had plants spaced too far apart. These affected communities may not be as resistant to changing conditions, disturbances, or weed invasions. Over time, this lack of resiliency equates with decreased sustainability.

However, the status of native species within communities appears to be improving over time. Evidence from the set of 190 trend studies indicates that more study sites had increases in native species richness (with 47% improving, 30% declining, and 16% having no change) and canopy cover (with 62% increasing, 33% declining, and 5% having no change) at the first or last reading.

Impacts from Land Use Activities

Many land use activities have the potential to degrade native communities. Excessive grazing by livestock, big game, and even rabbits can reduce palatable plants and trample others. Physical disturbances associated with off-road travel and concentrated activities like woodcuts or rock collecting can damage plants. In addition, the alteration of normal drainage patterns associated with road development, and range or watershed improvement projects can degrade native plant communities. Invasive plant dominance arising from certain types of land use can drive out native plant species as well.

FORECAST

The forecast for native plant communities in the greater region is of continued decline, in spite of some improvements on BLM lands in the last 30 years. Loss of native plant communities on private land is expected to continue, and increase over time. Much of the loss in and around the planning area stems from land development in response to a growing human population. This rapid growth increases the important role of public lands in preserving native plant communities.

CONFLICTING NATIONAL INITIATIVES

Recent national initiatives threaten to reduce or degrade native plant communities on both private and BLM lands. These threats include efforts to protect surrounding private land from fire by treating (vegetative) fuels on BLM lands, incentives to convert cropland and rangelands to biofuels production, and mandates to increase energy development. In addition, proposed restrictions on fire rehabilitation practices would make it more difficult to rehabilitate native plant communities on burned lands, especially at lower elevations.

Climate change is likely to worsen these losses, mainly at the lower elevation range of each community type. The greatest loss of native plant communities on public lands is expected to occur in the lowest elevation areas, around wildland-urban interface zones, and in areas of intensive energy development.

UPLAND PLANTS IN MIXED AGE CLASSES

Distribution

For the most part, the distribution of age classes seems adequate for maintaining major upland plant species across the landscape, with no strong trends evident. LHA data confirms casual field observations that the majority (74%) of dominant native species are present in a range of age classes at evaluated sites. Only 5% of species found were limited to old age individuals at some sites, indicating problems with recruitment for those species at those sites, although there is no data regarding trend. The dominance of old age classes on some sites is probably due to plant community successional processes, and is normal at some level on the landscape.

Effects of Fire Suppression

There are questions about the impacts of fire suppression, and whether or not it has caused abnormally high levels of old age classes. Wildfire is still occurring at a rate of just under 0.1% of BLM lands in the planning area burned each year. Vegetation management practices (such as rollerchops and prescribed burns) are conducted on another 0.1% of the planning area per year, resulting in younger age classes. With a 250-year fire frequency as some local pinyon dendrochronological studies have indicated (Eisenhart 2004, Shinneman 2006), approximately 0.4% of the vegetation would require treatment or fire annually. This suggests that the vegetation is gradually aging, although it is not substantially affected yet.

Drought and Insect Infestations

Large-scale trends occurring regionally and beyond include drought-triggered tree and shrub die-offs, and large beetle, borer, and budworm infestations. Qualitative observations indicate that populations of trees and shrubs have sustained themselves despite the increased mortality, suggesting that age class distribution is adequate to sustain populations.

The forecast for the next 20 years is that vegetation will maintain a healthy, although slightly aging class distribution over the next 20 years. This trend is expected to continue over the next several decades, except where climate change causes shifts in elevation ranges of species.

HABITAT CONTINUITY AND CORRIDORS

Primary Causes of Fragmentation

Habitat fragmentation has been examined during the LHA process, and some trends are evident. Regionally, the topography and varied geology of the planning area causes a substantial background level of habitat fragmentation and isolation of habitats, particularly in the lowest and highest elevation areas. The pattern of land ownership and private land development has further fragmented this landscape, with native habitat converted into agricultural and residential development in the Uncompahgre and North Fork valleys, and to a lesser extent in the Norwood area and Paradox Valley. These factors have isolated large

areas of intact public land into three distinct habitat blocks: 1) from Grand Mesa down to Dry Creek on the east side of the Uncompahgre Plateau, 2) from northeast of Paradox Valley down to Third Park on the west side of the Uncompahgre Plateau, and 3) from southwest of Paradox Valley to the UFO boundary.

Habitat Degradation

A more subtle fragmentation of habitat occurs within public lands in the planning area through the development of roads, pipelines, canals, and other disturbances. This type of fragmentation has brought in weeds and degraded habitat along corridors, so that areas of intact or suitable habitat for some plant species have become separated from one another. The scope of this fragmentation is evident in estimates of road density, which range from three to five miles of routes per square mile of public land in some parts of the planning area (BLM 2008). The trend in the past has been toward greater fragmentation with population growth, resulting from conversion of private lands from agricultural or range to residential use, and increased development of infrastructure and routes on BLM land. These trends are expected to continue, with additional conversion of private land to residential use, as well as development of land in the planning area, increasing the level of fragmentation at both the regional and local level.

PHOTOSYNTHETIC ACTIVITY

Warm and Cool Season Grasses

Indicators of maximal and efficient photosynthetic activity show overall weak improvements that include conflicting trends over the past 20-30 years. While inadequate cool season grass was identified in LHA data as the biggest problem, trend data shows substantial improvements over the past decades. Data from a set of 190 trend studies shows that perennial cool season grasses increased over the past 20-30 years in more areas than they declined (54% of studies showed increases, 34% had declines, and 12% had no perennial cool season grasses at either reading.) Warm season grasses were identified through LHA data as a lesser problem, but trends indicate that it is continuing to diminish on the landscape. Trend study data indicate that 15% of study areas increased in warm season cover, 25% declined, and 61% had no perennial warm season grasses at either reading of the study. Low levels of cool season grasses indicate shortcomings in photosynthesis during spring and fall growing periods, while low levels of warm season grasses reveal problems during summer months and the monsoonal period.

Perennial Forbs and BSC

Perennial forbs and overall species richness tend to increase photosynthetic activity across the growing season, and trend data indicates these have both increased. Data for perennial forbs indicates generally increasing forb levels across the landscape (with studies showing 52% with increasing numbers, 28% with declining numbers, and 20% with no occurrence of perennial forbs at either reading). In addition, BSC provides photosynthesis during winter

months when snow cover is not too deep, and LHA data shows that BSC was present in 82% of units evaluated, but was fully expressed at only 21%.

Summary of Findings

While no data is available to determine trends, a summary of existing data indicates that there are large areas of BLM land without plant communities that take full advantage of sunlight, but that there have been improvements over time. Physical disturbances, the spread of invasive cool season annuals and seeded species, and heavy grazing (especially on a specific plant species for the duration of its growing season) have been primary causes for reduced photosynthetic activity. Recent levels of these phenomena have been consistent with improving trends for forbs, species richness, and cool season grasses.

The forecast for indicators of photosynthetic activity is mixed. Climate change may disrupt the moderately improving trends shown on BLM lands over the past thirty years. Shifts in moisture patterns and increasing temperatures may be responsible for declines in warm season grasses. If monsoonal patterns change and moisture declines during summer months, it is likely that warm season grasses will also continue to decline. If spring and fall moisture dries out, we can expect to see reductions in cool season plants as well.

PLANT LITTER ACCUMULATION AND DISTRIBUTION

Trends in plant litter indicate an increase in accumulation and contributions to soil health over the past 30 years. LHA data reveals that only 5% of units appear to have too little litter. Of 97 long-term trend studies evaluated for litter, 67% show increasing litter and only 27% show declining litter over the past 20-30 years. Litter accumulation is affected by grazing, wind and water erosion, and ground disturbing activities. To date, these activities generally appear to be consistent with an increase in litter. Invasive annuals have increased litter in some areas, and may disrupt natural litter and carbon cycles, as well as the proportion of organic matter. If current trends continue and invasive annuals increase, the forecast is for plant litter to continue to increase.

SUCCESSIONAL STAGES AND PATTERNS

Seral Stage Mosaics

Landscapes in the planning area display a variety of successional stages and patterns. Objectives describing the desired proportion and arrangement of seral stages have been established for the planning area. The current objectives describe desired seral stage mosaics suited to promote certain management objectives (such as controlling wildfire in wildland urban interface areas and improving mule deer winter range) in some areas, and objectives that would arise without fire suppression in other areas. The current vegetation mosaic for most of the landscape units has been evaluated, and some issues have been disclosed. In general, early seral (grass and forb dominated) vegetation is the most lacking stage, with 77% of units evaluated needing more. Early mid (shrub and grass dominated)

vegetation is lacking in 59% of units. Moreover, while late stage (mature tree and shrub) vegetation is too abundant in 55% of units, it is lacking in other units.

Factors Affecting Seral Stage

The primary drivers for seral stage distribution are ecological site limitations restricting where woody species can grow, fire, drought, disease, insect infestations, and vegetation management practices that return vegetation to early stages. The trend has been toward fewer acres being affected by fire and vegetation treatments over the past 20 years, suggesting that vegetation seral stage is gradually advancing. If this trend continues, the BLM anticipates that the vegetation seral stages will increasingly be skewed toward older age classes. Large-scale initiatives to promote biofuels harvest, massive mining activity, or substantial changes in fire suppression policies could alter this trajectory, as could severe drought or disease outbreaks.

RIPARIAN AND WETLAND VEGETATION

Maintaining Riparian Health

While measured trends are not currently available, the indicators for riparian plants generally have been stable to improving. Native wetland plants tend to be desirable species, and indicate the presence of a high water table. Proper Functioning Condition data from 162 reaches indicates that 81% of sites have such species, and contained high vigor vegetation (USDI 2008). Grazing can drive channel downcutting, dewatering, and subsequent loss of desirable plants. There are very few streams with this problem in the planning area. Channel dewatering from upstream diversions associated with private water rights appears to be the biggest factor behind low vigor vegetation in the planning area. Nearly all of the streams and water sources involved are fully adjudicated, so there should be little change in water diversions in the future. The BLM has acquired some minimal instream flows for many of the larger streams to protect them from further dewatering.

Weeds, particularly tamarisk, are a significant problem in riparian areas, and in a few cases dominate the vegetation. While tamarisk control with herbicides has been conducted on a number of planning area streams, the tamarisk beetle (already established in the planning area) shows the greatest promise for providing long-term control. Control of this exotic should result in improved riparian vegetation vigor and composition, although the presence or establishment of other weeds would diminish this gain. The forecast for climate change, with projected earlier snowmelt, reduced precipitation, and warmer temperatures, may cause widespread reductions in riparian plant vigor that negates improvements from tamarisk control.

Structure, Composition, Cover, and Density

While no measured trends are available, riparian vegetation in the planning area appears healthy overall, with generally stable conditions for streams, as well as some challenges along rivers. Proper Functioning Condition data indicates that there is appropriate age class

structure and species composition on 85% of the 162 reaches evaluated, and adequate riparian vegetation cover on 78% of reaches. Streambank vegetation on 75% of reaches studied has adequate root masses to withstand flooding. While grazing can cause reductions in riparian vegetation and diversity, few streams in the planning area have been affected.

Within the planning area, riparian issues typically involve dewatering from diversions associated with private water rights. Dewatering reduces the amount of riparian vegetation, which can cause streams to be less resilient to flood events, which in turn cause further erosion and loss of vegetation. Planning area rivers are primarily impacted by altered flow regimes tied to upstream reservoir management. The altered flow has resulted in noticeable changes in species composition, and the loss of young age classes of cottonwood and willow. These trends are expected to continue unless reservoir management shifts to a regimen that simulates spring flooding. If forecasts for climate change are accurate, widespread reductions in riparian plant vigor could ultimately affect riparian composition, reproduction, age class distribution, and streambank cover.

Point Bar Colonization and Residual floodplain vegetation

While no measured trends are available, riparian vegetation in general appears to have healthy point bar colonization. Proper Functioning Condition data indicates that 88% of studied reaches had no problems with point bar colonization or with energy dissipation from either floodplain vegetation or channel characteristics. The few problem areas along reaches are attributable to excessive grazing, large fires in the watershed, or flood damage likely associated with water diversions as discussed above. The forecast for these indicators is similar to that discussed above.

KEY FEATURES

The following factors should be considered when making allocation and management decisions related to vegetation.

REGIONAL AND GLOBAL BIODIVERSITY

Areas of vegetation that contribute to biodiversity on a regional or global scale should be managed to maintain and/or enhance those high quality conditions. The Colorado Natural Heritage Program has surveyed the planning area, and identified areas contributing to state and global biodiversity (Lyon et al 1999 and 2000). Riparian areas are widely recognized for their important contributions to biodiversity in the arid West, and should be included in this group.

PRISTINE VEGETATIVE COMMUNITIES

Areas that support pristine or intact vegetation should be managed to maintain these qualities. Some of these have been identified by the Colorado Natural Heritage Program as being high quality examples of common vegetation communities. Data collected through LHAs will be helpful in identifying additional areas.

SPECIES MIGRATION CORRIDORS

Corridors that allow for upward, downward, or transregional migration of species should be maintained or reestablished where possible, and managed for high levels of vegetation health. This will be particularly important, as part of a strategy to ensure that plant communities and species are able to survive the predicted effects of climate change.

GENERAL MANAGEMENT FOR LAND HEALTH

All BLM lands should be managed to meet minimal levels of vegetation health as specified in the Colorado Land Health Standards. Areas not meeting standards should be specially managed to improve conditions. When determining uses of BLM lands, the BLM should employ BMPs in order to avoid unnecessary damage.

CRITICAL WEED CONTAINMENT AREAS

Public lands should be managed to contain infestations of those weed species identified under the Colorado Weed Law. These would probably be dynamic and depend on the species and location of infestation, and mechanics of weed seed spread for that species.

2.1.6 Fish and Wildlife

INDICATORS

Fish and wildlife resources include big game, upland game, waterfowl, raptors, migratory birds, small mammals, reptiles, amphibians, and fish, as well as their habitats. Fish and wildlife indicators include direct measurement or indices of species composition, structure, diversity, and relative abundance of fish, wildlife, and habitats within the planning area, as well as distribution, pattern, and connectivity of populations and habitats. Each of these measurements reflects ecosystem function and sustainability.

EMPHASIS ON HABITAT

The BLM works closely with the Colorado Division of Wildlife (CDOW) to manage habitat for fish and wildlife to achieve and maintain suitable habitat for wildlife within the planning area. CDOW is directly responsible for managing population levels while the BLM is responsible for managing fish and wildlife habitat quantity and quality in a condition that will sustain desired levels of species. Population data are tracked by CDOW for game animals and, increasingly, for key nongame species. For some species, the BLM assists CDOW in the collection of this information.

While CDOW is interested primarily in population dynamics and demographics, the principal indicator used by the BLM is habitat condition based on plant community attributes and a site's capacity to sustain native wildlife species. Within this framework, the BLM focuses on key animal species and their habitats. Indicators of habitat condition include plant species composition, cover, vigor, production, browse levels, and animal indices such as wildlife sign (including scat, tracks, and nests) and animal health.

LAND HEALTH ASSESSMENTS

LHAs employ both quantitative and qualitative methods for evaluating Land Health Standards for wildlife and habitats. While all of the standards ultimately benefit wildlife and habitats, Standards 2, 3, and 5 specifically address wildlife, fish, and their habitats. Standard 2 addresses riparian and aquatic habitats, Standard 3 addresses wildlife communities and terrestrial habitats, and Standard 5 addresses water quality and aquatic condition. (Special Status Species fall under Standard 4 and are addressed in Section 2.1.7)

CURRENT CONDITION

HABITAT TYPES

Dominant habitat types in the planning area include tall and low shrublands, desert shrub, grassland, woodland, forest, and riparian/aquatic. Bare or sparsely vegetated habitats include rocks and cliffs, caves and mines, barren slopes, and water bodies. Vegetation communities vary based on precipitation, elevation, topography, slope, aspect, geology, soils, and other environmental variables. Habitat type is further distinguished by site-specific attributes such as vegetation cover, composition, and structure. Vegetation community composition and distribution across the planning area are described in detail in Section 2.1.5.

The planning area supports a variety of wildlife, including birds, small mammals, big game, carnivores, and reptiles. Some species are specialists that use a narrow or restricted range of habitats, while others are generalists that can occur across a broad range of habitat types. Depending on species requirements, animals may be present seasonally or year-round.

Dominant Habitats in the Planning Area

Sagebrush provides important habitat for mule deer, sage grouse, and other sagebrush-dependent species such as the sage sparrow and Brewer's sparrow. ***Salt desert shrub*** provides habitat for pronghorn, winter range for mule deer and elk, and birds such as horned larks and Swainson's hawks. ***Grasslands*** provide habitat for northern harrier hawks, lark sparrows, and numerous other species. Pinyon-juniper ***woodlands*** and mixed mountain shrub communities provide habitat for bats, big game, ravens, and a variety of songbirds. ***Forests*** of cottonwood, aspen, Douglas-fir, and aspen provide good habitat for species that prefer timbered areas, such as black bears, Cooper's hawk, bald eagle, squirrels, flycatchers, and vireos. ***Riparian and aquatic*** habitats such as streams, rivers, and springs support warblers, raccoons, frogs, toads, and other species (Aquatic species are discussed below).

Rock complexes are inhabited by nesting swallows, swifts, golden eagles, and prairie falcons, along with many other bird species. These areas also provide important cover for large mammals such as bighorn sheep, mountain lions, and bobcats, and for small mammals such as ground squirrels, rabbits, and marmots. Numerous bat species roost, hibernate, and reproduce in rock crevices, caves, and mines across the planning area.

Water bodies, including rivers, perennial and intermittent streams, ponds, springs, and water diversions, provide habitat for fish, amphibians, and aquatic insects. Major river systems in the planning area include the Uncompahgre, Gunnison, San Miguel, and Dolores. Common riparian vegetation associations include cottonwood, willow, sedges, and grasses. Aquatic resources are described in further detail in Section 2.1.4 on Water Resources and Section 2.1.5 on Vegetation Communities.

KEY FISH AND WILDLIFE SPECIES

Table 2.20 lists species of high priority for BLM management efforts due to their economic value, regulatory status, high public interest, or other qualities. Special status species are discussed in Section 2.1.7.

TABLE 2.20 - KEY FISH AND WILDLIFE SPECIES OF THE UFO

SPECIES OR GROUP	RATIONALE FOR KEY DESIGNATION
BIRDS	
Waterfowl and shorebirds	Economic and recreational value
Upland game birds	Economic and recreational value
Migratory birds	High interest and protected by law
Golden eagle	High interest and protected by law
Raptors	High interest, protected by law, top of food chain
MAMMALS	
Bighorn sheep	High economic and recreational value
Black bear	High interest, economic, and recreational value
Elk	High interest, economic, and recreational value
Moose	High interest, economic, and recreational value
Mountain lion	High interest, economic, and recreational value
Mule deer	High economic and recreational value
Pronghorn	High economic and recreational value
Gunnison and white-tailed prairie dogs	High interest, species declines, and listing petitions
River otter	High interest, economic value
Bats	High interest
FISH	
Rainbow, brown, and cutthroat trout	High interest, economic, recreational value

Birds

Waterfowl

Streams, rivers, reservoirs, ponds, canals, and associated riparian vegetation provide habitat for waterfowl and shorebirds. Canada goose, mallard, green-winged teal, common merganser, and American widgeon are a few of the more common game waterfowl species found in the area. Great blue herons, egrets, sandhill cranes, and other wading and shorebirds typically occur along major rivers, valleys, and irrigated fields.

Upland Game Birds

The quality of upland game bird habitat depends on the availability of mixed shrubby and herbaceous vegetation for nesting, brood rearing, foraging, and thermal cover. Riparian habitat plays an important role as a source of food, water, and cover for most upland birds. Blue grouse are widely distributed throughout the higher elevation woodlands and mountain

meadows. Merriam's turkeys use a variety of habitats, including riparian areas, mixed mountain shrub, and pinyon-juniper woodlands. Chukar partridges and Gambel's quail occur in rocky foothills, canyons, and valleys, primarily in the north and central portions of the planning area along the Uncompahgre-Gunnison River watershed. Mourning doves occupy a variety of habitats across the planning area. Ring-necked pheasants are common in and near agricultural and cultivated lands.

Raptors

Raptors in the planning area include eagles, falcons, hawks, and owls. Golden eagles, red-tailed, ferruginous, Swainson's, and Cooper's hawks, peregrine and prairie falcons, and American kestrel are the most common diurnal species observed, while the nocturnal great horned owl occupies a variety of habitats in the planning area. Cliffs, rocky outcrops, and large trees provide suitable nesting habitat for many of these species. Because they are top (or apex) predators on the food chain, raptors are an important indicator of overall ecosystem health.

Migratory Birds

The planning area supports a variety of migratory bird species, including Neotropical migrants. Recent studies and monitoring suggest that some of these populations are declining, due in part to land use and management practices and habitat loss and degradation. Common migratory birds include common raven, American crow, Virginia warbler, mountain bluebird, green-tailed towhee, sage sparrow, and Brewer's sparrow.

A subset of known and potentially occurring birds in the planning area, including their habitats and status, are listed in Table 2.21. This table is based on the FWS Birds of Conservation Concern 2008 List for the Southern Rockies/Colorado Plateau Region. (Note: several species of concern listed here are also addressed under special status species in Section 2.1.7)

TABLE 2.21 - BIRDS OF CONSERVATION CONCERN IN THE PLANNING AREA

SPECIES	HABITAT DESCRIPTION	UFO RANGE AND STATUS[1]
Gunnison sage grouse *Centrocercus minimus*	Sagebrush communities (especially big sagebrush) for hiding and thermal cover, food, and nesting; open areas with sagebrush stands for leks; sagebrush-grass-forbs mix for nesting; wet meadows for rearing chicks	Year-round resident Breeding
American bittern *Botaurus lentiginosus*	Marshes and wetlands; ground nester	Spring/ summer resident Breeding confirmed in region Not within planning area
Bald eagle[2] *Haliaeetus leucocephalus*	Nests in forested rivers and lakes; winters in upland areas, often with rivers or lakes nearby	Fall/winter resident No confirmed breeding
Ferruginous hawk *Buteo regalis*	Open, rolling and/or rugged terrain in grasslands and shrub-steppe communities; also grasslands and cultivated fields; nests on cliffs and rocky	Fall/ winter resident Non-breeding

SPECIES	HABITAT DESCRIPTION	UFO RANGE AND STATUS[1]
	outcrops	
Golden eagle *Aquila chrysaetos*	Open country, grasslands, woodlands, and barren areas in hilly or mountainous terrain; nests on rocky outcrops or large trees	Year-round resident Breeding
Peregrine falcon[2] *Falco peregrinus*	Open country near cliff habitat, often near water such as rivers, lakes, and marshes; nests on ledges or holes on cliff faces and crags	Spring/summer resident Breeding
Prairie falcon *Falco mexicanus*	Open country in mountains, steppe, or prairie; winters in cultivated fields; nests in holes or on ledges on rocky cliffs or embankments	Year-round resident Breeding
Snowy plover[3] *Charadrius alexandrines*	Sparsely vegetated sand flats associated with pickleweed, greasewood, and saltgrass	Spring migrant Non-breeding
Mountain plover *Charadrius montanus*	High plain, cultivated fields, desert scrublands, and sagebrush habitats, often in association with heavy grazing, sometimes in association with prairie dog colonies; short vegetation	Spring/fall migrant Non-breeding
Long-billed curlew *Numenius americanus*	Lakes and wetlands and adjacent grassland and shrub communities	Spring/fall migrant Non-breeding
Yellow-billed cuckoo[4] *Coccyzus americanus*	Riparian, deciduous woodlands with dense undergrowth; nests in tall cottonwood and mature willow riparian, moist thickets, orchards, abandoned pastures	Summer resident Breeding
Flammulated owl *Otus flammeolus*	Montane forest, usually open and mature conifer forests; prefers ponderosa pine and Jeffrey pine	Summer resident Breeding
Burrowing owl *Athene cunicularia*	Open grasslands and low shrublands often in association with prairie dog colonies; nests in abandoned burrows created by mammals; short vegetation	Summer/fall resident Breeding
Lewis's woodpecker *Melanerpes lewis*	Open forest and woodland, often logged or burned, including oak, coniferous forest (often ponderosa), riparian woodland, and orchards, less often in pinyon-juniper	Year-round resident Breeding
Willow flycatcher[3] *Empidonax traillii*	Riparian and moist, shrubby areas; winters in shrubby openings with short vegetation	Summer resident Breeding
Gray vireo *Vireo vicinior*	Pinyon-juniper and open juniper-grassland	Summer resident Breeding
Pinyon jay *Gymnorhinus cyanocephalus*	Pinyon-juniper woodlands	Year-round resident Breeding
Juniper titmouse *Baelophus griseus*	Pinyon-juniper woodlands, especially juniper; nests in tree cavities	Year-round resident Breeding
Veery *Catharus fuscescens*	Deciduous forests, riparian, shrubs	Possible summer resident observed in Gunnison County Possible breeding
Bendire's thrasher *Toxostoma bendirei*	Desert, especially areas of tall vegetation, cholla cactus, creosote bush and yucca; juniper woodlands	Known range outside planning area

SPECIES	HABITAT DESCRIPTION	UFO RANGE AND STATUS[1]
Grace's warbler *Dendroica graciae*	Mature coniferous forests	Summer resident Breeding
Brewer's sparrow *Spizella breweri*	Sagebrush-grass stands; less often in pinyon-juniper woodlands	Summer resident Breeding
Grasshopper sparrow *Ammodramus savannarum*	Open grasslands and cultivated fields	Known range outside planning area
Chestnut-collared longspur *Calcarius ornatus*	Open grasslands and cultivated fields	Spring migrant Non-breeding
Black rosy-finch *Leucosticte atrata*	Open country including mountain meadows, high deserts, valleys, and plains; breeds/ nests in alpine areas near rock piles and cliffs	Winter resident Non-breeding
Brown-capped rosy-finch *Leucosticte australis*	Alpine meadows, cliffs, and talus and high-elevation parks and valleys	Summer resident Breeding
Cassin's finch *Carpodacus cassinii*	Open montane coniferous forests; breeds/ nests in coniferous forests	Year-round resident Breeding

[1] Assessment based on UFO files and Geographic Information System data, partner data, and local knowledge.
[2] ESA delisted species.
[3] Non-listed subspecies/population
[4] ESA candidate species **(Source: FWS 2008)**

Reptiles

Several reptiles occur within the planning area, primarily in lower elevations and drier habitats, such as semidesert shrub, sagebrush, and pinyon-juniper woodlands. Consequently, reptile diversity is higher in the drier western portion of the planning area where these habitats are most common. Species that occur in the planning area include the gopher (bull) snake, western rattlesnake, western terrestrial garter snake, sagebrush lizard, fence lizard, plateau striped whiptail lizard, and collared lizard.

Big Game

Elk and mule deer are the two most common big game species in the planning area, although bighorn sheep, pronghorn, black bear, and cougars are also present. Pronghorn occur in limited numbers in the northeast portion of the planning area near Delta, Colorado. Mule deer and elk occupy higher, often forested elevations during the summer and typically migrate to lower elevation mountain shrub, sagebrush, and agricultural valleys during the winter. BLM lands in the planning area provide the majority of winter range available to deer and elk. Critical winter ranges and calving/ fawning grounds are essential to the health and survival of elk and mule deer. Black bears prefer more mesic (moist) habitats and riparian areas. Mountain lion distribution generally coincides with high densities and concentrations of mule deer.

Small Mammals

Common small mammal species include mountain cottontail rabbit, striped skunk, raccoon, ground squirrel, least chipmunk, pinyon mouse, and white-tailed prairie dog. White-tailed prairie dogs occur primarily in dry salt-desert and shrublands, agricultural areas, and disturbed sites along the Uncompahgre River Valley.

A variety of bats occurs in the region. The Yuma myotis is a bat species often associated with permanent water sources such as rivers or streams. Habitats include riparian, arid scrublands and deserts, and forests. These bats prefer to roost in buildings, bridges, cliff crevices, and trees, rather than mines or caves. Yuma myotis bats have been documented near Paradox Valley, as well as in the Gunnison Gorge and Dominguez Canyon areas, making their occurrence along other nearby major tributaries in the planning area likely.

Furbearers

Coyotes, bobcats, raccoons, red foxes, and muskrats occur in all habitat types throughout the planning area, with coyotes being the most abundant. In the planning area, river otters are found in the San Miguel River, Dolores River, and Gunnison River, as well as major tributaries with abundant fish.

Aquatic Species

Game fish include rainbow, brown, brook, and cutthroat trout. Non-game fish include carp, sculpin, dace, minnows, suckers, cottids, shiners, and sunfish. Amphibians occur exclusively or seasonally in most aquatic systems throughout the planning area. Commonly observed amphibians include the western chorus frog, tiger salamander, and Woodhouse toad.

TRENDS

WILDLIFE POPULATIONS

A Data Analysis Unit is a geographic area that represents the year-round range of a big game herd, and includes all of the seasonal ranges of a specific herd. Elk populations typically exceed, and deer populations typically fall short of, CDOW population targets for Data Analysis Units in the planning area. If management is effective, populations that exceed objectives are expected to become smaller and more in balance with available habitat, while those that fall below targeted levels are likely to increase.

Current trends for fish, amphibians, and other aquatic species are largely unknown. With the limited data available, it appears that most raptor populations are stable. However, a number of migratory bird and Neotropical passerine populations are declining across the planning area. Although data is lacking, other non-game populations, including furbearers, small mammals, and reptiles, are expected to be stable. Those wildlife species or populations thought to be at-risk or declining are monitored and tracked as special status species (as described in Section 2.1.7).

DECLINING HABITAT

Wildlife diversity and abundance typically reflects the diversity, quality, and quantity of habitat. In general, habitats have declined over time. Possible causes include conversion of native vegetation to agricultural uses, noxious weed infestations, and increased recreational use of public lands. The effects of habitat decline vary for each species. While problems (such as poor browse conditions for wintering big game) are present in some areas, most of the planning area appears to be meeting land health objectives. Still, sagebrush and salt desert habitats, in particular, have been reduced in area and quality in the planning area and other regions across the United States. These sites are at risk due to overgrazing, cheatgrass and other weed invasions, pinyon-juniper conversions, and other factors. Wildlife that depend on these habitat types have declined in abundance and range. (See Section 2.1.7)

Monitoring Results

Long-term, systematic monitoring of wildlife habitat conditions (such as with permanent transects) has not been conducted in most of the planning area. Currently, the best available information is derived from annual LHAs, including a limited number of vegetation transects in select areas. The entire planning area has been assessed using the land health methodology. Portions of each landscape were found to be meeting, meeting with problems, or failing to meet Land Health Standards. The following is a summary of the most common conditions observed in problem areas, along with the significance to wildlife and fish.

1. Low cover by perennial cool season and warm season grasses and forbs

Cover by desirable native species is lower than expected for a particular site's ecological potential. This problem is most evident at drier, low-elevation sites in the planning area. Low-elevation sites also sustain heavier concentrations of grazing wildlife and livestock, which may further reduce palatable native grasses. Among other benefits, healthy stands of native perennial grasses and forbs provide essential hiding and breeding cover and forage for a variety of wildlife species.

2. Low plant community diversity

Plant community diversity is lower than expected for a particular site's ecological potential. This problem is often observed in connection with other symptoms (such as weeds and overbrowsing). Typically, diverse plant communities or heterogeneous habitats are more resilient to disturbances and more productive, and provide habitat for a greater number of wildlife species and individuals than uniform or homogenous plant communities provide. Vegetation patches that vary in type, size, shapes, and juxtaposition across a landscape are typically desired so that multiple species benefit.

3. Low seral stage diversity

Seral stage refers to a specific period in the development, or succession, of the plant community. Seral stage influences structural and spatial diversity of plant assemblages.

Typically, low seral stage diversity across a landscape (such as closed-canopy pinyon-juniper) provides relatively poor habitat from a multi-species standpoint.

4. Low vegetation age-class diversity

Areas are dominated by an even-aged stand of vegetation (such as sagebrush) and some sites may be closed canopy and/or stagnant (such as lacking cover with understory grasses). Like plant community and seral stage diversity, a diverse age-class community or population is typically more resilient to environmental disturbances and provides habitat for a greater number of species than even-aged stands of vegetation. Age-class diversity also indicates that vegetation reproduction and/or recruitment is occurring, another indicator of land health.

5. Excessive weeds and/or threat of invasion

Weeds, including cheat grass, other annuals, and noxious species, are at moderate to high levels in some areas and have invaded some undisturbed sites. In some cases, weed cover occurs at a level that poses an invasion risk, should a major disturbance (such as fire or drought) occur. Exotic and noxious weeds often displace native vegetation, typically resulting in degraded or unsuitable habitat.

6. Pinyon-juniper encroachment

Pinyon juniper communities are expanding beyond their perceived or known historical range or are increasing in canopy cover. Pinyon-juniper encroachment can render habitat unsuitable or poor for some species (such as sage grouse) and may alter plant community productivity, particularly in the understory community.

7. Habitat fragmentation, degradation, and loss

Road expansion, recreation, agriculture, and residential developments are increasing habitat fragmentation and degrading some habitats through the introduction of weeds. Disturbances may negatively impact one species and benefit another.

8. Degraded or unsuitable habitat due to past vegetation treatments

Some vegetation treatments have resulted in poor or unsuitable habitat for wildlife. In the planning area, the most common example is the conversion of sagebrush communities to crested wheatgrass stands. Crested wheatgrass plantings create a monoculture that typically results in poor habitat structure and diversity for wildlife (with some exceptions such as big game) and contributes to declines in sagebrush obligate populations. In addition, cheatgrass, annuals, and/or noxious weeds have invaded a number of treatment areas. However, when done properly, sagebrush thinning can promote herbaceous production and forbs cover. Thus, some treatment areas in the UFO are recovering well and have apparently resulted in improved conditions for wildlife.

9. Overbrowsed shrubs and trees

Abnormal growth form, hedging, poor leader growth, high or conspicuous browse-line heights, and similar problems indicate overuse by wildlife and/or livestock. This problem is most evident where big game and livestock use overlap. Wild ungulates in particular have the ability to cause dramatic shifts in vegetation, which can impact birds, small mammals, and other wildlife. This may indicate an imbalance between big game numbers, livestock stocking rates, and animal distribution, and the capacity of a habitat to support these population levels.

10. Poor vigor of shrubs

Decadent plants, dead plants, poor leader growth, and marginal seed production are observed in some areas. These problems are often observed in association with heavy browsing and foraging damage by grazing animals. The health and persistence of native shrubs is critical to provide essential cover, food, and structural diversity for multiple wildlife species.

11. Loss and/or degradation of crucial habitats

Impacts from developments, weeds, recreation, and similar activities may result in short or long-term loss or degradation of crucial habitats, such as big game severe winter range and production areas.

12. Landscape and habitat connectivity problems

Roads, fences, trails, rangeland conversions, and other human developments may impede or prevent animal movement and migration.

13. Declining wildlife populations

Wildlife populations (such as Neotropical migratory birds) may be declining.

14. Overabundance or unwanted growth of wildlife populations

Some wildlife species are exceeding habitat carrying capacity and may be contributing to site degradation. Overpopulation may be inferred from both habitat condition and utilization indices (such as overbrowsing or hedging of shrubs, scat, and weed proliferation) and harvest/ population data collected by the CDOW.

15. Poor water quality, channelized streams, and poor or weedy riparian vegetation

Riparian habitat is crucial to the survival of species in arid environments. In addition, the condition of fish habitat is intrinsically linked to the condition of adjacent riparian habitat and stream channel characteristics. Among other benefits, riparian vegetation moderates water temperatures, prevents stream bank erosion, and provides cover for fish. Amphibian and aquatic invertebrate species richness and diversity are strongly correlated with water quality and hydrologic conditions.

The primary causes identified for failure to meet Standard 3 include:

- Residual impacts from historic uses
- Old vegetation treatments or woodcuts
- Roads and road maintenance
- Fire suppression
- Livestock overgrazing
- Wildlife use, including excessive browsing by deer, elk, rabbits, and prairie dogs
- Wildland/urban/agricultural interface and associated activities; isolated BLM parcels
- OHV activity
- Recreation
- Recent fire
- Pipelines, canals, and other rights-of-way
- Livestock ponds
- Mining
- Water diversions, flow regulations, and augmented flows
- Dumping (such as trash and carcasses)

The primary causes identified for failure to meet Standard 2 (on Riparian Systems) include:

- Water diversions, flow regulations, and augmented flows
- Channelized streams
- Upstream water quality problems
- Residual impacts from historic use
- Old vegetation treatments or woodcuts
- Roads and road maintenance
- Livestock overgrazing
- Wildlife use, including excessive browsing by deer, elk, rabbits, and prairie dogs
- Wildland/urban/agricultural interface and associated activities; isolated BLM parcels
- Mining

Other potential causes for land health problems include:

- Drought or climate change
- Disease
- Oil and gas development
- Lack of keystone predators to control prey (including elk and deer) populations
- Sociopolitical challenges

Further discussion of land health trends and causal factors can be found in Section 2.2.5 on Vegetation.

FORECAST

With improved management and time, areas currently not meeting standards are expected to improve. However, some degraded areas, such as those dominated by cheatgrass or other weeds, may continue in their present condition, or become worse. These vegetation changes will in turn affect the composition and size of wildlife communities. The effects of habitat decline vary for each species. The population and habitat of more common wildlife and fish species are expected to remain relatively stable, while some generalist species may increase. Small or rare species and habitats are at higher risk for declines. As demand for resource values increases, these trends are likely to continue into the future.

POTENTIAL NEGATIVE IMPACTS

Oil and gas, coal, solar, and other energy-related projects have the potential to adversely impact wildlife habitat and populations. Other uses such as livestock grazing, water use, realty actions, and recreation may also have negative impacts. Streams could potentially be affected by development activities, resulting in increased sedimentation and adverse changes in water quality and aquatic habitat. To some extent, trends such as drought and disease are a result of natural factors, which may be beyond the control of management.

KEY FEATURES

The BLM UFO will continue to focus management and protection efforts on key wildlife and fish species and their habitats (shown in Table 2.20). The CDOW has identified several crucial habitats for elk, deer, and other big game species in the planning area, including production areas, movement corridors, summer and severe winter range, and others. Changes in these areas, such as loss or degradation of habitat, fragmentation, or disturbance during crucial seasons, could have a disproportionate effect on populations by reducing carrying capacity during critical periods. Data on raptor nest locations and status in the planning area are limited, although efforts are being made to improve this knowledge base. Nests and crucial habitat for raptors will continue to be priority areas for conservation. Furthermore, migratory birds and, in particular, species of conservation concern will continue to be monitored across the planning area, and protection measures will be implemented as necessary for compliance with the Migratory Bird Treaty Act and BLM policies. Key habitats identified for restoration and protection include sagebrush, pinyon-juniper, salt-desert shrub, riparian aquatic habitats, aspen, and cliff and cave features.

2.1.7 ☀ Special Status Species

INDICATORS

SPECIAL STATUS SPECIES

Special status species are those animals and plants that:

- have been proposed for listing or officially listed as threatened or endangered
- are candidates for listing as threatened or endangered under the provisions of the Endangered Species Act (ESA)
- have been listed by a State in a category such as threatened or endangered, implying potential endangerment or extinction
- have been designated by each BLM State Director as sensitive.

Habitat loss, competition, predation, disease, and other factors are to blame for species decline and imperilment. Habitat loss or modification due to human activity is the greatest threat to ecosystems, particularly for species adapted to specific ecological niches. BLM land management practices are intended to sustain and promote species that are legally protected, and prevent species that are not yet legally protected from needing such protection.

FOCUS ON HABITAT

Special status species indicators include population levels and density, breeding status, distribution and range, age class structure, and genetic diversity. Population and biological data for several special status species are tracked by the CDOW and Colorado Natural Heritage Program, and other partners, including the BLM, regularly assist with these studies. Both agencies focus primarily on population status and trends, while the BLM focuses its efforts on habitat management. The quantity and quality of preferred and suitable habitat, prey numbers, and threats to species are evaluated. Indicators of habitat condition include plant species composition, cover, vigor, production, browse levels, and other indices such as wildlife sign (including scat, tracks, and nests). The BLM also tracks conditions and restricts certain activities in critical breeding, foraging, and wintering areas and migration corridors.

PUBLIC LAND HEALTH STANDARD FOUR

While each of the Public Land Health Standards ultimately benefits wildlife, plants, and habitats, Standard 4 specifically addresses special status wildlife and plant species and their habitats. This standard requires stabilizing and increasing the population of endemic and protected species in suitable habitats, and protecting suitable habitat for recovery. Other

indicators include all those listed for healthy plant and animal communities under Standard 3 and riparian systems under Standard 2, which are addressed in Section 2.1.6. LHAs employ both quantitative and qualitative methods for evaluating the Standards for wildlife and habitats.

CURRENT CONDITION

Federal threatened and endangered species and designated critical habitat are managed by the FWS in cooperation with other federal agencies, with the ultimate goal of species recovery and viability. The BLM cooperates with the FWS to identify and manage critical habitat for listed species without habitat previously designated. Candidate species are managed to maintain viable populations in order to avoid listing. State of Colorado and BLM sensitive species are treated similarly. The BLM, the FWS, and the State of Colorado have developed formal and informal agreements to provide guidance on species management. Consultation is required on any action proposed by the BLM or another federal agency that "may affect" a listed species or critical habitat. Wildlife habitat types in the planning area are discussed under Current Conditions in Section 2.1.6 on Wildlife and Fish.

FEDERAL ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES

The ESA as amended (in 16 United States Code 1531-1534) mandates the protection of species listed as threatened or endangered of extinction and the habitats on which they depend. Section 7 of the ESA clarifies the responsibility of federal agencies to utilize their authority to carry out programs for the conservation of listed species. In addition, federal agencies must consult with the FWS to insure that any action authorized, funded, or carried out by the agency is "…not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species…"

Federally Listed Species

The UFO refers to the most current Colorado county list provided on the FWS website (www.fws.gov/mountain-prairie/endspp/CountyLists/Colorado.pdf) to analyze the effects of proposed actions on threatened, endangered, and candidate species and designated critical habitat for these species. Twelve federally protected species potentially occur in the planning area (as shown in Table 2.22). Federally designated critical habitat for three of these species also occurs in the planning area. Some species are not known to occur in the planning area, yet are included in this analysis and all other project planning efforts due to historic occurrences in the area, adjacent known occurrences, a presence of suitable habitat, insufficient survey coverage, potential expansions or shifts in species ranges, and other factors. In accordance with BLM Manual 6840, Special Status Species Management, federal

candidate species are managed as BLM sensitive species in order to prevent the need for future listing of species. Candidate species are discussed in the following section, BLM sensitive species.

TABLE 2.22 - FEDERALLY LISTED ANIMAL AND PLANT SPECIES[1]

SPECIES	FEDERAL STATUS	DESIGNATED CRITICAL HABITAT IN PLANNING AREA
Gila elegans Bonytail	Endangered	NO
Gila cypha Humpback chub	Endangered	NO
Xyrauchen texanus Razorback sucker	Endangered	YES
Ptychocheilus lucius Colorado pikeminnow	Endangered	YES
Oncorhynchus clarki stomias Greenback cutthroat trout	Threatened	NO
Mustela nigripes Black-footed ferret	Endangered	NO
Lynx canadensis Canada lynx	Threatened	NO
Strix occidentalis Mexican spotted owl	Threatened	NO
Empidonax traillii extimus Southwestern willow flycatcher	Endangered	NO
Eriogonum pelinophilum Clay-loving wild buckwheat	Endangered	YES
Sclerocactus glaucus Colorado hookless cactus	Threatened	NO
Boloria acrocnema Uncompahgre fritillary butterfly	Endangered	NO

Colorado River Endangered Fishes

The Gunnison, Uncompahgre, Dolores, and San Miguel Rivers all flow through the planning area into the Upper Colorado River system, which supports extant populations of these species. Within the planning area, ***Colorado pikeminnow*** occur in the Gunnison River and the lower reaches of the Uncompahgre River close to the confluence near Delta, Colorado. Recent data also suggests this species may occur in portions of the Dolores River. Historically, ***razorback suckers*** occurred as far upstream as the Gunnison and Uncompahgre River confluence. Today only small populations can be found in the Colorado River and in the Gunnison River upstream of the confluence (outside of the planning area). ***Bonytail*** once occurred in the Gunnison River and some likely occurred in the northwest corner of the planning area near Delta, Colorado. Today, no known populations occur in Colorado. The historical range of the ***humpback chub*** is similar to that of the pikeminnow. While this species may still be found in the lower portions of the Gunnison River near the

mouth, most occur in the Colorado River downstream of Grand Junction. This species likely does not occur in the planning area.

Greenback Cutthroat Trout (Oncorhynchus clarki stomias)

Habitat for the greenback includes cold-water streams and lakes with adequate spawning habitat (in gravelly riffles), often with shading cover. Young typically shelter in shallow backwaters. Greenbacks are a close relative of the Colorado River cutthroat trout, a BLM sensitive species found in similar habitats in the region. Distinguishing the two species is difficult and often impossible based on physical (phenotypic) characteristics alone. Recent genetic samples and tests have identified several Colorado cutthroat populations as having greenback cutthroat lineage. Therefore, consultation under Section 7 of the Endangered Species Act (ESA) is an interim measure until genetic and taxonomic issues are resolved. To date, known greenback populations in the planning area are few, and range is restricted to relatively short stream segments. Ongoing genetic testing could result in the identification of additional greenback cutthroat populations in the planning area.

Black-footed Ferret (Mustela nigripes)

While Gunnison and white-tailed prairie dog colonies occur in the planning area, according to inventory data, none of the prairie dog sites currently meets the habitat requirements needed to support black-footed ferrets: prairie dog colonies greater than 200 acres with a density of greater than eight burrows per acre. While there have been no sightings of black-footed ferrets in the region for at least 30 years (Bio-Logic 2004), historic records suggest that black-footed ferrets once occurred in the Uncompahgre and Gunnison River Valleys. Prairie dog numbers and distribution fluctuate largely as a result of sylvatic plague outbreaks and colony die-offs. Other threats include rangeland conversions, extermination or poisoning efforts, urban development, and recreational shooting.

Canada Lynx (Lynx canadensis)

Between 1999 and 2007, 218 lynx were released in the San Juan Mountains of southwestern Colorado. Many of the released animals remained within the core release area. Reproduction was first documented in 2003 with subsequent successful reproduction in 2004-2006. However, no successful dens were documented in 2007 or 2008. The first successful reproduction by a female lynx born in Colorado from introduced parents occurred in 2006. Snowshoe hare and red squirrel are the primary prey of lynx in this region. Preferred habitat for Canada lynx includes spruce-fir forests. This habitat type occurs at higher elevations or in mesic microsites (with north aspects, drainages, and cirques) and is limited in the planning area. Lynx likely move and disperse through upper-elevation BLM lands, and possibly at lower elevations, but are not known to reside in these areas. CDOW closely tracks and monitors lynx movements, and several research projects are underway to evaluate and guide reintroduction efforts.

Mexican Spotted Owl (Strix occidentalis)

Although widely variable by region and population, typical habitat for this species includes deep canyons with dense old growth conifers with high canopy cover and stand density. Mexican spotted owls are not known to occur within the planning area, although small, isolated areas of suitable habitat may be present in the west and north portions of the planning area. In the last twenty years, numerous Mexican Spotted Owl surveys have been conducted in the canyons, larger tributaries, and drainages of the Dolores and San Miguel, all with negative results. The nearest known occurrences are to the west around Moab, Utah, to the south near Mesa Verde National Park, and to the east around Canon City, Colorado.

Southwestern Willow Flycatcher (Empidonax traillii extimus)

Breeding habitats include riparian tree and shrub communities along rivers, wetlands, and lakes. Individuals winter in brushy grasslands, shrubby clearings or pastures, and woodlands, usually near water. In Colorado, historic and current breeding range includes the extreme southwest portion of the state. Although suitable habitat occurs in the region, the planning area is outside the current known range for the species.

Clay-loving Wild Buckwheat (Eriogonum pelinophilum)

Clay-loving wild buckwheat is confined to whitish alkaline, clay soils and soils of the Mancos Shale adobe badlands in Montrose and Delta counties, Colorado. Over 24 known occurrences of this buckwheat have been recorded. Sites range from one acre to over 200 acres and contain anywhere from 100 to over 10,000 individuals. Based on recent surveys, the total estimated population is likely more than 230,000 individuals.

Colorado Hookless Cactus (Sclerocactus glaucus)

Habitat for the Colorado hookless cactus (formerly called Uinta Basin hookless cactus) includes rocky hills, mesa slopes, and alluvial benches in desert shrub communities at elevations from 4,500 to 6,000 feet. Within the planning area, this species occurs primarily north of Montrose, Colorado, in the lower Uncompahgre River and Gunnison River valleys, with most subpopulations occurring near the city of Delta, Colorado. The Uinta Basin Recovery Plan estimated that 15,000 individual plants occur in the Gunnison River population. Recent surveys near Delta, Colorado, suggest total population size and distribution may be much larger than originally thought.

Uncompahgre Fritillary Butterfly (Boloria acrocnema)

The Uncompahgre fritillary butterfly occurs in the San Juan Mountains above 12,000 feet on moist, alpine slopes with extensive snow willow stands. Habitat is limited and no known populations occur in the planning area. The greatest known controllable threat is collecting by butterfly enthusiasts. Climatological patterns, disease, parasitism, predation, and trampling of larvae by humans and livestock are other possible threats.

This butterfly's distribution is restricted to two verified areas (inhabited by three colonies) and possibly an additional two small colonies in the San Juan Mountains and southern Sawatch Range in Gunnison, Hinsdale, and Chaffee counties in southwestern Colorado. The type locality is on Mount Uncompahgre in the Big Blue Wilderness, Hinsdale County, Colorado, and occurs on land managed by the USFS. A second colony also occurs on Mount Uncompahgre near the type locality. The only other known colony is the Redcloud Peak population discovered in 1982 on land managed by the BLM Gunnison Field Office. Despite numerous attempts to locate additional colonies, none has been verified.

TABLE 2.23 - SENSITIVE SPECIES KNOWN TO OCCUR AND POTENTIALLY OCCURRING IN THE PLANNING AREA

COMMON NAME	SCIENTIFIC NAME
FISH	
Roundtail chub	*Gila robusta*
Bluehead sucker	*Catostomus discobolus*
Flannelmouth sucker	*Catostomas latipinnis*
Colorado River cutthroat trout	*Oncorhynchus clarki pleuriticus*
MAMMALS	
Desert bighorn sheep	*Ovis canadensis nelsoni*
Gunnison's prairie dog	*Cynomys gunnisoni*
White-tailed prairie dog	*Cynomys leucurus*
Kit fox	*Vulpes macrotis*
Allen's (Mexican) big-eared bat	*Idionycteris phyllotis*
Big free-tailed bat	*Nyctinomops macrotis*
Spotted bat	*Euderma maculatum*
Townsend's big-eared bat	*Corynorhinus townsendii*
Fringed myotis	*Myotis thysanodes*
BIRDS	
Bald eagle	*Haliaeetus leucocephalus*
American peregrine falcon	*Falco peregrinus anatum*
Western yellow-billed cuckoo	*Coccyzus americanus*
Northern goshawk	*Accipter gentilis*
Ferruginous hawk	*Buteo regalis*
Burrowing owl	*Athene cunicularia*
Gunnison sage grouse	*Centrocercus minimus*
Columbian sharp-tailed grouse	*Tympanuchus phasianellus columbianus*
Long-billed curlew	*Numenius americanus*
White-faced ibis	*Plegadis chihi*
American white pelican	*Pelecanus erythrorhynchos*
Brewer's sparrow	*Spizella breweri*
Black swift	*Cypseloides niger*

COMMON NAME	SCIENTIFIC NAME
REPTILES and AMPHIBIANS	
Longnose leopard lizard	*Gambelia wislizenii*
Midget faded rattlesnake	*Crotalus viridis concolor*
Milk snake	*Lampropeltis triangulum taylori*
Northern leopard frog	*Rana pipiens*
Canyon treefrog	*Hyla arenicolor*
Boreal toad	*Anaxyrus boreas boreas*
PLANTS	
Grand Junction milkvetch	*Astragalus linifolius*
Naturita milkvetch	*Astragalus naturitensis*
San Rafael milkvetch	*Astragalus rafaelensis*
Sandstone milkvetch	*Astragalus sesquiflorus*
Gypsum Valley cateye	*Cryptantha gypsophila*
Fragile (slender) rockbrake	*Cryptogramma stelleri*
Kachina daisy (fleabane)	*Erigeron kachinensis*
Montrose (Uncompahgre) bladderpod	*Lesquerella vicina*
Colorado (adobe) desert parsley	*Lomatium concinnum*
Paradox Valley lupine	*Lupinus crassus*
Dolores skeleton plant	*Lygodesmia doloresensis*
Eastwood monkey-flower	*Mimulus eastwoodiae*
Paradox (aromatic Indian) breadroot	*Pediomelum aromaticum*
INVERTEBRATES	
Great Basin silverspot butterfly	*Speyeria nokomis nokomis*

BLM SENSITIVE SPECIES

BLM sensitive species may include Colorado State endangered, threatened, and special status species, BLM sensitive species, recently delisted species, and plant species ranked as critically imperiled (G1 or S1) or imperiled (G2 or S2) by the Colorado Natural Heritage Program. Sensitive species known to occur and potentially occurring in the planning area are listed in the table above.

Fish

Roundtail Chub (Gila robusta)

Roundtail chub habitats include warm to cool waters with rocky runs and rapids, and pools in creeks, streams, and rivers. Some reservoirs also harbor this species. Habitat features include cobble-rubble, sand-cobble, or sand-gravel substrate. The chub occurs in warm-water watersheds at lower elevations across the UFO, including the Lower Gunnison River downstream of the North Fork, Dolores River, and San Miguel River.

Bluehead Sucker (Catostomus discobolus)

While blueheads typically inhabit cool rivers and mountain streams, they are occasionally found in lakes and warm, turbid streams. Most occupied sites have moderate to fast flowing water above rubble-rock substrate. In the UFO, the species occurs in the lower Dolores River, lower San Miguel River, and lower Gunnison River watersheds.

Flannelmouth Sucker (Catostomas latipinnis)

Habitats for the flannelmouth sucker include rivers and creeks free of major impoundments and barriers. In the planning area, the species is known to occur in the lower Dolores, lower Gunnison, and lower San Miguel river watersheds.

Colorado River Cutthroat Trout (Oncorhynchus clarki pleuriticus)

This trout requires cool, clear water and well-vegetated streambanks for cover and bank stability, along with instream cover in the form of deep pools, boulders, and logs. Populations thrive in higher-elevation streams and lakes. A number of discrete populations occur across the planning area in mid- to high-elevation stretches and major tributaries of the Gunnison, North Fork of the Gunnison, Uncompahgre, San Miguel, and Dolores rivers.

Mammals

Desert Bighorn Sheep (Ovis canadensis nelsoni)

Important habitat requirements for the desert bighorn include escape terrain and areas with high visibility, with good forage sources and reliable water sources nearby. Terrain is typically rough, rocky, and broken by canyons and washes, with steep slopes being used for lambing and predator avoidance and cliff overhangs for shade on hot days. Desert bighorn utilize grass and shrub types, generally avoiding areas of dense vegetation and poor visibility. Water distribution can influence patterns of home range for some herds. In the UFO, desert bighorn sheep occur along the Lower Dolores River corridor and in the area around Roubideau Creek-Camelback Wilderness Study Area (WSA), including portions of the Dominguez-Escalante NCA. The Dominguez-Escalante-Roubideau herd is currently the largest in the state of Colorado.

Gunnison's Prairie Dog (Cynomys gunnisoni)

Gunnison's prairie dog habitats include level to gently sloping grasslands and semi-desert and montane shrublands, at elevations from 6,000 to 12,000 feet. Although historically present in the Uncompahgre River Valley and surrounding areas, this species now occurs primarily in the south and west portions of the planning area. A twelve-month finding by the FWS on a petition to list the Gunnison's prairie dog under the ESA determined that the species is not threatened or endangered throughout all of its range. However, the northeastern portion of the current range, located in central and south-central Colorado and north-central New Mexico, represents a significant portion of the range where the species is warranted for listing. At this time, federal listing is precluded by higher priority actions.

Only populations within the montane range of this species are being considered for listing at this time due largely to the relatively high threat of sylvatic plague at these elevations. Due to moist conditions more conducive to the flea vector, plague outbreaks appear to be more detrimental to populations within the montane range than colonies within the drier, low elevation prairie range. In the state of Colorado, montane areas account for approximately 80% of the prairie dog's available habitat, and 40% of its occupied habitat. Based on current information, no known occurrences of Gunnison's prairie dogs occur within the montane range on BLM lands within the planning area. However, one small colony occurs on private lands within the montane range near the town of Ridgway, Colorado. Genetic testing is underway to examine the differences, if any, between prairie and montane subpopulations.

White-tailed Prairie Dog (Cynomys leucurus)

Prairie dog habitats include level to gently sloping grasslands and semi-desert grasslands typically from 5,000 to 10,000 feet in elevation. Within the planning area, colonies are concentrated along the lower valleys of the Uncompahgre, Gunnison, and North Fork of the Gunnison rivers and adjacent lowlands. White-tailed prairie dog range converges with that of Gunnison's prairie dog in the upper Uncompahgre River valley region in Ouray County. Generally, most colonies east of the Uncompaghre Plateau are white-tailed, while colonies west of the plateau are Gunnison's prairie dogs (subpopulations). Genetic testing is underway to determine whether there is evidence of hybridization between these two species.

Kit Fox (Vulpes macrotis)

Kit foxes occupy sparsely covered, semi-desert shrublands of saltbrush, shadscale, and greasewood. Suitable habitat extends from north of Montrose to Grand Junction, Colorado. Kit foxes spend most of their days in scattered dens or burrows, which are very important for raising young and avoiding predators such as coyotes. Listed as endangered by CDOW, the kit fox is considered one of the state's most vulnerable animals, with only about 100 in residence. Studies are underway to determine the presence of this species in the planning area. Although thought to occur here in limited numbers, their true status is uncertain at this time.

Allen's (Mexican) Big-eared Bat (Idionycteris phyllotis)

Habitats for Allen's big-eared bat include mountainous, wooded areas (such as ponderosa pine, pinyon-juniper, and oak brush), riparian woodlands (such as cottonwood), and low-elevation deserts. This bat is typically found near rock and cliff features, and is frequently observed along streams or over ponds. Although not yet observed in the planning area, echolocation calls identified as being made by Allen's big-eared bat were recorded during recent surveys in the Paradox Valley. Suitable habitat for this species occurs across the planning area.

Big Free-tailed Bat (Nyctinomops macrotis)

Habitats for the big free-tailed bat include rocky areas in rugged country, shrubland deserts, and woodlands. The species roosts in cliff and cave crevices, and occasionally in tree cavities. Big free-tailed bats have been documented along the Dolores River in Montrose County. Recent surveys in the Paradox Valley recorded echolocation call sequences consistent with that of big free-tailed bats. The species is likely to occur across the planning area wherever suitable habitat is present.

Townsend's Big-eared Bat (Corynorhinus townsendii)

Townsend's big-eared bats commonly occur in mesic habitats characterized by coniferous and deciduous forests, but occupy a broad range of other habitats, including sagebrush steppes, juniper woodlands, and mountain shrub communities. Maternity and hibernation typically occur in caves and mine shafts. Maternity roosts for Townsend's big-eared bats were documented at Hieroglyphic Canyon west of Uravan and at Joe Davis Hill Project along the Dolores River. Roosting sites occur at several mines in the Dolores and San Miguel Canyons. Surveys in the Paradox Valley recorded echolocation call sequences consistent with that of Townsend's big-eared bats. The species is likely to occur across the planning area wherever suitable habitat is present.

Spotted Bat (Euderma maculatum)

Spotted bats inhabit desert to montane coniferous stands, including open ponderosa pine, pinyon-juniper woodland, and canyon bottoms, open pastures, and hayfields. Roost site characteristics are poorly known for this species, but limited observations suggest that spotted bats roost singly in crevices, characteristically with rocky cliffs and surface water. Spotted bats were documented through call identification during surveys in the Gunnison Gorge and Black Canyon National Monument. This bat is also expected to occur in other major canyons in western Montrose County near the Utah border.

Fringed Myotis (Myotis thysanodes)

Habitats for the fringed myotis include desert, grasslands, and woodlands. Common vegetation associations may include ponderosa pine, pinyon/juniper, greasewood, saltbush, and scrub oak. The species roosts in caves, mines, rock crevices, buildings, and other protected sites, and has been documented in several mines in Montrose and San Miguel counties. Recent surveys in the Paradox Valley region recorded echolocation call sequences consistent with that of the fringed myotis. Suitable habitat occurs throughout the planning area.

Birds

Bald Eagle (Haliaeetus leucocephalus)

Bald eagles concentrate near rivers, lakes, and adjacent uplands. In the planning area, most birds are observed along the Uncompahgre, San Miguel, and Gunnison Rivers. Although an active nest was recently recorded in Delta County, nests and breeding pairs are apparently

limited in the area. CDOW has identified winter forage, winter concentration, and roosts in the planning area. The bald eagle was removed from ESA federal listing in July 2007. Management of eagles and their habitat is guided by the delisting monitoring plan for five years, and the species is protected by the Bald and Golden Eagle Protection Act and Migratory Bird Treaty Act.

Peregrine Falcon (Falco peregrinus anatum)

Peregrine falcons occupy open, rugged terrain, typically on cliffs or similar features near water. Nests are often on cliff faces and, rarely, in trees. Peregrines and their habitat occur throughout the planning area, with the greatest concentration along the Dolores River in the Paradox Valley. Peregrine falcons were removed from ESA federal listing in 1999, and are currently managed under the delisting monitoring plan.

Western Yellow-billed Cuckoo (Coccyzus americanus)

Habitats for the cuckoo include extensive cottonwood galleries and riparian willow thickets with dense undergrowth. Suitable habitat occurs across the planning area, primarily at lower elevations. This species had not been reported in the region since the late 1980s until surveys in 2008 and 2009 detected and documented this species on private land near the North Fork of the Gunnison River. Breeding was also confirmed in the area. Recent data indicate that the species may also occur along the San Miguel River watershed, but this has not been confirmed. Recent sightings have been reported on private land along the Uncompahgre River south of Montrose, Colorado.

Northern Goshawk (Accipter gentilis)

In the western United States, goshawk habitats include coniferous forest and mature aspen woodlands, often on north-facing slopes. Northern goshawks typically nest in large blocks of forested habitats above 7,000. Nesting has been confirmed on adjoining U.S. Forest Service lands and is possible on higher elevation BLM lands in the UFO.

Ferruginous Hawk (Buteo regalis)

Habitats for the ferruginous hawk include open landscapes in grassland, shrubland, and juniper-pinyon woodland types. This species is often observed near prairie dog colonies and other rodent populations, their primary prey base. Based on the limited data available, the species is entirely migratory in the planning area, with birds overwintering and generally moving north in the early spring. Breeding and nesting by this species has not been reported. However, suitable habitat is abundant, particularly along the lower Uncompahgre and Gunnison River Valleys, and active nests may be identified during future surveys.

Burrowing Owl (Athene cunicularia)

Burrowing owls are primarily found in grasslands and mountain parks, usually in or near prairie dog towns. The burrowing owl also uses well-drained steppes, deserts, prairies, and agricultural lands. Burrowing owls require abandoned rodent burrows (typically prairie dog) for shelter and nesting. Abandoned prairie dog colonies eventually become unsuitable for

burrowing owls due to the collapse of burrow systems. Although uncommon, the species has been observed during breeding season in recent years (2007-2009) in the northeastern (Delta County) and southwestern (San Miguel County) portions of the planning area.

Gunnison Sage Grouse (Centrocercus minimus)

The Gunnison sage grouse is found in sagebrush communities, adjacent riparian meadows, and mixed mountain shrub communities with a diversity of understory grasses and forbs. Sagebrush provides essential cover and forage throughout the year. Three distinct Gunnison sage grouse populations occur wholly or partially within the planning area: 1) Crawford (west of Crawford, Colorado), 2) Cerro Summit-Cimarron-Sims Mesa (east and south of Montrose, Colorado), and 3) San Miguel (near Basin, Colorado). The San Miguel population occurs predominantly south of the planning area on lands managed by the BLM Dolores Field Office and Uncompahgre National Forest. However, historic habitat and sagebrush stands occur on adjacent UFO lands in San Miguel County, and there may be opportunities for improving habitat and local distribution. The species is currently under status review by the FWS to determine whether federal listing under the ESA is warranted.

Columbian Sharp-tailed Grouse (Tympanuchus phasianellus columbianus)

Sharp-tailed grouse prefer deciduous shrub or woodland communities with native grasses and perennial forbs. In Colorado, serviceberry provides critical winter food and cover. Grasses and forbs provide nesting cover and brood-rearing habitat. Other habitat types include sagebrush, Gambel oak, and aspen. Although sharp-tailed grouse historically occurred in the region, the species has not been reported in the area since it was observed in the Dominguez-Escalante region in 1994.

Long-billed Curlew (Numenius americanus)

Curlew habitats include lakes, ponds, wetlands, and adjacent grassland and shrub communities. This species has been documented as a migrant, but is not known to nest in the planning area.

White-faced Ibis (Plegadis chihi)

The white-faced ibis occurs in shallow ponds and lake margins, irrigated hay, and wet meadows. The species is known to occur in the planning area, primarily along the lower Uncompahgre and Gunnison river valleys, and breeding is possible according to Breeding Bird Survey data.

American White Pelican (Pelecanus erythrorhynchos)

Habitats for the pelican include rivers, lakes, reservoirs, estuaries, bays, and open marshes, as well as inshore marine habitats. Pelicans typically rest, roost, and locate their nests on islands or peninsulas (natural or dredge spoils) in brackish or freshwater lakes, or on ephemeral islands in shallower wetlands. Pelicans have been observed on the lower Gunnison River, although nesting has not been confirmed.

Brewer's Sparrow (Spizella breweri)

Brewer's sparrow habitats include sagebrush communities and other shrublands, such as mountain mahogany and rabbitbrush. Migrants can be observed in wooded, brushy, and weedy riparian, agricultural, and urban areas. The species occasionally occurs in pinyon-juniper woodlands. Primary breeding habitat includes sagebrush-dominated communities. Brewer's sparrows occur in suitable habitats throughout the planning area.

Black Swift (Cypseloides niger)

Active black swift nesting colonies occur adjacent to the planning area in the following areas: Ouray County, the towns of Telluride and Silverton, Black Canyon of the Gunnison River National Park, West Elk Wilderness, and Raggeds Wilderness. Most colonies are located on higher elevation USFS lands, although the species may also forage on adjacent BLM lands. There are unconfirmed reports of black swifts within the Dominguez-Escalante NCA planning area.

Reptiles and Amphibians

Longnose Leopard Lizard (Gambelia wislizenii)

Habitats for this lizard include lowland desert and semidesert areas with scattered shrubs or other low plants (such as sagebrush), especially in areas with abundant rodent burrows. Reported locations in the planning area include lowlands such as the Paradox and Uncompahgre valleys.

Midget Faded Rattlesnake (Crotalus viridis concolor)

The distribution of this rattlesnake species appears to be limited by the availability of rocky outcrops, which support many of their survival needs, including refuge and hibernacula. In the planning area, the species has been documented along the lower Gunnison, Dolores, and San Miguel rivers and tributaries.

Milk Snake (Lampropeltis triangulum taylori)

Habitats for the milk snake vary from desert scrub to grassland to scrub oak to pinyon-juniper, at elevations from 4,000 to 7,500 feet. Throughout most of their range, milk snakes are most often found in gravelly or sandy soils, and they typically do not inhabit areas with thick clay or hardpan. Known occurrences in the planning area include areas along the Uncompaghre and Gunnison river valleys. The species is also likely to occur in western portions of the planning area.

Northern Leopard Frog (Rana pipiens)

The northern leopard frog inhabits springs, slow streams, marshes, bogs, ponds, canals, flood plains, reservoirs, and lakes. Sites usually contain perennial water and aquatic vegetation. In the summer, the species is often observed in wet meadows and fields. Within the planning area, the species has been reported along the San Miguel, Uncompahgre, and Dolores rivers and major tributaries.

Canyon Treefrog (Hyla arenicolor)

The canyon treefrog requires temporary or permanent pools for breeding, typically in rocky canyons and streams. Because the species is primarily terrestrial, it is also found in arroyos and streambeds in pinyon-juniper communities. Several historical sightings occur within the planning area, primarily in the lower San Miguel and Dolores river watersheds. Most known populations occur in neighboring BLM field offices, including Grand Junction and Dolores.

Boreal Toad (Anaxyrus boreas boreas)

The boreal toad is a state endangered species not known to occur in the planning area. However, the species has been documented in Ouray County, south of the planning area. Limited habitat may occur at higher elevation BLM lands (above 7,500 feet) within the planning area, near lakes, ponds, meadows, and wetlands. Formerly widespread and common, boreal toads are now scarce except in localized areas.

Plants

Grand Junction Milkvetch (Astragalus linifolius)

Habitat for this milkvetch includes sparsely vegetated sites, often within the Chinle and Morrison formations and selenium-bearing soils, in pinyon-juniper and sagebrush communities at 4,800 to 6200 feet in elevation. Plants often occur on rocky slopes and in canyons. Based on current knowledge, the species is confined to the east side of the Uncompahgre Plateau. One occurrence along the west side of the plateau has been reported, but this is believed to be a misidentification of the species.

Naturita Milkvetch (Astragalus naturitensis)

Habitat for the Naturita milkvetch includes the cracks and ledges of sandstone cliffs and flat bedrock areas with shallow soil development, within pinyon-juniper woodlands at elevations of 5,000 to 7,000 feet. This species occurs on mesas adjacent to the Dolores River and its tributaries in Montrose and San Miguel Counties, including portions of the BLM Dolores Field Office. Recent surveys have found additional populations in region, including a population in the Dominguez-Escalante NCA area in the GJFO, and the species appears to be more abundant than originally thought.

San Rafael Milkvetch (Astragalus rafaelensis)

San Rafael Milkvetch habitat includes sandy clay gulches at the foot of sandstone outcrops, or among boulders along dry watercourses, and on gullied hills and washes in seleniferous soils at 4,500 to 5,300 feet in elevation. The species occurs in the Dolores River canyon, on side slopes, and tributary drainages near Uravan, Nucla, and Roc Creek.

Sandstone Milkvetch (Astragalus sesquiflorus)

Habitat for this milkvetch includes sandstone rock ledges, slickrock fissures, cliff talus, and sometimes, sandy washes at 5,000 to 5,500 feet in elevation. This species is found in the Dolores River canyon near Uravan and in the Paradox Valley area.

Gypsum Valley Cateye (Cryptantha gypsophila)

This cateye species is confined to scattered gypsum outcrops and grayish-white, often lichen-covered, soils of the Paradox Member of the Hermosa Formation at elevations from 5,200 to 6,500 feet. It is often the dominant plant at these sites. Although suitable habitats are present, particularly in the Paradox Valley region, no populations have been found in the planning area. Several known populations occur in neighboring BLM field offices.

Fragile (slender) Rockbrake (Cryptogramma stelleri)

Habitat for the fragile rockbrake includes cool, moist, sheltered calcareous cliff crevices and rock ledges, typically in coniferous forest or other boreal habitats. Known populations occur within the planning area, but are restricted to higher elevation lands administered by the USFS.

Kachina Daisy (Erigeron kachinensis)

This species of daisy occurs in wet, seasonally flooded sites and in the shallow caves or hanging gardens of red sandstone cliffs at 4,800 to 8,400 feet in elevation. One population occurs within the planning area in Coyote Wash near the Dolores River. Populations also occur along the Dolores River south and north of the UFO in the Grand Junction and Dolores Field Offices. Suitable habitat is present in the Dolores River vicinity and other similar areas in the UFO, and future surveys will likely discover additional occurrences.

Montrose Bladderpod (Lesquerella vicina)

This bladderpod species occurs in sandy-gravel soil comprised mostly of sandstone fragments over Mancos Shale adobe soils, primarily in pinyon-juniper woodlands or pinyon-juniper and salt desert scrub mixed communities at 5,800 to 7,500 feet in elevation. The species occurs less often in sandy soils in sagebrush steppe communities. Distribution centers on the Uncompahgre River Valley in south Montrose County and north Ouray County, with most occurrences near the town of Montrose. However, outlying subpopulations persist near Escalante Canyon just south of the Delta County line, and north to the Peach Valley area in GGNCA in Montrose County.

Colorado Desert Parsley (Lomatium concinnum)

This species of parsley prefers barren adobe soils derived from Mancos Shale in shrub-dominated communities including sagebrush, shadscale, or scrub oak at 4,300 to 7,300 feet in elevation. The species is found along the lower Uncompahgre and Gunnison River valleys in Montrose, Delta, and Ouray counties.

Paradox Valley Lupine (Lupinus crassus)

Paradox Valley lupine is typically found in or near pinyon-juniper or juniper woodland at 5,000 to 5,800 feet in elevation, on shales, quaternary alluvium, and other sparsely vegetated soils. The species is often found in drainages in the Paradox Valley near Nucla and Naturita.

Dolores Skeleton Plant (Lygodesmia doloresensis)

Habitat for the Dolores skeleton plant includes juniper-shrub or juniper-grassland communities in reddish-purple alluvial soils derived from sandstone outcrops at 4,000 to 5,500 feet in elevation. Most plants occur along benches between canyon walls and the river in juniper, shadscale, or sagebrush communities. Distribution includes the Dolores River Valley near Gateway, Colorado, (in the Grand Junction Field Office), and Grand County, Utah. Although not confirmed, this species potentially occurs along the Dolores River corridor within the planning area.

Eastwood Monkey-flower (Mimulus eastwoodiae)

The Eastwood monkey-flower occurs exclusively in hanging gardens in the shallow alcoves or horizontal cracks of sandstone canyon walls at 4,700 to 5,800 feet in elevation. Several subpopulations occur in a series of seep alcoves along Escalante Canyon in Delta County (Dominguez-Escalante NCA). Several other locations occur just outside the UFO along the Dolores River.

Paradox Breadroot (Pediomelum aromaticum)

This breadroot species prefers open pinyon-juniper, sagebrush, and shadscale communities in sandy or clay soils on adobe hills or in dry washes at 4,800 to 5,700 feet in elevation. This plant is often found alongside the Paradox Valley lupine. (See description above.) The distribution of this breadroot is concentrated in the Paradox Valley of western Montrose County, although additional occurrences have been found along the Dolores River and its tributaries.

Invertebrates

Great Basin Silverspot Butterfly (Speyeria nokomis nokomis)

The Great Basin silverspot butterfly is found in arid, streamside meadows and open seepage areas, typically with an abundance of the northern bog violet (Viola nephrophylla) upon which this species depends. The colonies of the silverspot are often isolated. Historic records indicate that this species occurred somewhere in the Paradox Valley, although the exact location is uncertain, and habitats do not appear suitable in that area. A known population occurs in the Grand Junction Field Office in the Unaweep Canyon area, north of the UFO.

TRENDS

By definition, the populations, and often habitats, of all special status wildlife species have historically suffered downward trends. However, due to protection and recovery efforts, some populations (such as peregrine falcon and bald eagle) are stabilizing. Management efforts by the FWS, CDOW, BLM, and others have reversed the downward trend for a

number of these populations. Nevertheless, none of the populations are thought to be near their historic levels, and most remain biologically insecure, regardless of their legal status.

Current and future threats include habitat loss and fragmentation, poaching, predation, disease, invasive species, and others. Habitat degradation and loss are caused by, or exacerbated by, historic overgrazing, oil and gas development, mining, water diversions, recreation, agriculture, residential development, and other human activities. Natural processes such as fire, drought, vegetation type conversions, and climate change may also contribute to landscape changes over time. It is not known which species will be able to adapt to these changes and persist over time. Pinyon-juniper, riparian, sagebrush, and salt-desert shrub have been determined to be at-risk habitats and harbor many of our special status and rare species.

LHA OBSERVATIONS

Healthy plant communities typically translate into healthy habitats for fish and wildlife. Therefore, most sites that met Standard 3 (for Healthy Native Plant and Animal Communities) were also found to meet Standard 4 (for Special Status Species). However, because special status species are typically restricted in their range and have narrower habitat requirements, achieving Standard 3 does not necessarily guarantee that Standard 4 will be met. Conversely, an area may have failed to meet Standard 3 but met Standard 4 simply because no special status species or habitat occur in an area. Where a site failed to meet, or fell short, of land health standards, the problems entailed one or more of those identified for common fish and wildlife. Refer to the Trends subsection of Fish and Wildlife in Section 2.1.6 for a list of the most common land health problems observed across the planning area and a description of causal factors.

FORECAST

The future of most special status wildlife species within the planning area depends on the degree to which threats can be eliminated or ameliorated, and populations and their habitat can be restored and protected. With time and improved management practices, areas currently not meeting land health standards are expected to improve. However, some degraded areas, such as those dominated by cheatgrass or other weeds, may continue in their present condition, or possibly become worse. As demand for resource values increases, these trends are likely to continue into the future.

Oil and gas, coal, and solar resources, and energy-related projects have the potential to adversely impact wildlife habitat and populations. Other uses such as livestock grazing, water use, realty actions, and recreation may also have negative impacts. Streams could potentially be affected by development activities, resulting in increased sedimentation and adverse changes in water quality and aquatic habitat. To a degree, some trends are a result of natural

factors, such as drought and disease, and may be beyond management's control. Conservation efforts can be improved by obtaining more complete information on the biology and distribution of special status wildlife species within the planning area, as well as by monitoring these populations.

KEY FEATURES

The UFO will continue to focus management and protection efforts on special status species and their habitats (listed in Tables 2.22 and 2.23). Key features and areas include core populations, historic habitats, occupied and suitable habitats (particularly those near known populations), federally designated critical habitats, and important landscape connectivity features such as movement corridors. Key habitats include plant ACECs (discussed in Section 2.3.1), perennial streams, riparian and wetland vegetation, sagebrush, pinyon-juniper, salt desert shrub, cliff and cave features, Mancos Shale, and other rare, unique, or diverse habitats. The UFO will continue to improve its knowledge base of the distribution and status of these species across the planning area and will develop and apply standardized protection measures to enhance the conservation and recovery of these species.

2.1.8 ☀ Wild Horse and Burro

CURRENT CONDITION

The UFO manages one Herd Area located in the Naturita Ridge area, south of the town of Naturita. Through analysis and decision of the 1985 San Juan/San Miguel RMP, all wild horses in this area were removed. The Herd Area continues to be closed to wild horses.

TRENDS

Following the passage of the Wild Horse and Burro Act of 1971, it was estimated that the Naturita Ridge wild horse herd roamed an area of 63,000 acres. Nearly 10,000 acres of their estimated range at that time was private land. The analysis for the 1985 San Juan/San Miguel RMP and EIS estimated the roaming area for the herd had diminished to 9,300 acres of public land and 330 acres of private land. In 1984, the herd population was estimated at seventeen.

Factors supporting the decision to close out the population on Naturita Ridge included the segmentation of the area by private land and pasture fences, conflicts with private land uses, elk herds, and livestock. In addition, the population was not large enough to sustain a viable genetic base.

FORECAST

The RMP revision will include analyzing the reaffirmation of the 1985 San Juan/San Miguel RMP decision to close the Naturita Ridge herd area.

2.1.9 ☀ Wildland Fire Ecology and Management

BACKGROUND

FEDERAL WILDLAND FIRE MANAGEMENT POLICY (FWFMP)

The FWFMP was developed by the secretaries of the departments of Interior and Agriculture in 1995 in response to dramatic increases in the frequency, size, and catastrophic nature of wildland fires in the United States. The 2001 Review and Update of the 1995 FWFMP consists of findings, guiding principles, policy statements, and implementation actions, and replaces the 1995 FWFMP. Known as the 2001 FWFMP, this update directs federal agencies to achieve a balance between fire suppression to protect life, property, and resources, and fire use to regulate fuels and maintain healthy ecosystems. The FWFMP provides nine guiding principles fundamental to the success of the federal wildland fire management program and the implementation of review recommendations. These umbrella principles compel each agency to review its policies to ensure compatibility. BLM policies are reflected in the fire management planning process and this plan.

The FWFMP identifies the following guiding principles:

- Firefighter and public safety is the first priority in every fire management activity
- The role of wildland fire as an essential ecological process and natural change agent will be incorporated into the planning process
- Fire management plans (FMPs), programs, and activities support RMPs and their implementation
- Sound risk management is a foundation for all fire management activities
- Fire management programs and activities are economically viable, based on values to be protected, costs, and land and resource management objectives
- FMPs and activities are based on the best available science
- FMPs and activities incorporate public health and environmental quality considerations
- Federal, state, tribal, local, interagency, and international coordination and cooperation are essential
- Standardization of policies and procedures among federal agencies is an ongoing objective.

The National Fire Plan

The Secretaries of Interior and Agriculture initiated a National Fire Plan in 2000 to address the principles outlined in the FWFMP. The National Fire Plan is a nationally coordinated

effort to protect communities and natural resources from the harmful effects of increasing wildland fire occurrence and severity in the United States. The National Fire Plan establishes the overarching purpose and goals, which are articulated and carried forward through the 10-Year Comprehensive Strategy (USDA and USDI 2002), the Cohesive Strategy for Protecting People and Sustaining Natural Resources, and other supporting documents.

Unit Fire Management Plans

Under the FWFMP, every unit (such as a field office) within a federal land management agency that has vegetation capable of sustaining wildland fire is required to prepare an FMP. The FMP is a strategic plan that outlines a program for managing wildland and prescriptive vegetation treatments. The foundation of the FMP is a unit's land use plan. FMPs are dynamic documents that are reviewed annually and updated whenever better information is available. The plan is supplemented by operational plans, such as preparedness plans, dispatch plans, prescribed fire plans, and prevention plans. Development of this collaborative FMP is an essential implementation task and performance measure for accomplishing the goals of the National Fire Plan and the 10-Year Comprehensive Strategy. The FMP is the on-the-ground operational framework by which the Montrose Interagency Fire Management Unit implements national direction for wildland fire suppression, wildland fire use, fuels treatment, emergency stabilization and rehabilitation, and community assistance and protection programs. (See Section 3.1.8 on Wildland Fire Ecology.)

INDICATORS

FIRE REGIME CONDITION CLASSES

National and State BLM fire policy requires current and desired resource conditions related to fire management be described in terms of three condition classes and five fire regimes. The Fire Regime Condition Classification System measures the extent to which vegetation departs from reference conditions (or how the current vegetation differs from a particular reference condition). Departures from reference condition could be a result of changes to key ecosystem components such as vegetation characteristics, fuel composition, fire frequency, fire severity, and pattern, as well as other associated disturbances, such as insects and disease mortality. The classification system is used to categorize existing ecosystem conditions and to determine priority areas for treatment as mandated by national direction.

Fire Regime Condition Class 1: "…fire regimes in this condition class are within historical ranges. Thus, the risk of losing key ecosystem components from the occurrence of fire remains relatively low. Maintenance management such as prescribed fire, mechanical treatments, or preventing the invasion of non-native weeds, is required to prevent these lands from becoming degraded."

Fire Regime Condition Class 2: "Fire regimes on these lands have been moderately altered from their historical range by either increased or decreased fire frequency. A moderate risk of losing key ecosystem components has been identified for these lands. To restore their historical fire regimes, these lands may require some level of restoration as through prescribed fire, mechanical or chemical treatments, and the subsequent reintroduction of native plants."

Fire Regime Condition Class 3: "These lands have been significantly altered from their historical range. Because fire regimes have been extensively altered, risk of losing key ecosystem components from fire is high. Consequently, these lands are on the verge of the greatest risk of ecological collapse. To restore their historical fire regimes before prescribed fire can be utilized to manage fuel or obtain other desired benefits, these lands may require multiple mechanical or chemical restoration treatments, or reseeding."

Inadequacies of the Fire Regime Condition Classification System

The Fire Regime Condition Classification System may not be an appropriate indicator for Wildland Urban Interface (WUI) areas, since WUI areas may be maintained in an altered vegetative state (with more early seral present than under reference conditions) in order to protect life and property. This is probably also true for those polygons with other significant resource needs, such as deer and elk winter range and sage grouse habitats.

Because there is some subjectivity to the process, as well as issues with scale, the UFO staff has not wholly embraced the Fire Regime Condition Classification System and has performed only a cursory examination of vegetation types within the planning area. Based on the analysis conducted by the BLM fire ecologist and fuels specialists, most of the vegetation types within the planning area were identified as belonging to Condition Class 2.

Fire Size

Another indicator of possible changes to fire regimes, including changes in vegetation, is the number of large fires that have occurred in the past 15 years. Beginning in about 1993, numerous large fires ignited on southern and southwestern aspects, primarily in pinyon-juniper vegetation, and moved upward into ponderosa pine. These fires ranged from hundreds of acres to 5,000 acres in size, with the largest burning over 31,000 acres. Although historically rare, this type of fire may have been part of the prehistoric fire regime. While there were no large fires within the planning area during 2006, 2007, or 2008, the 800-acre Grammar Fire occurred in 2009. The trend is somewhat uncertain, given the continuity of vegetation types in the absence of significant disturbance over the past 120 years, coupled with changes in climate, as well as other unknown factors. The increasing incidence of larger fires should be considered when planning both fire and fuels management activities, as well as resource management actions.

CURRENT CONDITION

UFO FIRE MANAGEMENT PLAN

The UFO FMP was written and approved in 1998, and has undergone three revisions in order to incorporate national policy changes, as well as minor changes gained through experience. The plan addresses wildland fire use for resource benefits over a large part of the planning area. In addition, the plan outlines constraints on fire management activities as needed to protect natural and cultural resources. Numerous management polygons were developed for the plan, with emphases on Wildland Urban Interface (WUI), winter range for deer and elk, and sage grouse habitat. In addition, polygons were designated for fire exclusion, as well as the use of fire as a natural process.

Vegetation mosaics were identified that best characterize a desired future condition in terms of a range of variability in seral stage (early, early mid, mid, and late) and patch size (in acres). Mosaics have been helpful in designing and planning mechanical fuels reduction treatments and, to some extent, prescribed burns, but have been of limited value for analyzing and managing Wildland Fire Use events which sometimes burn larger and hotter than is ideal (such as deer winter range). ***Wildland Fire Use*** is the management of naturally ignited fires to achieve resource benefits, where fire is seen as a major component of a healthy ecosystem.

The FMP is a primary document supporting the development of vegetation treatment projects for fuels management, to enhance ecosystem processes, and for wildlife, range, or watershed enhancement. FMPs for Black Canyon of the Gunnison NP, the USFS, and the BLM Gunnison Field Office are similar in direction to the UFO FMP, allowing for seamless management of fire and fuels across jurisdictional boundaries.

Fire Management Units (FMUs)

In the next few years, an effort will be made to integrate each local agency's FMP into a single Montrose Interagency Fire Management Unit FMP. The Montrose Interagency Fire Management Unit contains 17 smaller FMUs delineated by similar vegetation type and natural processes. FMUs are designed to help describe fire history, fire ecology, and suppression needs and constraints on a landscape scale. FMUs describe the vegetation and fuels situation, as well as some of the more significant land management issues within each area, making them extremely useful in managing wildland fire across the landscape, and as part of the Fire Planning Analysis budget process. Thirteen of the 17 FMUs include lands managed by the UFO. The current UFO FMP (2008 revision) includes a description of these FMUs (available online at www.UFORMP.com).

WILDLAND URBAN INTERFACE (WUI)

WUI is defined as those areas in which undeveloped wildlands meet or intermix with human development, ranging from communities and subdivisions to isolated structures and infrastructure (such as communication sites and powerlines). WUI is an issue throughout much of the planning area. These areas present a management challenge, not just from a fire perspective, but also with regard to wildlife habitat, travel management, recreation, watersheds, and exotic species. Continuing collaboration with the Colorado State Forest Service, county and community leaders, industry representatives, and homeowners associations is essential in order to mitigate some of these issues, particularly regarding fuels management and fire suppression. Over the past eight years, numerous fuel management projects involving extensive acreage within the planning area have been designed and implemented in WUI areas.

FIRE SUPPRESSION

The UFO has a moderate fire suppression load, which can range from as low as 30-40 fires per year with a few hundred acres burned to 70-90 fires per year, with several thousand acres burned. As part of the larger Montrose Interagency Fire Management Unit, fires are managed across jurisdictional boundaries as needed, sometimes including prioritization of suppression needs. The majority of fires and acres burned occur in the pinyon-juniper vegetation community, where fuels are typically more available than in lower grassland communities that may be grazed or impacted by drought. Fires also occur in grassland, desert shrub, oakbrush, ponderosa pine, and occasionally in spruce/fir/aspen vegetation, although the acres burned tends to be lower in these communities. Wildland Fire Use fires are designated 5-10 times each season within the UFO depending on the forecasted ability of the fire to meet desired resource objectives through a naturally occurring fire. Wildland Fire Use acres burned range from 10-20 acres per year to 2,000-3,000 acres per year.

FUEL MANAGEMENT OBJECTIVES

Prescribed Fire

Prescribed fires are implemented regularly with 4-5 burns each year totaling approximately 600-1,000 acres. The majority of burns are located in previous mechanical treatments with the objective of reducing dead and down fuels and maintaining a mosaic of earlier seral stages across the landscape. The majority of burns in recent years have been implemented in WUI areas in order to keep fuel loadings and continuity low so that subsequent wildfires would burn with reduced intensity and resistance to control.

Mechanical Fuel Reduction

Mechanical fuel reduction treatments are aimed primarily at reducing fuel loadings and future fire behavior with secondary objectives of improving wildlife habitat, range, and watershed conditions. Tools used for mechanical treatment include roller choppers, hydro-

axes, brush beaters, hand crews, and small timber sales. Between 1,500 and 4,900 acres of mechanical treatment are implemented each year within the UFO.

TRENDS

CHALLENGES FOR THE FIRE PROGRAM

Wildland Urban Interface

WUI areas have been increasing dramatically throughout the planning area over the past two decades. Many large pieces of private land adjacent to BLM lands have been subdivided, while smaller acreages within larger pieces of contiguous BLM land are also being developed. Many of these subdivisions contain 35 to 40-acre parcels, while others contain three to ten-acre parcels. Development has slowed due to the current large-scale economic downturn, but this slowdown is expected to be temporary, and subdividing of large blocks of private land is expected to continue into the near future. Additional WUI infrastructure includes powerlines, pipelines, and communications sites, as well as some recreation and energy sites. Much of the UFO fuel management budget is being used to plan and implement fuel treatments within the WUI, with the objective of reducing risk to these values. Many of the more intensive and costly fire suppression actions occur within and adjacent to the expanding WUI.

Invasive Plants

Exotic species are a growing concern in fire management. (See Section 2.1.5 on Vegetation Communities and Noxious Weeds.) Most fire management activities are either surface or vegetation disturbing and subsequently, the impacts from these activities include increased susceptibility to exotic species. The most significant, widespread, and persistent threat is the invasion of cheatgrass (*Bromus tectorum*) into disturbed areas. The potential impact of exotic species invasions, as well as mitigation measures that must be followed in order to reduce, or if possible, eliminate the risk, are carefully considered in planning for mechanical and prescribed burn treatments, as well as Wildland Fire Use events. Rehabilitation of the impacts from large wildfires is primarily aimed at quickly reestablishing native vegetation that can compete with invasive species. Regular monitoring of treatments, as well as treating exotic species in and near treatments, is the key to maintaining healthy landscapes.

Smoke Impacts

Smoke management, primarily from prescribed burning, is always an issue. With increasing population and the changing demographics of the communities, the aesthetic impacts of smoke cannot be ignored. Although no known violations of National Ambient Air Quality Standards from prescribed burning have occurred within the planning area, fire managers and burn bosses typically manage smoke based on aesthetic issues and public perception, which can be more restrictive than air quality standards. Because tourism, and consequently,

Visual Resource Management (VRM) is very important to communities within and adjacent to the planning area, this community aspect cannot be ignored. The fire program continues to work with the State's Air Pollution Control Division to find ways to increase our ability to burn more acres each year. These relationships are critical for maintaining and improving our ability to utilize fire as a management tool.

BENEFITS MAKE PRESCRIBED FIRE WORTH THE EFFORT

Given the trends outlined above, the continued and increased use of prescribed fire as a management tool will take extraordinary effort on the part of fire managers, education specialists, resource specialists, and line management. While each of the trends alone presents a challenge, when combined the task for fire and resource personnel becomes significant. Although this increasing difficulty can make it tempting to replace prescribed burns with solely mechanical treatments, the ecological impacts of each are very different, as are the longevity of the treatments. The use of prescribed fire in the planning area as both a fuels and resource management tool is well worth supporting and pursuing, as well as for both the on-site ecological processes and as a landscape scale disturbance mechanism; its use should continue to be a priority.

A CHANGING CLIMATE

Climate change is a difficult issue to quantify. Research indicates that changes are occurring (Global Climate Change Impacts in the US, 2009) and fire management seems to be readily impacted by minor changes in climate, both in the frequency, intensity, and size of fires but also in the vegetative recovery of burned areas. As fires are managed, as Wildland Fire Use is designated, and as prescribed burns and mechanical treatments are planned and implemented, it will continue to be important to maintain resiliency and redundancy across the landscape so that the ecological system can adjust to changes in climate. The latest global and local research and recommendations should be read and understood to better understand the management of natural resources in a changing climate.

A SHRINKING FIRE BUDGET

Because future budgets cannot be forecast, it is important to maintain flexibility within the fire program so that resources can be shifted to those emphasis areas that are being funded, while maintaining the long-term capability to perform all aspects of the fire management job.

FORECAST

As the WUI expands, exotic species increase and invade new areas, the public perception of air quality changes demographically, and budgets remain static or shrink, the complexity of managing wildland fire and fuels within the planning area will continue to increase. It will be

essential to educate the public, hire and retain high quality employees with progressive ideas, and use adaptive management. Fire suppression will continue to be the most acceptable task performed by the fire program, with mechanical fuels treatments following close behind. The most difficult task will continue to be the implementation of landscape-scale prescribed burns for fuels reduction and vegetation management, as well as the management of naturally ignited fires for resource benefits.

2.1.10 ☀ Cultural and Heritage Resources

INDICATORS

The term ***cultural resource*** refers to historic or architectural objects, sites, structures, or places with potential public and scientific value, including locations of traditional cultural, ethnic, or religious significance to a specific social or cultural group. Cultural resources are located, classified, ranked, and managed through a system of identifying, protecting, and utilizing them for public benefit. Fragile and irreplaceable, cultural resources represent an integral part of American heritage. Cultural resources have a definite location of human activity, occupation, or use identified through field inventories, historical documentation, or oral evidence (BLM Manual 8110). Archaeological resources are a subset of cultural resources that include any material remains of human life or activities that are at least 50 years old, and are of archaeological interest (as defined in 43 CFR 7.3). Native American religious concerns, a critical element noted in Appendix 5 of the BLM NEPA handbook, will be addressed in Section 2.4 on Social and Economic Conditions.

Prehistoric or historic cultural resource sites, structures, or objects listed in or eligible for listing in the National Register of Historic Places are managed as directed by 36 CFR 800, Protection of Historic and Cultural Properties. These regulations stipulate that cultural resources must be assessed for integrity of location, design, setting, materials, workmanship, feeling, and association. A property may be considered eligible for listing on the National Register if it retains sufficient integrity of these elements and meets certain criteria outlined in National Register Bulletin 15 (NPS 1997). As listed in 36 CFR Part 60, Historic Properties (including prehistoric and historic archaeological sites and places considered important to Native Americans) must meet a specific set of criteria:

The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

- That are associated with events that have made a significant contribution to the broad patterns of our history
- That are associated with the lives of persons significant in our past
- That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction

- That have yielded, or may be likely to yield, information important in prehistory or history (NPS 1997).

ASSESSING RESOURCE CONDITIONS

The condition of a cultural resource is assessed through field observation, inventory, and project review. The primary indicator is whether the characteristics that would qualify a resource for National Register of Historic Place listing, or the cultural values of an area important to Native American or other traditional communities, have been lost or diminished. These characteristics can be affected by physical destruction, damage, neglect, alteration, isolation, transfer, sale, or lease of a resource, or alteration of the resource setting. Specific indicators include the extent or intensity of natural weathering, erosion, wildfire, ground disturbance, grazing, recreation use, and unauthorized collection, intrusion, and vandalism. This loss affects the completeness and accuracy of the scientific information that can be derived from a resource, the aesthetic, historic, or interpretive value of a resource, and the importance of a resource in maintaining social and cultural traditions.

Over the past five decades, various large and small cultural projects have been conducted in the planning area. Range improvement projects, wildland fire rehabilitation, recreation projects, realty actions, oil and gas development, and minerals extraction (including uranium and coal) continue to expand the number of inventories completed and cultural resources identified.

Cultural Resource Units

For ease of discussion in this AMS, the cultural resources staff has divided the planning area into four cultural resource units (as shown in Map 2-13 on page 588):

Uncompahgre Unit

The Uncompahgre unit encompasses lands along the northeastern flank of the Uncompahgre Plateau in Ouray, Montrose, Delta, and Mesa counties, including the Dry Creek Basin, Roubideau Canyon, Escalante Canyon, Little Dominguez and the adobe badland flanks of Grand Mesa north of Delta. Existing data indicates that the unit covers some 498, 952 acres, of which 29, 937 acres (6%) have been surveyed. There are 655 survey reports and 1,968 recorded sites in the Uncompahgre Plateau unit.

North Fork Unit

The North Fork unit includes all BLM-administered public lands situated north and east of the Gunnison Gorge NCA. The unit encompasses some 433,809 acres, of which 6,507 acres (1.5%) have been surveyed. There are 227 survey reports and 94 recorded sites in the North Fork unit.

Ouray Unit

The Ouray unit is generally characterized by higher elevations and less intensive use. The unit extends alone the eastern margin of the UFO from Ouray on the south to the Black

Canyon on the north, and includes some 520,270 acres of which 6,234 acres (1.2%) have been inventoried. There are 134 Survey reports and 165 recorded sites.

West End Unit

The West End encompasses all BLM-administered lands in the western half of the UFO, including lands on the southern flank of the Uncompahgre Plateau, the San Miguel River drainage, Paradox Valley and the Dolores River canyons south of Gateway. The unit covers some 631,287 acres, of which 48,609 acres (7.7%) have been inventoried. There are 1,320 survey reports and 2,536 recorded sites in the West End.

TABLE 2.24 - CULTURAL PERIODS

ERA	TIME PERIOD	CULTURAL ADAPTATION
Paleo Indian	Before 7000 BC	• Big-game subsistence patterns • No dated sites from this period, although projectile points have been recovered • Sites are significant due to their scarcity
Archaic	7000 BC – AD 1	• Hunting and gathering lifestyle likely, with well-established seasonal rounds for resource procurement • Projectile points and camps have been found and further discoveries are likely
Formative	AD 1 – AD 1250	• Introduction of bow and arrow, ceramics, and farming with associated sedentary lifestyle and population growth • More permanent settlements and associated cultural resources remain from these cultures • Scientific uncertainty remains concerning their origin and disappearance • Identification of additional sites would be scientifically beneficial • Formative Era sites in the planning area are associated with both Anasazi and Gateway cultures in the West End and with the Fremont complex

ERA	TIME PERIOD	CULTURAL ADAPTATION
Post-Formative	AD 1250 – AD 1600	• Return to hunting-gathering traditions with limited use of ceramics and horticulture • expansion of the historically known Numic (Ute, Paiute, Shoshone and Comanche) and Athabaskan (Navajo and Apache) peoples • Diagnostic artifacts include small unnotched or sidenotched projectile points and Ute Intermountain Tradeware ceramics • Later traits include equestrian rock art motifs, European trade goods, wickiups, and a possible increase in the use of obsidian • Identification of additional sites would benefit further research
Historic	Post AD 1600	• Euro-American settlement patterns associated with agriculture, homesteading, limited ranching, farming, minerals development, and transportation
Multiple	Any	• Multi-component sites occupied over at least two identifiable time periods within the same geographical boundaries (such as Anasazi site with Historic campsite)
Unknown Aboriginal	Unknown	• Unknown Aboriginal sites with prehistoric type artifacts • Lack diagnostic materials making assignment to a specific prehistoric time period impossible

CURRENT CONDITION

Cultural resources include prehistoric and historic archaeological and architectural structures, features, and objects, as well as Native American traditional cultural and religious properties. Prehistoric properties include lithic scatters, quarries, temporary camps, extended camps, wickiups, hunting/kill/butchering sites, processing areas, tree scaffolds, rock shelters, formative era stone structures, caves, rock art panels, trails, and isolated finds. Historic properties include homesteads, trails and roads, irrigation ditches, reservoirs, mining sites, corrals, line camps, cabins, trash scatters, and isolated finds. Together these properties represent human use of the area by Native American and Euro-American cultures, covering a timeframe from the Paleo-Indian period (11,500 BC) through the present. (Table 2.24 provides a description of these cultural periods.)

During consultation, the Ute Tribes have indicated that the UFO encompasses part of their ancestral homeland, thereby increasing the potential of traditional cultural properties and sacred sites. At present, the Ute Tribes have identified several sacred/religious sites and special use areas.

TRENDS

Factors influencing cultural resource trends include the presence and condition of cultural sites, landscapes, or places of traditional use. The current condition of cultural resources in the planning area is highly variable due to the diversity of terrain, geomorphology, access, visibility, and past and current land use patterns. Adherence to Section 106 of the National Historic Preservation Act and the BLM policy of avoiding impacts to cultural resources provides for the continued identification and preservation of cultural resource sites. Few research-based surveys or Class II inventories have been conducted, and much of the information used to help identify the characteristics of the planning area is generally based only on where disturbance has previously occurred, rather than where sites are likely to occur. Most surveys conducted in the planning area comply with Section 106, meaning that the surveys are conducted as needed to identify cultural resources in a project-specific context and generally are not statistically valid samples of a region.

DECLINE IN SITE CONDITIONS

In general, site conditions are considered to be declining, mainly due to natural erosional processes, increased casual use of public lands, and limited site monitoring and protection. Exposed sites and associated artifacts, features, and structures are easily disturbed by natural elements such as wind and water erosion, deterioration, decay, animal and human intrusion, and development and maintenance activities. Vandalism to sites and cultural artifacts (such as unauthorized digging and pot hunting) has been documented, and is illegal under the Archaeological Resources Protection Act. Archaeological and historic sites are also known to be deteriorating from a variety of causes. Collectively, these agents have adversely affected many known cultural resources.

Conditions have remained stable for cultural resources identified through compliance activities associated with Section 106 and the *State Protocol Agreement between the Colorado BLM and the Colorado State Historic Preservation Office*. Although realty actions and energy and mineral activities continue to be conducted in proximity to cultural resources, potential impacts are avoided or mitigated under current NEPA guidelines and management measures. In these cases, the trend is toward a desired condition of conservation and protection. Qualitative observations indicate a downward trend in condition for recorded and unrecorded cultural resources not associated with formal surface disturbing management proposals. Illegal removal of artifacts, ground disturbance associated with

recreational activity, limited law enforcement, livestock operations, and a trend toward more intensive use of public lands all contribute to this trend.

FORECAST

Based on current management practices, the potential for cultural resources being illegally removed or damaged will increase because of projected increases in recreational and commercial usage, and limited law enforcement presence. Cultural resources are known to be deteriorating from a variety of causes. Collectively, these agents have adversely affected many known and undiscovered cultural resources. This trend will likely continue due to the continued development of private lands adjacent to BLM lands, the increased use by recreationalists, development for energy, mining, communication, and other associated activities that require the use of Federal lands. Developing management actions to identify and protect sensitive areas and traditional cultural properties will help alleviate damage to cultural resources and places of Native American concern.

2.1.11 ☀ Paleontological Resources

INDICATORS

Paleontological resources constitute a fragile and non-renewable scientific record of the history of life on Earth. BLM policy is to manage paleontological resources for scientific, educational, and recreational values, and protect or mitigate these resources from adverse impacts. In order to accomplish this goal, paleontological resources must be professionally identified and evaluated, and paleontological data must be considered as early as possible in the decision-making process.

Paleontological resources are managed according to the ***BLM Manual, Section 8270 - Paleontological Resource Management*** and ***BLM Handbook (H-8270-1) General Procedural Guidance for Paleontological Resource Management.***

Resource condition is assessed through field observations, paleontological reports, commercial site reports, and project reviews. The primary resource indicator is whether the characteristics that make a fossil locality or feature important for scientific use have been lost or diminished. Natural weathering, decay, erosion, improper collection, and vandalism can remove or damage those characteristics that make a paleontological resource scientifically important.

CURRENT CONDITIONS

Paleontological resources are integrally associated with the geologic rock units (such as formations, members, or beds) in which they are located. If extensive excavation of a certain formation in one geographic area results in significant paleontological resources, excavations throughout the extent of the formation have the potential to produce fossil material as well. Although numerous fossil localities are known within the planning area, few have been formally documented and fewer have been extensively studied. Efforts to fully inventory fossil resources have been spotty and limited in scope.

POTENTIAL FOSSIL YIELD CLASSIFICATION SYSTEM

The potential for paleontological resources is currently identified using two indicators: The BLM Fossil Class Condition system, and the newer Potential Fossil Yield Classification system. While the BLM Condition has been used most extensively, recent BLM guidelines encourage use of the more precise Potential Fossil Yield Classification system, which is currently used by the UFO.

The probability for finding paleontological resources can be broadly predicted by the geologic units present at or near the surface. Therefore, geologic mapping is useful for assessing a location's potential for paleontological resources.

Using the Potential Fossil Yield Classification system, geologic units are classified based on the relative abundance of vertebrate fossils or significant invertebrate or plant fossils and their sensitivity to adverse impacts, with higher numbered classes indicating a higher potential. This classification is applied to the geologic formation, member, or other distinguishable unit, preferably at the most detailed mappable level. It is not applicable to specific paleontological localities or small areas within units. While widely scattered fossils or localities may occur within a geologic unit, the relative abundance of significant localities determines the class assignment.

The Potential Fossil Yield Classification system is meant to provide baseline guidance for predicting, assessing, and mitigating paleontological resources. The classification should be considered at an intermediate point in the analysis, and should be used to assist in determining the need for further mitigation assessment or actions. Descriptions of the Potential Fossil Yield Classification classes can be found in BLM IM# 2000-009.

Classification for the Planning Area

Vertebrate fossils or scientifically significant invertebrate fossils are known or can reasonably be expected to occur in the planning area. The probability for impacting these fossils is high. On-the-ground surveys will typically be necessary prior to authorizing any surface disturbing activities. On-site monitoring may be necessary during construction activities.

TRENDS

Qualitative observation indicates that the condition has remained stable for paleontological resources protected or mitigated through the permitting process and other standard operating procedures (such as pre-disturbance clearance) associated with federal management actions. In these cases, the trend has been toward conservation.

For resources not associated with direct management actions, the trend has been slightly downward. The primary contributors to this trend include unauthorized collection of fossils, limited law enforcement resources, and ground disturbance associated with recreational activities.

FORECAST

Projected increases in commercial and recreational use may increase the risk of damage and unauthorized collection in areas where paleontological resources are present. Management actions to identify and protect sensitive areas or to mitigate impacts to paleontological resources would reduce the nature and degree of these impacts.

2.1.12 Visual Resources

INDICATORS

The scenic quality of the planning area is of national significance and an important part of the local and state economy. Many people live and play in the planning area because of its remoteness and visual qualities. The visual setting is an important part of local lifestyles, and for most travelers, the scenery or visual resource is an important part of their visit. Five special management areas, two Scenic Byways, and one All American Road occur within the planning area. Both tourists and local residents drive across this landscape expecting to see open mountain vistas, rushing water, forested slopes, and vast rolling sagebrush-covered lands.

The BLM Visual Resource Management (VRM) system is a way to identify and evaluate these scenic values in order to determine appropriate levels of management. VRM is a tool to identify and map essential landscape settings to meet public preferences and recreational experiences today and into the future. The VRM system helps to ensure that actions taken on public lands today will benefit the visual qualities associated with the landscapes, while protecting these visual resources for years to come.

VISUAL RESOURCE INVENTORY

A Visual Resource Inventory of the planning area was completed in September 2009 according to guidelines in BLM Manual Handbook H-8410-1 – Visual Resource Inventory. The inventory consisted of three components: 1) Scenic Quality Evaluation, 2) Sensitivity Level Analysis, and 3) Delineation of Distance Zones.

VISUAL RESOURCE CLASSES

Based on the three inventory components, lands in the planning area were placed into one of four Visual Resource Classes (as shown in Map 2-14 on page 589 and in Table 2.25 on the following page). These class assignments are informational and provide the basis for considering visual values during the RMP process. They do not establish management direction and are not used as a basis for constraining or limiting surface-disturbing activities, but are considered a baseline for existing conditions.

Class Objectives

Objectives for each of the four Visual Resource Classes are as follows:

Class I

The objective of this class is to preserve the existing character of the landscape. This class provides for natural ecological changes; however, it does not preclude very limited management activity. The level of change to the characteristic landscape should be very low and must not attract attention.

Class II

The objective of this class is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.

Class III

The objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention, but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.

Class IV

The objective of this class is to provide for management activities that require major modification of the existing character of the landscape. The level of change to the characteristic landscape can be high. These management activities may dominate the view and be the major focus of viewer attention. However, every attempt should be make to minimize the impact of these activities through careful location, minimal disturbance, and repeating the basic elements.

TABLE 2.25 - VISUAL RESOURCE INVENTORY CLASSES FOR THE PLANNING AREA

VISUAL RESOURCE CLASS	ACRES	PERCENTAGE
I	44,920	2.44%
II	691,442	37.60%
III	567,829	30.88%
IV	534,881	29.08%
TOTALS	1,839,072	100.00%

VISUAL RESOURCE MANAGEMENT

The assignment of VRM classes is ultimately based on management decisions made during the RMP process, which must take into consideration the value of visual resources. During the process, inventory class boundaries can be adjusted as necessary to reflect these

resource allocation decisions. The goal of VRM is to minimize the visual impacts of all surface-disturbing activities, regardless of the class to which an area is assigned.

CURRENT CONDITION

Cumulative impacts to the landscape have resulted from increases in recreation and tourism, vehicular travel, and the number of roads and trails, as well as sightseers attracted to the area for its extraordinary scenic qualities. Additional impacts have resulted from an expanding urban interface due to population increase, the development of utility corridors, oil and gas exploration and development, seismic exploration, vegetation management, and other land use disturbances. Oil and gas development and exploration, commercial filming, rights-of-way, utility corridors, and range improvements can all be sources of visual resource conflict.

The increasing number of roads and travel networks in use within the planning area is having an indirect effect on visual resources. Area networks include highways, paved and gravel county roads, dirt roads (two-tracks), foot, equestrian, mountain bike, and OHV trails, railroads, and river corridors. As a result, seldom seen zones no longer exist, most areas are within three to five miles of a travel route, foreground/middle ground views are increasing, and changes in visual sensitivity have occurred (BLM 2009). The increased use of two-track roads and routes is creating conditions that allow users to expand surface disturbances and impact visual resources.

TRENDS

Public lands in the planning area are highly fragmented. The landscape is experiencing a high degree of human modification due to urban development (and its associated infrastructure and uses) and energy development. Management of multiple resources on public lands can alter scenic resources. With an increased amount of urban development throughout the resource area on adjacent private lands, increased management activities are also occurring on public lands. Growing pressure is being placed on visual resources due to activities such as oil and gas extraction, fire management, utility corridors, roads and trails, recreation activities, communication sites, pipelines, livestock grazing, and water tanks. Public concern is also on the rise regarding preservation of the visual and scenic qualities associated with open space and scenic backgrounds for recreation and in residential areas.

In response to growing concern from local communities, the current condition of visual resources is being assessed for major transportation corridors, population centers, and other scenic viewsheds to assess how the BLM can best manage these sensitive viewsheds and corridors.

Tourism also plays a major role in the economy of western Colorado, and much of the planning area is viewed en route to or from major tourist destination areas, such as Telluride. As the population of Colorado grows, more visitors will be attracted to the natural landscapes of our public lands. In addition, a high demand is being placed on scenic resources near population centers.

FORECAST

During the RMP revision, current visual resource management will be evaluated to ensure compliance with guidelines established by the BLM, and help to better manage the visual resources of the planning area for the future. In addition, the BLM must consider updated VRM information when conducting future land health assessments.

2.1.13 ☀ Wilderness Characteristics

INDICATORS

The BLM will complete a review of BLM-administered public lands within the planning area to determine whether or not they possess one or more wilderness characteristics (such as naturalness and outstanding opportunities for solitude and for primitive and unconfined recreation). Areas with wilderness character can be identified by the BLM or through external nominations by the public. Both methods require the same type of review to determine whether the area has wilderness characteristics. Information provided by the public concerning resources and other values will be considered along with all other resource information during the planning process. New information may be considered through the National Environmental Policy Act (NEPA) process as appropriate. The BLM will continue to manage public lands according to existing land use plans while new information (including new resource assessments, wilderness inventory areas, or citizen proposals) will be considered as part of the land use planning effort.

CURRENT CONDITION

In 1994, Colorado conservationists presented the BLM with a bound volume entitled *Conservationists' Wilderness Proposal for BLM Lands*, which included a compilation of numerous citizen wilderness inventories and an area-by-area justification for each. The proposal included locations within the planning area. In 2001 and 2007, citizen's groups again presented the BLM with a compilation of numerous citizen wilderness inventories and area-by-area justifications for each citizen's wilderness proposal on BLM lands. Currently, the proposal includes five locations within the planning area, including Norwood Canyon and all existing WSAs, along with some additions.

TRENDS

During the RMP process, the BLM will analyze whether any BLM-administered public lands outside of the current WSAs possess wilderness characteristics.

FORECAST

The BLM has authority under Section 201 of the Federal Land Policy and Management Act to inventory public land resources and other values, including wilderness characteristics. Wilderness characteristics may be considered in land use planning when the BLM determines that those characteristics are reasonably present, of sufficient value and need, and are practical to manage. The revised RMP could delineate areas with wilderness characteristics and prescribe goals, objectives, and management actions that would maintain those characteristics.

2.2

Resource Uses

THE RESOURCE USES SECTION INCLUDES:

CURRENT LEVEL OF USE OR CURRENT CONDITIONS

Discusses the current level and locations of resource use, or describes the location, extent, and current condition of resource use

FORECAST

Describes the anticipated demand for use

KEY FEATURES

Describes the areas with a high potential for use

2.2.1 Livestock Grazing Management

CURRENT LEVEL OF USE

Currently 628,754 acres (93%) of BLM-administered public land within the planning area are allocated for livestock grazing. The public range is permitted at a level of 43,491 Animal Unit Months (AUMs) of forage. An ***AUM*** is equal to the approximate amount of forage needed to sustain one cow, five sheep, or five goats for a month. The permitted level includes 38,200 active AUMs and 5,291 suspended use AUMs. Permittees paid to use 29,219 AUMs of forage in 2008. Table 2.36 (in Appendix A on page 560) details grazing allotments, acreages, permitted AUMs, and grazing periods within the planning area.

Over the past five years, billed use has averaged 65% of total permitted use. This difference can be attributed to a number of variables. Seasonal variations in precipitation and temperature result in more or less available forage from one year to the next. Drought conditions have required a reduction in grazing use in order to maintain good range conditions. Permittees may also opt for voluntary non-use for a variety of reasons, resulting in AUMs that are available but not used. In addition, grazing is typically deferred in an area for two years following land treatments and fire rehabilitation projects, accounting for lower use levels.

There are 46,923 acres (7%) of BLM-administered public land within the planning area not allocated for livestock use. In addition, a small number of permits have been voluntarily relinquished and the allotments are considered vacant.

Within the planning area, there are 203 allotments and 135 permittees. The allotments vary in size from 40 to 92,198 acres, with grazing allocations ranging from one to 4,800 AUMs in each allotment. In 2009, 85% of the allotment permits were for cattle, with sheep and horse grazing accounting for the remaining 15%. Individual operators graze animals on 188 allotments, while the remaining fifteen are common allotments grazed by two or more operators.

Grazing within the planning area occurs throughout the year, with much of the use concentrated during spring and fall months. Spring and fall allotments are typically located adjacent to U.S. Forest Service land, and are utilized for short periods prior to "on" dates and after "off" dates for higher elevation summer allotments on national forest land. Summer use allotments are commonly found at higher elevations in the North Fork of the Gunnison River area. Winter use allotments are primarily located in the west end of Montrose and San Miguel Counties, at lower elevations associated with a semi-arid climate.

All grazing permits include terms and conditions regarding management of the allotment. In some cases, allotment management plans have been developed, which provide details about

the location, amount, and timing of permitted grazing use, and incorporate allotment-specific planned grazing systems.

Most allotments in the planning area contain portions that are only slightly used or not used at all by livestock due to topography, distance from water, limitations caused by natural barriers, or for other reasons. Rangeland improvement projects, water developments in particular, have been implemented within the UFO to better distribute livestock grazing.

Many other uses take place within UFO grazing allotments, such as recreation, wildlife, energy development, mining, and utility easements. Resources requiring special management attention, such as threatened and endangered species, Special Recreation Management Areas, wilderness areas, and Areas of Critical Environmental Concern, also occur within grazing allotments.

LHAs conducted in the planning area between 1998 and 2009 identified causal factors in instances where Public Land Health Standards were not met or were met with problems. Table 2.26 below summarizes the status of grazing allotments in relation to Public Land Health Standards.

TABLE 2.26 - STATUS OF ALLOTMENTS IN MEETING PUBLIC LAND HEALTH STANDARDS

DESCRIPTION	# OF ALLOTMENTS	ACRES
Upland Soils, Healthy Plant and Animal Communities, and T&E* Species Standards		
Total number of allotments assessed	75	630,568
Allotments meeting standards with problems and/or NOT meeting standards, with livestock grazing identified as the cause	35	32,425
Allotments meeting standards with problems and/or NOT meeting standards, with causes other than livestock grazing identified	125	315,458
Riparian and Water Quality Standards		
Total number of allotments assessed	151	714
Allotments meeting standards with problems and/or NOT meeting standards, with livestock grazing identified as the cause	12	44
Allotments meeting standards with problems and/or NOT meeting standards, with causes other than livestock grazing identified	41	81
***T&E = Threatened and Endangered Species**		

FORECAST

As grazing permits within the planning area become available for whatever reason, there is considerable interest among area livestock producers to acquire them. There is also

interest in acquiring grazing authorization for lands not currently allocated for grazing. The anticipated demand for grazing on BLM lands within the planning area is expected to continue into the near future.

KEY FEATURES

Elevation plays a significant role in determining which areas have a high potential for use during different grazing seasons. The higher elevations and associated precipitation zones offer higher levels of forage production and are more likely to have perennial livestock water supplies. These areas have a higher potential for summer grazing. Lower elevation ranges are drier, receive less snow, and have a higher potential for winter use. Middle elevation ranges are more suited to spring and fall use.

Larger, contiguous tracts of BLM land have a higher potential for livestock grazing use than smaller tracts adjacent to and sometimes surrounded by private lands. Many smaller, isolated tracts are currently authorized for grazing, but can create management challenges, such as difficulties in accessing these areas and controlling livestock due to lack of fencing.

2.2.2 Forest and Woodland Products

CURRENT LEVEL OF USE

BLM forests and woodlands are managed under the principles of multiple use, sustained yield, and environmental quality protection in accordance with FLPMA and the Colorado Standards for Public Land Health. Values and uses associated with forests, such as timber production, recreation, aesthetics, water quality, wildlife habitat, and wilderness, are managed through an ecologically based program that emphasizes biological diversity, sustainability, and long-term forest health.

FOREST RESOURCES

The BLM manages approximately 5,300 acres of forested land within the planning area (as shown in Map 2-15 on page 590). Commercial species include ponderosa pine, Douglas fir, Engelmann spruce, subalpine fir, and aspen. Historically, the primary commercial species were ponderosa pine, Engelmann spruce, and aspen. The annual allowable harvest from suitable commercial forested lands established for the San Juan/San Miguel decision area is 14.5 thousand cubic feet. Annual allowable harvests for the Uncompahgre Basin decision area were to be developed as needed, but due to funding constraints and low demand, were never established. Harvest levels over the past decade have averaged less than 36 hundred cubic feet of forest products per year. This figure is significantly less than annual sustainable harvest limits within the resource area. In Colorado, the low harvest levels have coincided with a reduction in national forest timber harvests and consequent closures and/or very low levels of capacity at the few remaining sawmills since the late 1970s through the early 1990s. Table 2.27 on the following page shows the number of forest products sold in the UFO from 1998 to 2008.

WOODLAND RESOURCES

In addition to commercial forestlands, approximately 107,000 acres of woodland within the planning area are suitable for harvest, consisting mainly of pinyon pine, juniper, and Gambel oak (as shown in Map 2-15 on page 590). The annual allowable harvest established for woodlands in the San Juan/San Miguel decision area is 10.2 thousand cubic feet. Annual allowable woodland harvests for the Uncompahgre Basin decision area were not established. The average annual firewood harvest for the past decade has been 230 cords per year across the entire resource area, which is well below sustainable harvest limits. The present demand for fuelwood has been steady and limited almost exclusively to pinyon and juniper. Currently, the collecting of other woodland species, including gamble oak, is not permitted within the planning area, except on a case-by-case basis when other management

objectives are desired. There are known cases of fuelwood and post and pole removal by the public without permits; however, the level of use has been difficult to document and quantify. Realistically this level of use equates to an additional 10-15% of known use (or approximately 23-35 cords per year) which, when combined with known harvest levels, still equates to less than sustainable harvest limits.

CHRISTMAS TREES AND TRANSPLANTS

Special forest products, including posts, poles, Christmas trees, and transplants, are sold commercially or by the individual item. Seasonal Christmas tree harvesting by local residents is also a common use of woodland resources, with an average of 514 trees sold per year. Pinyon pine and juniper are the only species currently permitted for Christmas tree harvest within the planning area. The annual harvest of Christmas trees has fluctuated over the past ten years, with the greatest demand occurring in 2004 and the lowest demand occurring in 2008. The harvest of transplants has been minimal, reflecting public and commercial demand. Fewer than sixty transplant permits are sold annually, with a preference for pinyon used in the emerging trend of xeriscape landscaping.

TABLE 2.27 - UFO FOREST AND WOODLAND PRODUCTS SOLD 1998-2008

FISCAL YEAR	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Fuelwood Cords #	285	167	309	126	262	199	224	192	291	214	254
Fuelwood Volume	232	136	252	103	214	162	183	157	237	174	207
Revenue	$2,850	$1,400	$2,440	$976	$1,966	$1,592	$1,680	$1,562	$2,220	$1,752	$1,270
Round-wood[1]	33	11	16	20	22	25	16	19	79	150	3
Revenue	$1,501	$395	$1,452	$759	$1,082	$1,140	$601	$776	$494	$182	$863
Christmas Trees #	607	625	603	438	463	289	673	636	580	374	370
Revenue	$3,269	$3,362	$2,412	$2,728	$2,963	$1,788	$3,438	$2,601	$2,008	$1,827	$3,700
Boughs (pounds)							1,000			4,000	
Revenue							$16			$16	
Transplant #		6	62	14	55	242	32	32	20	15	
Revenue		$24	$252	$56	$260	$512	$144	$128	$80	$68	
TOTAL YEARLY REVENUE	$7,620	$5,181	$6,556	$4,519	$6,271	$5,032	$5,878	$5,066	$4,802	$3,845	$5,833

[1]Roundwood includes both saw timber and all non-saw timber and fuelwood products sold which are convertible to cubic feet such as posts, poles, and house logs.

FOREST INVENTORIES

Given the minimal demand for pinyon-juniper products and relatively small volume contained within stands of commercially viable saw timber in the planning unit, labor-intensive stand inventories have not been utilized. Straight area calculations have traditionally been used to calculate allowable harvest limits under sustained yield principles. Harvest limits are calculated using the following equation:

$$\frac{\textbf{Stand Acres}}{\textbf{Return Interval/Regeneration Time + Re-establishment Lag}} \textbf{ x Productive Capability = Sustainable Harvest}$$

An extensive inventory of the planning area, known as the Timber Production Capability Classification, was conducted in the late 1970s through 1980s in order to identify the various species present within a given stand and calculate the stand's production capabilities, as well as to map the stand on a 1:24,000 scale (commonly known as 7.5-minute quadrangle maps). Given current BLM funding and the decrease in demand for forest products from 1970-1989 levels, these inventories, and the straight area calculations used to determine sustainable allowable cuts, remain valid and germane.

MANAGEMENT OBJECTIVES AND PRACTICES

The primary focus of forest management practices in the UFO from the early 1950s through the early 1980s was to provide forage for livestock and big game species. These objectives were achieved through the practice of chaining and roller chopping, primarily in pinyon-juniper woodlands, and then seeding with non-native forage species. This practice was applied to approximately 35,000 acres of pinyon-juniper woodland within the planning area. Although the woodlands are lightly stocked, these treated acres are still considered part of the woodland base. These management objectives and practices have continued through the 1990s to the present.

While the emphasis had been on moving towards or maintaining pinyon-juniper woodlands in an early seral state for forage production, there has been a shift in the last decade toward a landscape approach for managing these treatment areas. For example, a percentage of the early seral woodlands within the Spring Creek and Dry Creek watersheds will be allowed to mature, while the remaining pinyon-juniper sites will be managed as early seral, with restoration of the native herbaceous and woody shrub component. Similar approaches could be utilized across the resource area to restore greater ecological integrity to forest and woodland communities.

With implementation of the National Fire Plan, the BLM has conducted numerous fuel treatments in the planning area to manage previously untreated stands through mechanical thinning or prescribed burning. Such efforts represent an attempt to restore areas of

woodland and forest that have experienced an increase in numbers of trees per acre or crown closure due to past management practices, such as fire exclusion and grazing. The objective of the treatments has been to minimize fire danger by reducing stocking rates and the continuity of forest canopy.

FORECAST

FOREST HEALTH

Forest and woodlands in Colorado have been affected by drought, insects, and disease. Pinyon ips, mountain pine, spruce bark, and balsam fir beetles have all been increasing in population. Within the planning area, aspens are in varying stages of growth, although overall stands are declining. Many stands are on marginal sites exhibiting signs of a relatively unknown phenomenon called Sudden Aspen Decline Syndrome (Colorado State Forest Service 2005).

Fluctuations in Tree Density

Concerns about tree invasion causing major land health problems are lessening in light of recent drought. In addition, recent research on pinyon dendrochronology and stand structure on the Uncompahgre Plateau indicates that many woodland stands have experienced density increases followed by density declines over the past several centuries, apparently linked to climate fluctuations (Eisenhart 2004).

Two prolonged wet periods over the past century have likely contributed to increases in tree density, both within woodlands and through invasion into new communities. Land management practices such as livestock grazing may enhance tree establishment as well, with young trees sprouting in woodland chainings from the mid 20th century. However, the drought has recently killed many of these young regenerating pinyon trees in parts of the landscape, with tree death in some areas as high as 90%. Because there is no evidence that frequent fire in shrub communities has repelled tree invasions, the effects of fire repression cannot be implicated thus far.

DEMAND FOR FOREST PRODUCTS

Saw Timber

Recent government initiatives, including the National Fire Plan, Healthy Forest Restoration Act, and Healthy Forest Initiative have called for the treatment of forests and woodlands to reduce fire and insect threats and improve overall forest health, while also providing incentives for local community-based business development of forest products. Despite these initiatives, the demand for saw timber within Colorado and eastern Utah remains low, and is expected to continue at this level into the foreseeable future.

Fuelwood

The demand for fuelwood has remained steady over the last decade, and this trend is expected to continue, along with fluctuations in response to oil and natural gas price fluctuations. This is due, in part, to strict air quality regulations that deter wood burning within major population centers in the region, and the fact that fuelwood is more readily obtained on adjoining USFS-managed lands. Posts and poles account for approximately 75-90% of all roundwood

sales within the planning area over the past decade. This trend can be expected to remain constant, as modestly priced manufactured posts and poles enter the region, due in part to landscape-scale pest epidemics damaging forests throughout the intermountain west.

As communities along the Western Slope continue to grow, and water resources become more stretched, it is reasonable to expect that xeriscaping and xerogardening trends will accelerate, increasing the demand for native transplant trees from public lands. While difficult to project, as community planners impose water restrictions and promote green community development, the demand for water-conserving transplants can be expected to parallel community growth.

KEY FEATURES

- Identify characteristics (indicators) to describe healthy forest conditions (i.e. desired outcomes) for forest/woodland types found within the planning area (also see Vegetation).
- Identify the suite of possible management actions (including appropriate harvest, reforestation, and forest development methods), and associated BMPs, that can be applied to meet desired outcomes.

2.2.3 ☀ Energy and Minerals

BACKGROUND

Mineral and energy resources are discussed in subsections describing fluid and non-fluid leasable, locatable, and salable minerals. (Solar and wind energy projects are discussed in Section 2.2.8 under Land Use Authorizations.)

A ***leasable mineral*** refers to a mineral or mineral commodity acquired on federal land, or through a federally retained mineral interest on private land in the United States through the Mineral Leasing Act of 1920, as amended, the Geothermal Steam Act of 1970, as amended, or the Acquired Lands Act of 1947, as amended. Acquisition of leasable minerals requires applying for and obtaining a government lease, along with a permit or permits to mine or explore. Examples of leasable minerals include oil, gas, coal, oil shale, sodium, potash, and phosphate. Geothermal energy is an example of a renewable energy-related leasable resource.

A ***locatable mineral*** refers to a mineral or mineral commodity on federal land acquired through the General Mining Law of 1872, as amended. Acquisition of locatable minerals is done by staking a mining claim (location) over a deposit, and then acquiring the necessary permits to explore or mine. Locatable minerals include base and precious metal ores, ferrous metal ores, and certain classes of industrial minerals. Examples include, but are not limited to, gold, silver, platinum, copper, lead, zinc, magnesium, nickel, tungsten, bentonite, barite, feldspar, uranium, and uncommon varieties of sand, gravel, and dimension stone. Uncommon variety minerals are deposits that have distinct and special properties, making them commercially valuable for use in manufacturing, industrial, or processing operations.

A ***salable mineral*** refers to a mineral commodity on federal land sold by the federal government through a sales contract. The applicable statute is the Mineral Materials Sale Act of 1947, as amended. Salable minerals are generally common varieties of construction materials and aggregates, such as, sand, gravel, cinders, roadbed, and ballast material. Common variety minerals do not have a distinct, special value beyond normal use. On federal lands, such minerals are considered salable and are disposed of through sales or special permits to local governments.

LEASABLE MINERALS

CURRENT LEVEL OF USE

COAL

Three active subsurface coal mines holding federal coal leases and one active surface mine expressing future interest in federal coal operate within the planning area. The three subsurface mines are in a region locally known as the North Fork Valley. The operations will be extracting and selling federal and fee (privately held) coal at about a 9 to 1 ratio until around 2011, when federal coal will constitute 100% of extraction and sales. Federal coal production is expected to range from 14 million to 18 million tons per year and yield an average of $38 million in royalties each year. The UFO coordinates the leases with the Grand Mesa, Uncompahgre, and Gunnison national forests, as much of the federal coal underlies USFS-managed lands. The surface mine extracts fee coal at a location near the town of Nucla, Colorado, with potential for expanding into federal coal under fee and/or BLM-administered surface lands.

Some areas with federal coal resources involve split estate. Some areas with privately held surface and federal coal have, or have the potential for, improvements that include houses and subdivisions.

The following table shows the current coal lease serials, controlling company, and leased acres within the planning area:

TABLE 2.28 - COAL LEASING WITHIN THE PLANNING AREA

COMPANY	LEASE SERIAL	ACRES
Bowie Resources	D-036955	280
Bowie Resources	C-25079	311
Bowie Resources	COC53356	522
Bowie Resources	C-27432	1,014
Bowie Resources	COC61209	3,954
Bowie Resources	C-37210	5,037
Mountain Coal Company	COC67011	680
Mountain Coal Company	COC54558	1,012
Mountain Coal Company	C-0117192	1,283

COMPANY	LEASE SERIAL	ACRES
Mountain Coal Company	COC67232	1,517
Mountain Coal Company	D-044569	1,662
Mountain Coal Company	COC56447	2,919
Mountain Coal Company	C-1362	4,996
Oxbow Mining	COC53510	1,467
Oxbow Mining	COC61357	4,795
TOTAL	**15 leases**	**31,449**

About 8,800 of the 31,449 acres leased have remaining coal reserves. If no other leases are obtained, the longest mine life would be expected to end in about 2020.

FLUID MINERALS: OIL AND GAS

The Energy Policy and Conservation Act Amendments of 2000 (Public Law 106-469) directed the DOI to inventory oil and natural gas resources beneath federal lands. The act also directed the DOI to identify the extent and nature of any restrictions to their development. Executive Order 13212 (May 2001) states that "…agencies shall expedite their review of permits and take other action as necessary to accelerate the completion of [energy-related projects] while maintaining safety, public health, and environmental protections. The agencies shall take such actions to the extent permitted by law and regulation, and where appropriate." As a result, the Departments of the Interior, Agriculture, and Energy released a report entitled *Scientific Inventory of Onshore Federal Lands' Oil and Gas Resources and Reserves and the Extent and Nature of Restrictions or Impediments to their Development* (referred to as the Energy Policy Conservation Act Inventory) in January 2003.

Based on the Energy Policy Conservation Act Inventory, the BLM designated seven Energy Policy Conservation Act focus areas in which to concentrate BLM efforts and resources to meet the President's National Energy Policy. The BLM is integrating the results of the Energy Policy Conservation Act Inventory into RMPs and reasonably foreseeable development scenarios.

Four companies are currently active in oil and gas exploration and production drilling in the North Fork area. Natural gas exploration and production is modestly active in the western portion of Montrose County in the Mailbox Park, Hamilton Creek, and Wray Mesa areas. Recent geophysical exploration operations have been conducted in the Mailbox Park area.

Oil and Gas Profile for the Planning Area

The Mesaverde is a USGS-identified Total Petroleum System that extends into the Piceance Basin. As shown in on page 592, the northern and central portion of the planning area is within the Piceance Basin, the eastern half of a greater geologic basin known as the Uinta-Piceance Basin. Most of the hydrocarbon production in the planning area is natural gas, with very little associated oil, natural gas liquids, or water. Gas production derives from formations of the Mesaverde Group. Map 2-20 on page 595 shows current oil and gas leases in the planning area.

Northern Portion of the UFO

The largest natural gas development activity is concentrated in the North Fork Area, located in the northern portion of the UFO south of Grand Mesa. The area is situated within the southern part of the Piceance Basin, known to have high potential for the occurrence and development of natural gas resources.

The Mesaverde Group is the source rock in the North Fork gas field area. Map 2-17 on page 592 shows the structural geology of the Piceance Basin in relation to the Uinta Basin, as well as the Mesaverde Group boundary in relation to western Colorado and the planning area.

In the Piceance Basin, the base of the Mesaverde Total Petroleum System is placed at the base of the lowest coal zone in the Williams Fork Formation (at the top of the Rollins and Trout Creek Sandstone members). Coal and carbonaceous shale source rocks in the Mesaverde Group accumulated in mires, swamps, and marshes associated with deltaic and coastal plain environments in a generally west to east pro-gradational depositional system. The primary coal-bearing intervals become increasingly younger and rise stratigraphically from west to east across the Uinta-Piceance Province (as shown in Map 2-19 on page 594). Thicker coal accumulations typically overlie marine and marginal marine sandstone successions in the lower part of the Mesaverde Group (USGS 2002).

In the Piceance Basin, the most important coal-bearing interval is the Cameo-Fairfield coal group in the lower part of the Williams Fork Formation. This coal group is present in the subsurface throughout most of the basin. Some of the more important local designations, found in part of or the entire interval, include (in ascending order) the Cameo-Wheeler, South Canyon, and Coal Ridge coal zones. Total cumulative coal thickness in the Cameo-Fairfield coal group varies from near zero in the extreme southeastern part of the Piceance Basin to greater than 180 feet in the northeastern corner (as shown in Map 2-19 on page 594). Throughout most of the basin, however, the zone contains from 20 to 80 feet of total net coal (USGS 2002).

Isotopic evidence also supports the concept that the vertical migration of gases was more important than lateral migration. Gases are isotopically distinctive in each of the three areas of the Piceance Basin. The differences are related primarily to variations in thermal maturity in the underlying Cameo-Fairfield group, the likely source for gas in all three areas. Long-

term lateral migration would tend to eliminate the distinctiveness of the gases in the three areas and eliminate the close correlation between isotopic compositions and thermal maturities in the underlying source rocks. Furthermore, lateral migration would likely be inhibited by the lenticular nature of the predominantly fluvial sandstone reservoirs in the Mesaverde Total Petroleum System (USGS 2002).

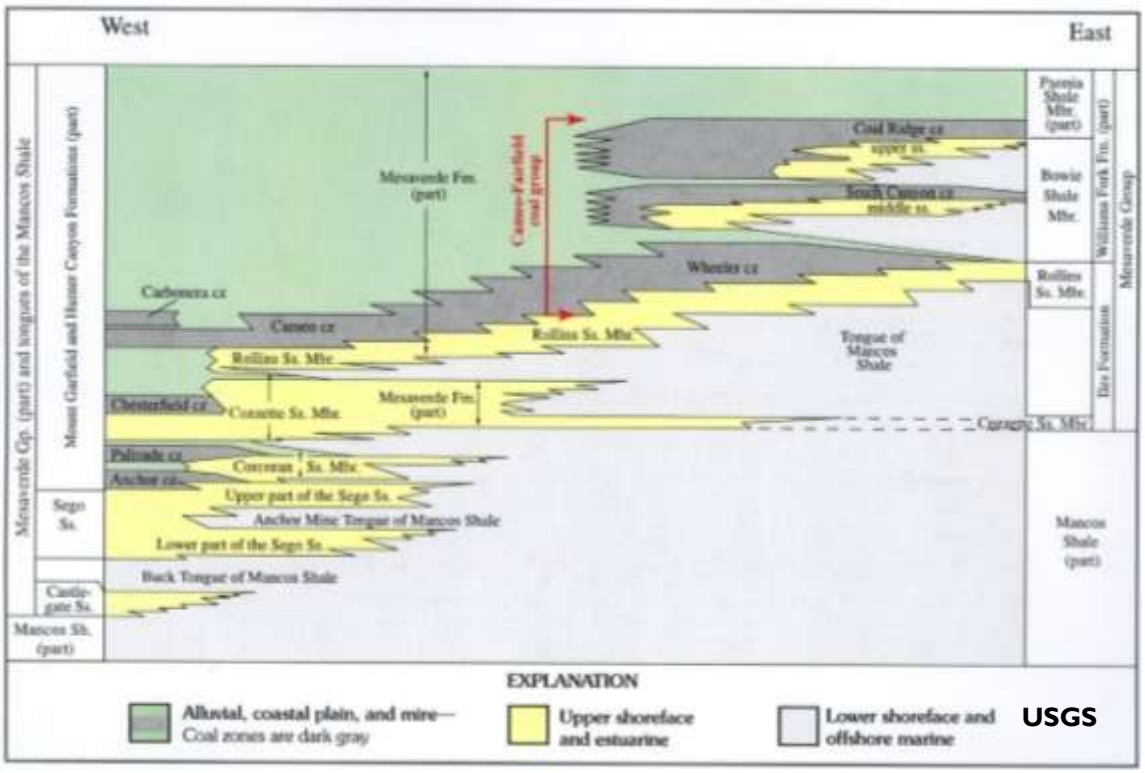


FIGURE 2.6 - STRATIGRAPHIC RELATIONSHIP OF MESAVERDE GROUP UNITS

Producing and potential reservoir rocks are primarily fluvial channel sandstone beds in the Mesaverde Group, and overlying the Fort Union and Wasatch Formations in the Piceance Basin. Fluvial sandstone reservoir units are predominantly lenticular. The sediments were deposited by various streams that flowed into the Uinta-Piceance Province during the Late Cretaceous and early Tertiary. The bulk of gas production in the Mesaverde Total Petroleum System is from sandstone reservoirs in the Mesaverde Group and Wasatch Formation. In most of the Piceance Basin, Mesaverde Group reservoirs range from 20 to 60 feet thick, and have porosities varying from less than 5 percent to greater than 8 percent (USGS 2002).

There are significant differences in the distribution of sandstone reservoirs in the Mesaverde Total Petroleum System between the Uinta and Piceance Basins. In the Piceance Basin, the Upper Cretaceous interval is much thicker and contains more sandstone reservoirs (USGS 2002).

As Map 2-19 (on page 594) shows, the Mesaverde Group coal and sandstone units provide source and reservoir rock in the UFO portion of the southern Piceance Basin. This is

proven by the target units that various applications for permit to drill show. Member units of the Mesaverde Group that are targets for drilling include the South Canyon Coal (seam V), Cameo Coal, Cozzette, and Corcoran Sandstone units. In the North Fork area, the Wasatch Formation is at the surface and therefore not a target for gas production. Well depths generally range to approximately 5,000 feet.

Western Portion of the Planning Area

The Mailbox Mesa, Hamilton Creek, and Wray Mesa areas in portions of Montrose and San Miguel counties west of Telluride are presently being explored for natural gas resources. The economic potential for this area will be reflected in the Reasonably Foreseeable Development Scenario being developed in conjunction with the RMP. No USGS oil and gas assessment has been conducted for this area.

Map 2-1 (on page 576) shows the generalized geology of the planning area. The surface formations of the northern portion are noticeably dominated by Cretaceous sedimentary units of Mancos Shale and the Mesaverde Group along with the Tertiary Wasatch Formation, whereas the western portion is comprised primarily of Jurassic Morrison Formation and Early Cretaceous Dakota Sandstone. Whereas northern drill rigs collar in the Wasatch, western rigs set up on these much older sediments. Target formations are older, and generally much deeper. Total depth of wells in the west end tends to be around 10,000 feet versus the 5,000 foot depths of the North Fork gas wells. The geologic structure regime is different also. Where the North Fork wells are in the Piceance Basin, west end wells are in the Paradox Basin. Figure 2.6 shows the stratigraphic relationship between formations in the Paradox Basin. Target formations for gas are the Cutler Formation and various members of the Hermosa Group. Map 2-2 (on page 577) shows the northwest trend of several folds that make up the Paradox Basin in the UFO.

Geophysical Exploration

Recent increases in natural gas prices have elevated interest in exploratory gas drilling. To more efficiently drill, companies may conduct geophysical exploration projects to better define targets and to site drill pad locations. Companies generally employ seismic geophysical studies, either as a two-dimensional or three-dimensional survey, to better understand the subsurface geologic conditions. The projects involve drilling seismic source blast holes and running lines of receiver instruments to record the reflected seismic wave data. These shot holes are usually drilled either by a helicopter-supported method or by low-impact buggy-mounted drilling equipment. In fiscal year 2008, there were two geophysical permits issued for the Mailbox Mesa area. One project was primarily conducted on USFS lands, with a BLM access road used for a receiver line, and the other involved both shot lines and receiver lines on BLM lands.

OTHER LEASABLE MINERALS: POTASH

Within the planning area, there is potential for potash deposits at depth in the Paradox Member of the Hermosa Formation.

RENEWABLE ENERGY

There are no permit applications or current leases for concentrated solar, wind generation, biomass, or geothermal energy production within the planning area.

The planning area has been assessed for renewable energy potential (Dahle and others 2003). Although state of Colorado policies and financial incentives are classified as favorable for renewable energy development, the UFO does not rank nationally among the top 25 BLM field offices with potential. However, the UFO is within an area regarded as having potential for geothermal resources. Of the 800,861 acres of public land in the planning area, 130,462 are designated as closed to geothermal leasing (BLM and USFS 2008a).

FORECAST

COAL

Stable demand for coal resources is expected, with the rate of production dependent upon economic conditions and development of alternative energy resources. Subsurface mining operations in the North Fork Valley are expected to continue extracting and selling federal coal at about the current rate. The potential for continued exploration of federal coal in all known coal areas could result in additional leasing and mining beyond 2020, in particular with expansion to the west along Grand Mesa from north of Paonia to west of Cedaredge.

FLUID MINERALS: OIL AND GAS

Demand for oil and gas resources is expected to remain stable, depending upon economic conditions and the development of alternative energy sources. A Reasonable Foreseeable Development report will project future activity in the planning area.

Natural Gas Field Development

Development is expected to continue in portions of the North Fork, where significant natural gas reserves are currently being developed. Most of the existing wells occur on federal mineral, split estate lands. Although drilling of proven reserves will continue, there is much interest by the industry in technically recoverable coal bed methane natural gas of the Mesaverde Group. These potential resources were identified by the USGS and displayed in the Energy Policy Conservation Act study. Future drilling leases within the North Fork must comply with constraints addressed in the Uncompahgre RMP.

Increased drilling may also occur on USFS lands since only about half of the available lands are currently leased. It is projected that much of this drilling would occur during the latter half of the RMP's life.

Unitization

Unitization provides for the exploration and development of an entire geologic structure or area by a single operator, so that drilling and production may proceed in the most efficient and economic manner, regardless of surface and mineral estate ownership. There are 27 units and participating areas within the planning area, involving 556,341 acres. Twelve units in the North Fork area involve 204,973 acres of land, and 15 units in the western portion involve 351,368 acres (LR2000 2009). Much of the split estate land is within the Grand Mesa National Forest.

Communitization

Communitization provides for the pooling of lands, when separate tracts under federal and Indian lands cannot be independently developed and operated in conformity with an established well-spacing program. Used extensively within the planning area, there are currently 143 communitization agreements involving more than 47,029 acres. Communitized gas production primarily occurs in the Mesaverde/Williams Fork Formation and the Cozzette Member of the Iles Formation. There are 142 agreements in the western portion of the planning area involving 46,869 acres, and one agreement for the North Fork area involving 160 acres. All of the agreements involve areas classified as having high potential for the occurrence of oil and gas.

Spacing

In the state of Colorado, the current spacing requirement for wells greater than 2,500 feet deep is 40 acres (with 600-foot setbacks from the lease line), but spacing can be increased or decreased depending on geologic and reservoir characteristics. The Colorado Oil and Gas Conservation Commission uses the term *default spacing*, with modifications occurring through cause orders.

Adjustments are intended to maximize production of the resource while minimizing surface disturbance and expense. In a case involving production from the Williams Fork Formation, ten-acre spacing has been justified and approved. Currently the Wasatch Formation is producing natural gas on 160-acre spacing. Tight sands, compartmentalized geologic structures, and reservoir characteristics may increase the demand for tighter spacing of reservoir formations in the future (other than in the Williams Fork). In addition, it will be necessary to revise spacing regulations in order to accommodate new drilling and production technology and techniques. Map 2-18 (on page 593) shows the location of oil and gas wells throughout the planning area.

OTHER LEASABLE MINERALS: POTASH

Along with other natural resources, potash has experienced a rise in commodity prices to historic levels. Should these levels remain stable, there will be continued interest in the potash potential of the western portion of the planning area.

RENEWABLE ENERGY

As part of the RMP effort, a Renewable Energy Potential report containing information from various sources will help determine the true potential for development of renewable energy resources within the planning area.

KEY FEATURES

COAL

Grand Mesa/Somerset Coal Field

Coal deposits in the planning area are primarily found in rock layers of the Mesaverde Group, with less significant resource deposits found in the Upper Cretaceous Dakota and Fruitland formations. These rock units were deposited in continental and nearshore marine environments along the western margin of an ancient interior seaway. The Mesaverde Group is confined to a region along the north side of the Gunnison River and North Fork of the Gunnison River, under the southern flank of Grand Mesa and extending east up Anthracite Creek to Kebler Pass and south up Minnesota Creek and Coal Creek. Known as the Grand Mesa/Somerset coal field, the area hosts three active mines.

The lowest sandstone member of the Mesaverde Group is the Rollins Sandstone, which marks the base of the coal members. There are as many as six coal seams in intervals above the Rollins Sandstone conventionally labeled A through F from bottom to top. Typically, only two of the seams are of mineable thickness at a given location. The coal is primarily extracted for consumption in electrical power generation, although some can be sold to the steel industry as metallurgical coal.

Mining activities take place in the eastern extent of the North Fork of the Gunnison River valley. The Bowie No. 2 Mine and Elk Creek Mine are located on the north side of the river, while the West Elk Mine is located on the south side of the river.

Nucla-Naturita Coal Field

Although the Dakota Sandstone has a wide distribution throughout the planning area, coal in this formation is typically not substantial enough to be mineable, except in areas on the west end of Montrose County near the town of Nucla. Known as the Nucla-Naturita coalfield, the area has one active mine currently operating under fee coal.

The Dakota Sandstone is often exposed as the top or near top layer on mesas ranging from west of the Uncompahgre River south of Montrose to the lower San Miguel basin near Paradox. The lower section contains the Dakota coal seam, which varies from being carbonaceous shale to bituminous coal. The coal is produced in one location near the town of Nucla from a surface mining operation that has potential for expanding operations from fee to federal coal reserves.

Tongue Mesa Coal Field

Coal in the Fruitland Formation is confined to an isolated area under Cimarron Ridge extending from Cerro Summit south to Owl Creek Pass in the Uncompahgre National Forest. Known as the Tongue Mesa coal resource, this area has no active mining.

Approximately 200 feet of coal-bearing strata is present in a 1,000-foot thick interval that originally was thought to be equivalent to the Mesaverde Group, but was later designated as the Fruitland Formation. Because it is mostly concealed by heavy vegetation, landslides, talus, and glacial deposits, the outcrop of the coal-bearing interval has not been mapped in detail. The Fruitland contains one laterally extensive coal bed that is about 20-40 feet thick, and three to five coal beds that are about 5–13 feet thick, and is mostly sub-bituminous. The beds of coal are gently inclined and known to have faults. While mining historically occurred in a few locations along the outcrop, and exploration drilling was conducted in the early 1980s, currently there is no mining activity.

FLUID MINERALS: OIL AND GAS

Oil and gas exploration and development are expected to continue within the North Fork area, as well as the Mailbox Park and Wray Mesa areas in the western portion of Montrose County.

Geophysical Exploration

Depending upon the demand for and global supply of natural gas, exploration interest is expected to continue to be strong, although perhaps not as great as in past years due to the global financial crisis. The BLM can expect an average of one to two proposed geophysical exploration projects per year in the planning area over the typical twenty-year life expectancy of the RMP.

OTHER LEASABLE MINERAL RESOURCES: POTASH

In the western portion of the planning area, the northern and central portions of the Paradox Basin appear to have the highest potential for potash development. The oldest sedimentary formation outcrops in the center of the Paradox Valley. During the Late Carboniferous Period (approximately 300 million years ago), sediments filled accommodation space created by the rapidly subsiding Paradox Basin. Thousands of feet of evaporites, carbonates, and black shale constitute the Hermosa Formation (See Figure 2-1). The flow of these evaporitic rocks formed prominent structural anticlines and fractures in overlying sediments. At depth, these Pennsylvanian strata, particularly the Paradox Member, are potential hosts to potash deposits (Wengerd 1958).

RENEWABLE ENERGY

Potential solar, biomass, wind, and geothermal resources occur in various locations and forms within the planning area.

LOCATABLE MINERALS

CURRENT LEVEL OF USE

Rock formations within the planning area are primarily sedimentary and form a large portion of the historic Uravan Mineral Belt, a significant source for deposits of the strategic locatable minerals uranium and vanadium. In addition, placer gold deposits occur along the San Miguel River below Telluride, Colorado.

CURRENT CONDITIONS

URANIUM-VANADIUM

Uranium is designated as a strategic locatable mineral. In recent years, interest in uranium exploration and development had been increasing along with the price. However, the recent economic downturn has caused a decrease in activity. Numerous companies are exploratory drilling for uranium-vanadium in the planning area portion of the Uravan Mineral Belt, while a few operations have undertaken underground bulk sampling excavations. Currently there are twenty-nine active plans of operations or mining notices within the planning area.

PLACER GOLD

The other locatable mineral resource use is gold placer mining along the San Miguel River in western Montrose County. The activity is centered on Pinon, Colorado, and east of Nucla, with placer mining claims locate upstream from this location. Independent operators and mining clubs both use up to a 3-inch suction dredge to extract gold from the river bed. This activity is considered casual use and does not require BLM authorization. The UFO tracks this activity by requiring the operators to submit a notification of use. In 2008, the UFO received over 50 notices.

FORECAST

When uranium-vanadium prices went up, interest in uranium exploration in the planning area increased dramatically, as did the level of uranium mining claims being staked. Presently however, the prices of these two commodities have fallen significantly, as the global financial crisis has diminished the perceived demand. Uranium demand is being controlled by

speculative forecasts of future nuclear power plant operations in India and China. Future activity will depend upon the global financial and energy demand situation.

Activity of placer operations depends upon the price of gold. As recently as July 2008, the price of gold has been at historic highs with a subsequent significant decrease due to the global financial crisis. It is anticipated that as the price fluctuates, so will the activity level. In the short term, the UFO can expect robust though relatively diminished activity until gold prices rise.

KEY FEATURES

The location of uranium and vanadium resources is within the historic uranium mining area designated as the Uravan Mineral Belt, western Montrose County. The host rock for this resource is the Salt Wash Member of the Jurassic-age Morrison Formation (Map 2-1).

The Jurassic Morrison Formation contains various members, but not all are present in the UFO. The Morrison Formation is host to extensive uranium deposits. The Salt Wash Member, particularly in its upper part, is the most prolific uranium-producing horizon in the Morrison Formation, and hosts small to large uranium deposits in channel sandstones (Wood 1968; Woodward-Clyde 1982; Gloyn and others 1995). This member consists of brown, lenticular, fluvial sandstone interbedded with red mudstone, and thin gray limestones at its base. It varies from 0 to 550 feet thick (Hintze 1988). The youngest member of the Morrison Formation is the Brushy Basin Member. It varies from 200 to 440 feet thick and consists of brown, bentonitic mudstone and brown, conglomeratic sandstone (Hintze 1988). The bentonite was derived from voluminous amounts of volcanic ash that was carried to the depositional sites by north and northwesterly flowing paleo-streams (Turner-Peterson and others 1986).

As shown in Map 2-21 on page 596, the primary active placer gold deposits lie in gravel deposits within the San Miguel River upstream from Nucla for approximately seven miles.

SALABLE MINERALS

CURRENT CONDITIONS

SAND AND GRAVEL

Sand and gravel provide raw materials for most construction and paving activities. Sand and gravel deposits are found along the San Miguel, Uncompahgre, and Gunnison Rivers, and

their major tributary valleys. Other sources include glacial wash, and widespread colluvial deposits at the base of rock outcrops, and alluvial fans.

FORECAST

With the projected increase in uranium and oil and gas activities over the next 20 years, the need for additional sand and gravel resources for road improvements and other construction-related activities will likely increase.

KEY FEATURES

There are six county gravel pits, two rock, rip-rap sites, two fill locations and one clay area scattered over the UFO. In addition, there is a moss rock sales area.

2.2.4 Recreation

BACKGROUND

Management of recreation is guided by BLM regulations and policies, federal and state laws, current and emerging trends in public demand for recreational activities and opportunities, and an area's physical and natural surroundings. Current management direction is based on objectives in RMPs and RMP amendments, activity level plans, and recreation management guidance, including 43 CFR 8340, Subchapter H on Recreation (Parts 8342 and 8364), Appendix C on Resource Uses in the Land Use Planning Handbook (H-1601-1), Part C - Recreation and Visitor Services, and the BLM Recreation Permit Administration Handbook (H-2930-1). The intent of the various laws, policy, and guidelines is to meet public demand for outdoor land-based recreation opportunities, while preventing or minimizing adverse impacts to the natural and cultural elements of public lands in Colorado.

CURRENT LEVEL OF USE

RECREATION MANAGEMENT AREAS

Recreation Management Areas are the primary means of managing recreational use on BLM land. Public land is designated as either a Special Recreation Management Area (SRMA) or an Extensive Recreation Management Area. Area recreation includes opportunities to hunt, fish, whitewater raft, canoe, kayak, camp, hike, backpack, mountain bike, horseback ride, rock climb, ride off-highway vehicles (OHV), photograph, and view wildlife.

Extensive Recreation Management Areas

Because Extensive Recreation Management Areas include all public lands not within a SRMA or other specially designated area, these areas make up the majority of recreation opportunities on BLM lands in the planning area. Recreation in such areas is non-specialized, dispersed, and does not require intensive management. Recreation may not be the primary management objective in these areas, and recreational activities are subject to few restrictions. The principal recreation setting consists of minimally developed, resource-dependent, recreational opportunities subject to custodial management. This type of setting is typical of an area that is largely undeveloped, and where nature-based recreation predominates.

Special Recreation Management Areas

BLM policy requires that concentrated recreation use areas be designated as SRMAs through the RMP process. SRMAs are areas where more intensive recreation management is needed, and where recreation is a principal management objective requiring a recreation investment. These areas often have high levels of recreation activity or contain valuable natural resources. The BLM issues Special Recreation Permits (SRPs) for commercial outfitters to operate and events to be held in a SRMA. The planning area contains two SRMAs: the San Miguel River SRMA and the Dolores River SRMA.

San Miguel River SRMA

An amendment to the San Juan/San Miguel RMP designated 32,641 acres of public land as the San Miguel SRMA in February 1993. The predominant recreation uses in the San Miguel River SRMA include whitewater rafting, kayaking, fishing, camping, picnicking, hiking, mountain biking, and motorized vehicle sightseeing. BLM visitor patrols recorded approximately 24,260 visitor use days from October 1, 2007 through September 30, 2008. These visits were associated with annual rafting, fishing, camping, and hunting trips within the San Miguel River corridor. During the summer, the majority of campers are first-time visitors who spend at least two to four days in the area. About half of these visitors spend some time fishing during their stay. Camping use peaks during the fall hunting and spring river seasons, and many of these visitors return every year for a stay of seven days. Camping use occurs on developed and dispersed designated sites along the river corridor. Thirteen river rafting outfitters currently operate under provisional SRPs, which will be evaluated as part of this RMP.

Dolores River SRMA

The Dolores River SRMA extends from McPhee Dam to Bedrock, Colorado. The area is co-managed with the BLM Dolores Field Office. The UFO portion extends from the Dolores Field Office boundary to Bedrock. The Dolores River SRMA provides recreation activities and settings that are unique for BLM-administered lands in the region. In most years, the Dolores River provides boatable flows from the end of April through mid-June.

TRACKING RECREATION VISITS

The BLM uses the Recreation Management Information System to track and report recreation visitation. The system enables BLM employees to estimate recreation participation in 65 types of recreation activities recorded at BLM sites and areas, based on registrations, permit records, observations, and professional judgment. Visitation is estimated by number of participants as well as visitor days. Participants are the actual number of people who take part in a recreational activity. A visitor day is a recreation unit of measure commonly used by federal agencies, and represents an aggregate of twelve visitor hours at a site or area. Table 2.29 displays the Recreation Management Information System figures for the planning area for fiscal years 2006 through 2008.

It is important to note that the visitation figures shown in the table are estimates. Many areas lack direct visitation monitoring facilities, such as traffic counters or visitor registers. Direct monitoring by BLM staff must focus on areas of greatest use or conflict, with the result that more remote locations within the planning area may not receive adequate monitoring. In addition, many popular trails and use areas are not designated, making it difficult to accurately determine the amount of recreational use these areas receive. Therefore, the numbers recorded for specific activities in specific areas may not accurately reflect level of use, and the origin of changes in use patterns (such as a change in numbers or types of non-local users) are difficult to determine.

Popular Recreation Activities

During the past three years, participation in some recreational activities has substantially increased. As shown in Table 2.29, more recreationists participate in OHV travel than any other activity. Based on number of participants or visitor days, other popular recreation activities include camping, picnicking, hunting, non-motorized travel, pleasure driving, and non-motorized boating. Increased recreation use within the planning area is attributed to population growth, marketing, and healthier lifestyles. Recreation activities are common throughout the year. OHV use has become one of the fastest growing activities. Consequently, management actions based on OHV use levels from twenty years ago are often inadequate. Due to its significance, OHV use is more thoroughly addressed in the Travel and Transportation section.

Elk, mule deer, small game, bears, and mountain lions are hunted throughout the planning area. Fishing is popular on the Lower Gunnison, Uncompahgre, San Miguel, and Dolores rivers. The fall hunting and spring river seasons are the busiest times of year. The CDOW manages hunting, primarily through licensing and law enforcement. The CDOW issues, and Colorado State Park Rangers help to enforce, state rules and regulations. In addition, the BLM requires SRPs for all commercial outfitters operating within the planning area.

RECREATION PERMITS

Special Recreation Permits

SRPs are issued for five types of use – commercial, competitive, vending, individual, or group use in special areas, as well as organized group activities and events. The BLM issues SRPs for noncommercial use in certain special areas, including wilderness, rivers, and the backcountry, and in other areas where it is determined that resources require special protective management and control measures, or a permit system for individual use would achieve management objectives.

Commercial SRPs are issued to outfitters, guides, vendors, recreation clubs, and commercial competitive event organizers that provide recreational opportunities or services not employing permanent facilities. SRPs for competitive and organized group events are also included in this category. SRPs may be issued for ten years or less, with annual renewal. The permits are issued to manage visitor use, protect natural and cultural resources, and

accommodate commercial recreational uses. In 2008, the BLM issued approximately fifty SRPs for use within the planning area.

The BLM also requires non-commercial recreation use permits for individual use of fee-site campgrounds and other uses such as large noncommercial group activities, although none have been issued for the planning area thus far.

DEVELOPED RECREATION SITES

The UFO currently has twenty developed recreation sites. As defined in the Colorado Standards for Public Land Health Guidelines for Recreation Management, developed recreation sites incorporate amenities such as roads, parking areas, and facilities, to protect the resource and support the recreation user in his or her pursuit of activities, experiences, and benefits. This visitor use infrastructure is a management tool that can minimize resource impacts, concentrate use, and reduce visitor conflicts.

TABLE 2.29 - RECREATION VISITS BY ACTIVITY 2005-2008

Source: RMIS Report #20	OCTOBER 1, 2005 - SEPTEMBER 30, 2006		OCTOBER 1, 2006 - SEPTEMBER 30, 2007		OCTOBER 1, 2007 - SEPTEMBER 30, 2008	
ACTIVITY	PARTICI-PANTS	VISITOR DAYS	PARTICI-PANTS	VISITOR DAYS	PARTICI-PANTS	VISITOR DAYS
Boating/Motorized	3,701	416	3,617	592	2,513	325
Boating/Non-Motorized	28,321	12,145	27,295	11,443	33,430	14,047
Camping & Picnicking	62,046	53,310	61,690	53,141	65,733	56,255
Driving for Pleasure	72,841	16,971	74,896	17,538	80,080	18,939
Fishing	16,120	7,340	15,908	6,814	17,772	7,709
Hunting	89,323	50,417	92,671	52,210	98,628	55,318
Interpretation, Education, & Nature Study	47,666	13,583	48,152	13,568	44,319	2,445
Non-Motorized Travel	62,614	21,886	65,609	23,065	69,631	24,614
OHV Travel	205,054	78,894	211,730	81,601	227,725	87,699
Snowmobile & Other Motorized Travel	9,459	4,656	9,760	4,807	10,523	5,186
Specialized Motor Sports, Events & Activities	9,021	6,014	9,321	6,214	10,071	6,714
Specialized Non-Motor Sports, Events & Activities	74,440	21,369	75,093	21,093	79,672	22,262
Swimming & Other Water Based Activities	14,246	4,749	13,890	4,630	14,307	4,769
Winter/Non-Motorized Activities	9,108	3,021	9,409	3,122	10,161	3,372
TOTAL	**703,960**	**294,771**	**719,041**	**299,838**	**764,565**	**309,654**

FORECAST

INCREASED USE AND DEMAND FOR RECREATIONAL OPPORTUNITIES

Indicators for measuring trends in recreation include visitor use levels, user conflict levels, impacts to resources, and compliance with commercial authorizations. Concentrated camping use is increasing across the planning area during the fall hunting season, as well as in spring and summer. The impacts include rock fire rings, user-created routes, littering, soil compaction and vegetation loss at campsites, and vandalism of signs. As OHV use continues to increase, potential user conflicts and impacts to wildlife, archeological resources, soil, and vegetation are likely to increase. The need for active OHV management and management tools is becoming increasingly obvious. Overall recreation use, especially motorized-based, is likely to increase. In addition, interpretive opportunities at cultural sites are likely to increase. Additional SRMAs may be prescribed in order to address increasing and conflicting uses and thus minimize resource impacts, and address safety issues and user conflicts. These SRMAs would also address recreational demands in gateway communities. It would be beneficial for the BLM to coordinate with counties and communities to assist in identifying recreational opportunities that local users would enjoy.

KEY FEATURES

Hunting, fishing, rafting, and OHV use are the predominant recreational activities throughout the planning area. Recreation in the planning area is managed primarily through licensing, permit fees, and enforcement of federal regulations. Human population projections predict increases within Colorado, which are likely to translate into increased recreational uses and pressures.

2.2.5 ☀ Travel and Transportation Management

BACKGROUND

COMPREHENSIVE TRAILS AND TRAVEL MANAGEMENT

Travel and transportation are an integral part of virtually every activity that occurs on BLM-administered public lands. Recreation, management of livestock, wildlife, and commodity resources, rights-of-way, access to private inholdings, maintenance of electronic sites, and the day-to-day management and monitoring of the UFO all rely on effective travel management planning.

Comprehensive trails and travel management is the proactive management of public access, natural resources, and regulatory needs to ensure that all aspects of road and trail system planning and management are considered. This includes resource management, road and trail design, maintenance, and recreation and non-recreational uses of the roads and trails. In this context, travel activities incorporate access needs and the effects of all forms of travel, both motorized and non-motorized.

Comprehensive trails and travel planning means providing clear and specific direction on the proper levels of land and water access for all modes of travel. Travel management objectives serve as the foundation for appropriate travel and access prescriptions.

Federal Regulations

43 CFR 8342.1 designation criteria states that:

> The authorized officer shall designate all public lands as either open, limited, or closed to off-road vehicles. All designations shall be based on the protection of the resources of the public lands, the promotion of the safety of all the users of the public lands, and the minimization of conflicts among various uses of the public lands.

National Guidance

On a national level and in response to increasing demand for trails recreation on public lands, the BLM first developed an OHV strategy and then a mountain bike strategy. These strategies emphasize that the BLM should be proactive in seeking travel management solutions that conserve natural resources while providing for ample recreation opportunities (BLM 2007).

The BLM released the current version of the Land Use Planning Handbook (H-1601-1) in March 2005. Guidance on determining OHV designations during the planning process was incorporated into the Recreation Section (Appendix C, Section II C). As field offices implemented the guidance for RMP development, revision, or amendment, they identified a

need to clarify how to implement the guidance in the recreation section and introduce refinements to the existing process. IM Number 2004-005, Clarification of OHV Designations and Travel Management in the BLM Land Use Planning Process, emphasized policy and provided clarification and additional guidance for travel management decisions that will be part of RMP planning (BLM-WO-IM-2004-005).

Modes of Travel

Visitors to public lands use roads and trails for a variety of recreational activities that involve various modes of travel. Motorized travel in the planning area ranges from standard passenger vehicles driving on maintained roads to OHVs operating on primitive roads and trails. OHVs include off-road motorcycles, all-terrain vehicles, utility terrain vehicles, jeeps, specialized 4x4 trucks, and snowmobiles. Mountain bikes are the predominant mechanized vehicle, while other modes of travel include cross-country skiing, snowshoeing, horseback riding, pack animal driving, hiking, boating, hang-gliding, paragliding, ballooning, and wheelchairs. The type and amount of use and the location of roads and trails influence physical, social, and administrative recreation setting and the overall quality of the recreation experience.

History of Existing Route System

Many roads within the planning area were constructed to create access to public land improvements and projects for timber/vegetation management, gas and mineral development, range management, and various ROWs. Some of these roads are used by permittees to maintain improvements, such as livestock or wildlife ponds or fences. Numerous roads were not necessarily intended to be left behind or open for recreational use, but have become popular routes for visitors engaged in mechanized/motorized recreation activities.

The majority of mechanized and motorized routes were created or pioneered by public land users. Open travel designations that permit cross-country mechanized and motorized use, high levels of use, and improvements in vehicle technology have allowed public land users to gain access to and through more terrain. Routes are maintained primarily by the repeated passage of vehicles. These user-created routes are often rutted and eroded.

Travel Designations

During the early 1980s, in response to Presidential Executive Orders 11644 and 11989, the BLM began assigning all public lands one of three OHV categories. Public lands within the planning area were designated as open, limited to existing or designated roads and trails, or closed to OHV use. Approximately 1.3 percent of the planning area is designated as open to OHV use, 90.3 percent is limited to existing or designated roads and trails, and 8.4 percent is closed. The designations are as follows:

Open

Available for OHV travel without restriction, based on an analysis determining that there are no compelling resource protection needs, user conflicts, or public safety issues to warrant limiting cross-country travel.

Limited

OHV travel is limited to designated or existing roads and trails in order to protect resources. Restrictions may include the number or types of vehicles, time, season of use, use of existing roads and trails only, use of designated roads or trails, or licensed use only. The BLM may also impose other restrictions to protect resources.

Closed

OHV travel is not allowed in areas designated as closed. Areas are closed in order to protect resources, ensure visitor safety, or reduce user conflicts.

Temporary

Areas may be closed to OHV use temporarily in order to allow resources to recover or for other purposes.

CURRENT CONDITIONS

Primary factors influencing the current state of travel management within the planning area include:

- Lack of comprehensive travel management planning that considers the relationships between various resources, authorized access, and recreation uses.
- Historic routes that predate planning for recreational opportunities.
- Unauthorized uses (including user-created routes) emanating from existing routes and impacting other resources.
- Subdivision of private property resulting in the creation of new access points to public lands.
- Routes/areas open to motorized use, but accessible only to adjacent landowners.
- Conflicts between recreational users.

EMPHASIS ON MINIMIZING IMPACTS

In the current RMPs, OHV designations were made solely to limit impacts by protecting resources, preventing recreation conflicts, and protecting public safety. Recent travel management plans for specific areas have been intended to manage routes and route systems to provide specific recreation opportunities and experiences. However, this planning has focused on a relatively limited area. Table 2.30 summarizes the number of acres in the planning area with restrictions on OHV travel.

TABLE 2.30 - ACREAGE FOR OHV DESIGNATIONS WITHIN THE PLANNING AREA

OHV DESIGNATION	ACRES	% OF PLANNING AREA
Closed	55,623.42	8.4%
Designated to OHV Play Area	8,510.29	1.3%
Limited to Designated Routes	145,361.53	21.8%
Limited to Existing Yearlong	420,088.85	63.1%
Limited to Existing with Seasonal Closure from 12/1 to 4/30	32,759.33	4.9%
Limited to Existing with Seasonal Closure from 5/1 to 6/15	3,386.49	0.5%

Furthermore, even designated routes were not built with recreation experiences in mind. Most follow historic non-recreational routes (such as grazing, mining, or administrative) or were created by repeated cross-country OHV travel. Such trails typically do not provide a desirable recreation experience. The user-created routes in particular are often unsustainable and cause resource impacts. There are approximately 3,700 miles of routes in the planning area. Almost 98 percent of these routes are open to motorized travel.

INCREASED OHV USE

As is the case throughout the West, OHV use has increased dramatically in the planning area since the RMPs currently in use were written in the 1980s. Lands with no previous history of user impacts now commonly experience impacts to natural and cultural resources, as well as significant impacts to recreation.

OHV use occurs nearly year-round, and for many users the act of driving or riding an OHV is the primary reason for their visit. Most of these visitors live within an hour's drive of the area and enjoy practicing their technical skills, using their equipment, and spending time with family and friends. During autumn, most parts of the planning area experience heavy OHV use by hunters.

EFFECTS OF URBANIZATION AND INCREASED ACCESS

In addition to increased OHV use, urbanization of adjacent private lands has created additional non-motorized and motorized use and new expectations for recreation experiences. Many users recreate on BLM lands because the lands are close to home and provide a convenient place to exercise, relieve stress, and spend time with family and friends. New and evolving BLM land uses include "backyard" hiking, mountain biking, dog walking, rock climbing, fly-fishing, and OHV riding. Recreational boating (either to fly fish or to whitewater kayak or raft) occurs heavily on the San Miguel, Dolores, and Lower Gunnison rivers.

At times, uses and expectations conflict with one another. Until recently, there has been very little demand, and consequently very few resources allocated, for non-motorized recreation travel. This type of use has increased in all of the public lands that border municipalities. The counties of Montrose, Delta, Ouray, San Miguel, Mesa, and Gunnison have all experienced rapid population growth, and the subdivision of private lands adjacent to BLM parcels has accompanied the growth. BLM lands are often isolated and provide limited public access. In these instances, enforcement of travel restrictions can be difficult, and motorized trespass from adjacent private land frequently occurs. Increasing high-density subdivision of private land is changing this scenario. Subdivisions are often designed to provide public access to BLM lands. A new community can offer welcome stewardship to adjacent public lands, while the resulting increased access can make BLM monitoring and management more efficient.

COMPETING NON-RECREATIONAL USES

Finally, increased transportation demands for non-recreational uses (such as oil and gas exploration and development and livestock grazing) have greatly affected recreation travel in some areas. Recreation experiences can suffer when transportation systems for other uses are increased or created.

When the above factors are considered, it is apparent that there is a need for comprehensive travel management for all recreation uses, as well as close coordination with transportation planning for non-recreational uses.

TRANSPORTATION FACILITIES AND ACCESS

The BLM transportation system represents one of the most critical aspects in effectively managing public lands. It provides public access and the infrastructure that supports uses ranging from recreation to commercial activity on public lands under BLM jurisdiction.

Federal, State, and County Roads

A network of federal, state, and county roads provides access throughout the planning area. Numerous highways bisect the area, bringing traffic to the region from throughout the United States.

Traffic volume on the road network is highly variable. The highest volume counts are found on major roadways in or near the largest communities. State highways (50, 550, 141, 65, 133, 92, 145, and 62) carry the largest traffic volumes, followed by county roads.

BLM Roads

BLM roads provide public and administrative (agency and permittee) access to public lands, through public lands, and to in-holdings of private land within the planning area. Reasonable administrative access is made available to the public for valid uses, such as mining claims, mineral leases, livestock grazing, and recreation. Most use of BLM roads would be described as casual.

Transportation planning is related to travel management. Travel management is the identification, through RMP planning, of areas where foot, pack stock, and mechanized and motorized vehicle travel is appropriate, restricted, or not allowed, depending on resource objectives and use considerations.

ROAD SYSTEM MAINTENANCE

The BLM maintains roads under standards set forth in BLM 9100 series manuals, as well as RMPs. Road maintenance provides for resource protection, accommodation of users, and protection of the public's investment. BLM road maintenance levels are described in Table 2.31.

Road system maintenance has focused on maintaining major recreational access roads, which generally receive most of the traffic volume. The BLM engineering office annually maintains about 120 to 130 miles of road within the planning area, depending on road conditions and funding availability. Road maintenance generally consists of blading or grading, and is usually performed in the summer or fall. Additional corrective maintenance or water drainage work (such as installation of culverts, drains, or other water management devices) is performed as needed, such as after periods of heavy rainfall. Snow is not removed.

TABLE 2.31 - BLM ROAD MAINTENANCE LEVELS

ROAD MAINTENANCE LEVELS	
Level 1	Assigned to roads where minimum maintenance is required to protect adjacent lands and resource values. These roads are no longer needed and are closed to traffic. The objective is to remove these roads from the transportation system.
Level 2	Assigned to roads where the management objectives require the road to be opened for limited administrative traffic. Typically, these roads are passable by high clearance vehicles.
Level 3	Assigned to roads where management objectives require the road to be open seasonally or year round for commercial, recreational, or administrative access. Typically, these roads are natural or aggregate surfaced but may include low use bituminous surfaced road. These roads have a defined cross section with drainage structures (e.g., rolling dips, culverts, or ditches). These roads may be negotiated by passenger cars traveling at prudent speeds. User comfort and convenience are not considered a high priority.
Level 4	Assigned to roads where management objectives require them to be open all year (except when closed or access is limited due to snow conditions) and which connect major administrative features (such as recreational sites, local road systems, and administrative sites) to county, state, or federal roads. Typically, these roads are single or double lane, aggregate or bituminous surface, with a higher volume of commercial and recreational traffic than administrative traffic.
Level 5	Assigned to roads where management objectives require the road to be open all year and are the highest traffic volume roads of the transportation system.

Functional Road Classification Types for BLM System Roads

In accordance with BLM Manual, Section 9113 (Roads), roads on BLM lands are classified as either *collector*, *local*, or *temporary*, based upon the amount of traffic movement. Collector roads (Level 4 or 5) generally provide access to large land tracts and are the major access routes into developed areas with relatively high average daily traffic rates. They usually connect with or are extensions of public road systems and are operated to support long-term land uses. Local roads (Level 4 or 3) normally serve a smaller area and have lower traffic volumes than collector roads. They connect with collectors or public road systems. In mountainous terrain, local roads may be single-lane with turnouts. Resource roads (Level 2) generally are point access or spur roads that connect with local or collector roads and carry low traffic volumes.

Collector Roads (Level 4 or 5)

These BLM roads normally provide primary access to large blocks of land and connect with or are extensions of a public road system. They accommodate mixed traffic and serve many uses. They generally receive the highest volume of traffic of all roads in the BLM road system. User cost, safety, comfort, and travel time are primary road management considerations. Collector roads usually require application of the highest standards used by the BLM.

Local Roads (Level 4 or 3)

These BLM roads normally serve a smaller area than collectors serve and connect to collectors or public road systems. Local roads receive lower volume, carry fewer traffic types, and generally serve fewer users. User cost, comfort, and travel time are secondary to construction and maintenance cost considerations. Low volume local roads in mountainous terrain, where operating speed is reduced by terrain, may be single-lane roads with turnouts. Environmental impacts are reduced because steeper grades, sharper curves, and lower design speeds than would be permissible on collector roads are allowable.

Resource Roads (Level 2)

These BLM roads are spur roads that provide point access and connect to local or collector roads. They carry very low volume and accommodate only one or two types of use. Use restrictions are applied to prevent conflicts between users needing the road and users attracted to the road. The location and design of these roads are governed by environmental compatibility and minimizing bureau costs with minimal consideration for user cost, comfort or travel time.

ENERGY DEVELOPMENT-RELATED TRANSPORTATION ISSUES

Road capacity, maintenance, and safety issues from gas development/mining-related traffic are an issue in the western and northeastern part of the planning area, where gas resources are being developed. A short-term increase in the volume of both heavy and light traffic

occurs during the construction, well drilling, and completion phases of developing gas resources.

Temporary conflicts (including a potential for delays, dust, road degradation and increased vehicle safety) occur during the construction/drilling phase and recompletion/work over activities. County roads also are affected by heavy equipment use, fugitive dust, and traffic-related noise. All associated impacts are lower after gas wells are in operation because traffic levels drop.

Many existing unimproved roads have been repaired and improved to accommodate the increase traffic and heavy equipment. Many new roads have also been created to facilitate gas production by providing access to the many gas wells. These new roads across public lands are often only open to gas development personnel for administrative vehicle access.

AIRPORTS AND RAILROADS

Six public airports are located within the planning area. Montrose Regional Airport, located in the city of Montrose, and Telluride Regional Airport west of Telluride offer commercial service, while Nucla Hopkins Field near the town of Nucla and Blake Field near Delta provide general aviation services. In addition, North Fork Valley Airport near Paonia and Westwinds Airpark (Hawkins Field) near Delta operate with limited general aviation services.

One major rail line serves the planning area. The Union Pacific Railroad enters the planning area from the north along the Gunnison River, runs through the town of Delta and on to the coal mines near Somerset in Gunnison County. In addition, the Union Pacific runs intermittently from Delta to Montrose.

FORECAST

INCREASE IN DEMAND FOR RECREATION OPPORTUNITIES AND ACCESS

OHV use is expected to continue to increase, especially around Montrose, Delta, and Telluride. It will also likely increase in the western and northeastern portions of the Resource Area, where new routes are developed for oil and gas production/mining and new residents move to those areas. Use may become more concentrated in these areas as other places urbanize and motorized users look for areas with fewer recreation conflicts.

The unknown rate of growth of OHV use is due in part to the increased cost of the sport. As technology has increased, so too has the cost of equipment. An ATV or off-road motorcycle currently costs $5,000 to $10,000. A pickup truck, trailer, and hundreds of dollars of safety equipment are also needed. It could require spending tens of thousands of dollars for a family to enjoy this sport, thus limiting the number of participants. In addition, it is unknown how the future cost of gasoline will affect OHV use.

The use of non-motorized vehicles close to urbanizing areas will grow as the population grows. It is expected that demand for hiking and mountain biking trails adjacent to all of the municipalities in the planning area will increase, as well as in areas close to major subdivisions outside of incorporated towns. In addition, the demand for floating and fishing access to the San Miguel River and lower Dolores River is expected to increase. It is expected that the subdividing of private property adjacent to BLM will continue. Continued collaboration between the BLM and municipalities/counties will help provide appropriate access during subdivision design and valuable stewardship once homes are occupied.

INCREASE IN DEMAND FOR AND CONSTRUCTION OF NEW ROUTES

Construction of new routes for oil and gas development and mining is expected to increase in the western and northeastern portions of the planning area. While OHV recreationists are likely to use these routes, the routes are not designed to optimize recreation experiences. New routes might also conflict with existing OHV routes and current recreation experiences.

INCREASE IN MAINTENANCE REQUIREMENTS AND EXPENSES

Maintenance costs are rising, and each year the BLM maintains fewer miles of BLM Roads. With flat federal budgets and rising fuel and equipment costs for contractors, it is likely that this trend will continue in the future.

KEY FEATURES

BLM Colorado's Executive Order 11644 and CFR (43 CFR Part 8340) both require the BLM to designate all public lands as open, closed, or limited for OHV use. All OHV use must now be restricted to designated routes within limited areas, rather than designating areas as limited to existing routes. During the RMP revision, the UFO is tasked with identifying specific route designations, along with accompanying modes of travel.

There will be no motorized cross-country travel except in areas designated as open. Open areas will be limited to a size that can be realistically managed and is geographically identifiable, but large enough to offer a high quality motorized riding or driving opportunity for participants.

For areas with limited and open categories, managers may impose different types of restrictions, including vehicle numbers, types, use times or seasons, permitted use, existing routes, designated routes, and other limitations necessary to meet management objectives.

2.2.6 ☀ Utility Corridors and Communication Sites

CURRENT LEVEL OF USE

UTILITY CORRIDORS

Utility corridors are preferred routes that co-locate multiple linear utility rights-of-way and are generally located adjacent to existing highways or county roads. Utilities within these corridors may include gas and water pipelines, electric transmission and distribution powerlines and communication lines such as telephone or cable. The BLM encourages the placement of new rights-of-way within corridors, to the extent possible. However, factors such as origination, destination, purpose, compatibility, and saturation of an existing corridor may prevent or limit the routing of a new facility within an existing corridor. In general, the highways and major county roads within the planning area already have some type of utilities located adjacent to them.

Section 368 of the Energy Policy Act of 2005, Public Law 109-58 (H.R. 6), enacted August 8, 2005, directed the Secretaries of Agriculture, Commerce, Defense, Energy, and the Interior to designate under their respective authorities corridors on federal land in eleven western states for oil, gas and hydrogen pipelines and electric transmission and distribution facilities, or energy corridors. The West-Wide Energy Corridor Programmatic EIS designated corridors are shown in Map 2-22 on page 597.

COMMUNICATION SITES

The BLM typically issues Communications Use Leases for communications facilities on public lands. The planning area currently has 28 authorized communications facilities (as shown in Table 2.32).

TABLE 2.32 - COMMUNICATIONS SITES IN THE UFO

AREA NAME	NUMBER OF FACILITIES	LOCATION
Storm King	8	T47N/R7W/Sec 16
Gobbler's Knob	4	T46N/R17W/Sec 12
Jumbo Mountain	3	T13S/R91W/Sec 27
Sheep Knob	3	T48N/R7W/Sec 1

AREA NAME	NUMBER OF FACILITIES	LOCATION
North Delta	2	T15S/R96W/Sec 7
Young's Peak	2	T15S/R91W/Sec 31
TV Hill	2	T13S/R91W/Sec 18
Paradox Hill	1	T47N/R19W/Sec 17
Baldy Mountain	1	T45N/R8W/Sec 36
Club Mesa	1	T47N/R17W/Sec 5
Oxbow Mine	1	T13S/R91W/Sec 13

FORECAST

UTILITY CORRIDORS

Use of utility corridors or the collocation of rights-of-way has become a more common practice within the BLM. As development in the planning area continues, for both energy and increased population related needs, the demand for and use of utility or energy corridors will increase accordingly. Highways and most county roads within the planning area will have some type of utilities located adjacent to them, as most already do. As existing corridors become saturated, new corridors will need to be designated.

COMMUNICATION SITES

Demand for communication sites is anticipated to increase in the future, given the fast pace of technological advances and the boom in wireless networking. Whenever possible, new applicants will be encouraged to collocate their equipment on existing towers. Also to the extent feasible, any new facilities will be encouraged to co-locate their towers at existing sites with other towers. Ultimately, new communication sites for new facilities will need to be designated, as the existing sites become filled to capacity.

KEY FEATURES

UTILITY CORRIDORS

Areas with the highest demand potential for utility corridors would include corridors designated by the West-Wide Energy Corridor Programmatic EIS. In addition, existing

major roads as well as existing trans-regional pipelines and electric transmission powerlines would be areas targeted for development for designated utility corridors.

COMMUNICATION SITES

Communication facilities are typically located at points of higher elevation within a general area and are often located adjacent to or near highways or well-traveled roads. Locations meeting these criteria will have the highest potential for increased demand.

2.2.7 ☀ Land Tenure

BACKGROUND

LAND TRANSACTIONS

While public lands are typically retained in federal ownership, occasionally there are jurisdictional transfers between federal agencies. Land tenure adjustments are accomplished through acquisitions, exchanges, or sales.

Land may be acquired when it is in the public interest, provides resource protection, improves land management through consolidation, provides recreational opportunities, enhances wildlife habitat, provides access to public lands or waters, or preserves archaeological and historical resources.

Lands identified for disposal are typically small, isolated parcels that are difficult or uneconomical to manage, or will serve important public objectives such as community expansion and economic development. Exchanges are preferred over sales for disposal of public lands.

Acquisitions: Lands may be acquired through purchase, easement, and donation or through a land exchange. Acquisitions must be consistent with the BLM mission and with applicable land use plans.

Exchanges: An exchange must be determined to be in the public interest, and fully consider better federal land management and the needs of state and local people. It must be determined that the values and objectives of the lands being acquired will be greater than the values of the federal lands being conveyed.

Sales: Public lands must be identified for disposal in a land use plan, or an amendment to the plan, before being offered for sale. Sales are typically conducted through the competitive bid process and cannot be sold at less than fair market value. Public lands that are classified, withdrawn, reserved or have special designations are not available for sale.

The Recreation and Public Purposes Act (R&PP) of 1926 was established as a means for state and local government or non-profit organizations to acquire public lands at reduced or no cost. The transferred land must be used for an established or specifically proposed public project, need, historic monument, or recreational purpose.

When in the public interest, it is the goal in land tenure adjustments to keep the surface and mineral estates together on both lands disposed of and acquired to benefit the future landowner's use and management of the land by avoiding the creation of split estate.

CURRENT LEVEL OF USE

In the amended Uncompahgre Basin RMP, 10,353 acres of public lands scattered throughout the planning area were considered suitable for disposal. Non-federal lands would be considered for acquisition through exchange opportunities if such lands met established criteria and enhanced resource management.

In the San Juan/San Miguel RMP, various parcels of public lands were considered suitable for disposal. These tracts included small, unmanageable, isolated parcels of land with limited public value scattered throughout the area. Disposal would be accomplished through sales, exchanges or any other title transfer means.

The planning area has not had an aggressive program for disposal of public lands through sales, but has processed land exchanges to the extent possible, given staff and workload.

FORECAST

The BLM will continue to negotiate land exchanges, acquisitions, easements, and potential sales within the planning area on a case-by-case basis as staff and priority workload allow. As opportunities present themselves, each prospect will be reviewed with careful consideration for public benefit.

KEY FEATURES

Areas with anticipated higher potential for land tenure adjustments include inholdings or lands adjacent to specially designated areas such as ACECs, NCAs, Special Management Areas, WSAs, and existing or potential recreation sites. In addition, public lands interfacing with areas of increasing population growth may be targeted for potential land tenure adjustments.

2.2.8 ☀ Land Use Authorizations

BACKGROUND

RIGHTS-OF-WAY (ROW)

A ROW grant is an authorization to use a specific piece of public land for a certain project, such as roads, pipelines, transmission lines, and communication sites. A ROW grant authorizes rights and privileges for a specific use of the land for a specific period. In general, a BLM ROW is granted for a term appropriate to the life of a project. Land use ROWs are authorized by grants, leases, or permits. A ROW authorizes the holder to construct, operate, maintain, and/or terminate a new or existing facility over, under, upon, or through public lands. Such authorizations are issued to businesses for commercial purposes and to private citizens for non-commercial purposes, and may be for energy or non-energy-related uses. Land use authorizations are issued to other federal, as well as state, county, and local agencies and governments.

A ROW is typically authorized through a grant, although sometimes a permit or lease may be issued. Permits are generally short-term authorizations (not to exceed three years) that have a negligible impact on the land (such as film permits, temporary storage areas, and beehives). Leases are usually long-term authorizations requiring a significant capital investment (such as communication sites).

Impacts to resources are considered when the BLM evaluates the routing or siting of a ROW. Land use authorizations contain special stipulations for surface reclamation, weed control, and other resource concerns. Additional mitigation stipulations (such as to protect cultural, plant, and wildlife resources) are applied on a case-by-case basis.

CURRENT LEVEL OF USE

Public lands throughout the planning area are generally made available for all types of land use authorizations, which are analyzed and issued on a case-by-case basis. Certain lands within the planning area are or may be designated as areas to be avoided or excluded. Examples of designated areas include ACECs, NCAs, SMAs, SRMAs, and WSAs. Land use authorizations within designated areas generally are not allowed, and if allowed, are subject to stringent stipulations.

In the past several years, the BLM has processed an average of 25 land use authorizations per year within the UFO. Typical land use authorizations within the planning area currently include:

- Roads: including Federal and State highways (which may include material storage sites), RS2477 County road systems, as well as roads authorized for commercial or private use
- Oil, gas and water pipelines
- Other water facilities including irrigation ditches and canals
- Electrical powerlines, including transmission and distribution lines, and other related facilities such as substations
- Telephone lines
- Energy related facilities such as compressor stations
- Film permits
- Reservations to other federal agencies
- Temporary use or short term (less than three years) permits
- Railroads
- Communication sites (discussed in Section 2.2.6)

It is the BLM's responsibility to protect the public lands from trespass and encroachment through means of prevention, detection, and resolution. Land authorizations including grants, permits, and land exchanges have been issued to resolve trespass issues. Locations in the planning area where trespass is more likely to occur include areas where residential and commercial development interface with public lands. Trespass occurrences are known to exist and are continually being discovered within the planning area. They are pursued as time, personnel and priorities allow.

FORECAST

Demand for land use authorizations in the planning area is anticipated to increase in correlation with future residential and commercial development and increasing population and energy demand needs. There is potential for land use authorizations for renewable energy projects (wind, solar, and geothermal), although the true potential for these resources within the planning area has yet to be determined.

KEY FEATURES

There is potential for an increase in land use authorizations within the planning area due to energy-related, residential, and commercial development, and public lands that interface with areas of increasing population and development.

2.2.9 ☀ Withdrawals

CURRENT LEVEL OF USE

Withdrawals are formal actions that segregate or reserve federal land by statute or administrative order for public purposes. Withdrawals are often used to preserve sensitive environmental values, protect major federal investments in facilities or improvements, support national security, and provide for public health and safety. The majority of withdrawals issued prior to FLPMA remain in effect until they are specifically revoked. Since FLPMA was enacted, withdrawals typically have a term not to exceed 20 years, unless a term is specifically determined by the Secretary of the Interior based upon resource use. Map 2-23 (on page 598) shows the location of withdrawn lands in the planning area.

Withdrawals typically accomplish one or more of the following:

- Transfer total or partial jurisdiction of federal land between federal agencies, without the land leaving federal ownership.
- Close, segregate, or suspend federal land to operation of all or some of the public land laws and/or mineral laws (withdraw land from settlement, disposal, location, or entry).
- Dedicate federal land to a specific purpose.

TABLE 2.33 - CURRENT WITHDRAWALS IN THE PLANNING AREA BY TYPE

TYPE OF WITHDRAWAL	HOLDER OF WITHDRAWAL	PURPOSE
Public Water Reserve	BLM CO State Office	Water Resource Protection
Power Site Reserve	BLM CO State Office	Power Site
Power Site Classification	BLM CO State Office	Power Site Classification
BLM Special Designation	BLM CO State Office	Tabeguache Special Mgmt Area
BLM Miscellaneous	BLM CO State Office	Administrative Site
BLM Miscellaneous	BLM UFO	Administrative Site
Reclamation	Bureau of Reclamation	Irrigation Projects
Department of Energy	Department of Energy	Energy Development
FERC	Grand Mesa Hydroelectric	Hydroelectric Site
BLM Miscellaneous	BLM UFO	Bat Roost Sites
NOTE: This table excludes withdrawals to the USFS		

FORECAST

The majority of BLM withdrawals were issued between 1915 and 1966, at the time the withdrawal acts were passed. Withdrawals since 2000 have primarily been designated for creation of special management areas, developed recreation areas, and national conservation areas, and protection of threatened and endangered species or cultural sites. The lands program will continue to administer both new and existing withdrawals in accordance with FLPMA on a case-by-case, site-specific basis. If any existing withdrawals were revoked, the lands would be managed in accordance with the surrounding lands and the objectives of the management unit in which they are located.

KEY FEATURES

Areas with anticipated high potential for withdrawals would include newly designated special management areas, national conservation areas, or recreational sites.

2.3

Special Designations

THE SPECIAL DESIGNATIONS SECTION:

- Identifies the locations and discusses the special values of existing special designations.
- Identifies areas meeting the relevance and importance criteria necessary for special designation consideration.

2.3.1 ☀ Areas of Critical Environmental Concern

An Area of Critical Environmental Concern (ACEC) is defined in FLPMA, Section 103(a), as an area within BLM-administered public lands where special management attention is required to protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources or other natural systems or processes, or to protect life and safety from natural hazards. BLM regulations for implementing the ACEC provisions of FLPMA are found in 43 CFR 1610.7-2(b).

Special management attention refers to management prescriptions developed during preparation of an RMP or RMP amendment expressly to protect the important and relevant values of an area from the potential effects of actions permitted by the RMP, including proposed actions deemed to be in conformance with the terms, conditions, and decisions of the RMP (BLM Manual 1613). Such management measures would not be necessary or prescribed if the critical and important features were not present.

To be designated as an ACEC, the area must meet criteria of relevance and importance found in 43 CFR 1610-7-2(a)(b), and as defined in BLM Manual 1613. To be eligible for designation as an ACEC, an area must meet criteria for both ***relevance*** and ***importance***. An ACEC possesses significant historic, cultural, or scenic values, fish or wildlife resources (including habitat, communities, or species), natural processes or systems, or natural hazards. In addition, the significance of these values and resources must be substantial in order to satisfy the importance criteria.

Restrictions that arise from an ACEC designation are determined at the time the designation is made, and are designed to protect the values or serve the purposes for which the designation was made. Goals, standards, and objectives for each proposed ACEC will be identified, as well as general management practices and uses, including necessary constraints and mitigation measures. The RMP will identify a reasonable range of alternatives that will include current management for existing ACECs, as well as management for proposed ACECs.

The planning area has five ACECs, which were designated in the two existing RMPs (as shown in Map 2-24 on page 599). The size of each area and the values it is designed to protect are listed in Table 2.34. Current ACECs will be reevaluated as part of the RMP revision process, which will determine whether the relevance and importance of each ACEC are still present and require continued management attention; whether threats of irreparable damage to the values have been identified; and whether current management is sufficient to protect the values.

TABLE 2.34 - ACECS IN THE PLANNING AREA

NAME AND DESIGNATION	AREA (IN ACRES)	VALUES
Fairview Research Natural Area/ACEC (See Map 2-25 on page 600)	213	Fairview ACEC contains two tracts. The south tract is within the planning area. The north tract is within the GGNCA and will not be considered in the RMP. The ACEC has a large population of a listed endangered species and significant populations of a candidate species.
Needle Rock Outstanding Natural Area/ACEC (See Map 2-26 on page 601)	83	This site consists mainly of a volcanic geological structure with high-value scientific, interpretive, and scenic characteristics.
Adobe Badlands Outstanding Natural Area/ACEC (See Map 2-27 on page 602)	6,383	This area consists of Mancos shale hills and flats which, through wind and water erosion, have formed unique scenic formations. The area's soils are highly erodible and saline, resulting in high sediment loads and very saline runoff. The area also contains known and potential habitat for several endangered and threatened plant species.
San Miguel ACEC/Special Recreation Management Area (See Map 2-28 on page 603)	22,841	The primary emphasis is on the protection of unique, high quality riparian vegetation resources, the scenic values of the corridor, and preservation of relic riparian communities. The provision of quality recreation experiences while maintaining these riparian systems is the second major goal.

2.3.2 National Scenic Byways

The National Scenic Byways Program was established under the Intermodal Surface Transportation Efficiency Act of 1991, and reauthorized in 1998 under the Transportation Equity Act for the 21st Century. The program recognizes certain roads as National Scenic Byways or All-American Roads based on their archaeological, cultural, historic, natural, recreational, and scenic qualities. All-American Roads must exhibit multiple intrinsic qualities. To be considered for inclusion in the program, a highway must provide safe passage for passenger cars year-round, be designated a State Scenic Byway, and have a current corridor management plan in place. Installation of off-site outdoor advertising (such as billboards) is not allowed along byways. Within the UFO, there is one All American Road and one National Scenic and Historic Byway.

AMERICA'S BYWAYS

In the state of Colorado, eleven routes have been designated as part of America's Byways by the U.S. Department of Transportation. Two of these are within the planning area.

San Juan Skyway

The San Juan Skyway was designated as an All-American Road in 1996. This 236-mile scenic byway travels southwest from Ridgway over Dallas Divide and along Leopard Creek on Highway 62. The loop joins Highway 145 near Placerville and continues past Mountain Village (just west of Telluride) through the San Juan National Forest to Cortez. From Cortez, the skyway heads east on Highway 160 to Durango, and then north along Highway 550, passing through Silverton and Ouray before returning to Ridgway.

Grand Mesa Scenic and Historic Byway

In 1996, Colorado Highway 65 over Grand Mesa was designated as a National Scenic Byway. This 63-mile route begins in Cedaredge, heads north through Mesa, and ends at the junction with Interstate-70. A spur road on top of the mesa leads to Land's End.

COLORADO SCENIC AND HISTORIC BYWAYS

The Colorado Scenic and Historic Byways program is a statewide partnership intended to provide recreational, educational, and economic benefits to Coloradans and visitors. This system of outstanding touring routes provides travelers with interpretation and identification of key points of interest and services, while protecting significant resources. Scenic and Historic Byways are nominated by local partnership groups and designated by the Colorado Scenic and Historic Byways Commission for their exceptional scenic, historic, cultural, recreational, and natural features. There are two Colorado Scenic Byways within the planning area.

Unaweep/Tabeguache Scenic Byway

This 133-mile southwest Colorado route begins in Placerville on Highway 145 and heads northwest through Naturita and Uravan. The byway continues on Highway 141 through Gateway, past the Gateway Canyons Resort, and ends in Whitewater.

West Elk Loop

The 205-mile West Elk Loop begins in Carbondale, Colorado and travels south along Highway 133 through the towns of Redstone and Paonia. The route continues south and then east along Highway 92 towards the town of Gunnison. At Gunnison, the loop heads north along Highway 135 through Crested Butte and meets up once again with Highway 133, where it continues north back to Carbondale.

2.3.3 ☀ Wild and Scenic Rivers

The BLM UFO is conducting an inventory and analysis to determine the eligibility and suitability of rivers and streams in the planning area, as well as the portion of the Dominguez-Escalante National Conservation Area within the UFO, for inclusion in the National Wild and Scenic Rivers System. The evaluation is a required component of the RMP revision.

Prepared in September 2009, the ***Draft Wild and Scenic River Eligibility Report for the Uncompahgre Planning Area*** details river segments determined to be ***eligible*** for the Wild and Scenic Rivers System, as defined by the Wild and Scenic Rivers Act of 1968. These river segments will be carried forward to the Suitability Phase of the study as part of the RMP revision. The Eligibility Report also lists all rivers and streams within the planning area that were evaluated and found not to be eligible, along with supporting rationale. The Eligibility Report, including detailed maps of eligible river segments, is available on the Uncompahgre Planning webpage.

DETERMINATION OF WILD AND SCENIC RIVER ELIGIBILITY

The initial step in determining eligibility was to generate an inventory of all rivers and streams within the evaluation area. Every known river with a perennial or intermittent flow regime was identified, using a variety of Bureau of Land Management and other data sources. Some waterways were further segmented based on differences in level of development, physiographic character, land status, or the existence of in-channel diversions or dams.

The river segments were then evaluated to determine whether they meet the dual criteria of being free-flowing and possessing one or more outstandingly remarkable values, as defined in the Wild and Scenic Rivers Act. Eligible segments were preliminarily classified as *wild*, *scenic*, or *recreational*, based on water quality and level of human development along the river corridor.

DRAFT ELIGIBILITY RESULTS

During the inventory phase, 174 river segments were identified for review. After evaluating these river segments, 23 rivers separated into 34 segments, were determined to be free-flowing and possessed one or more outstandingly remarkable values necessary for Wild and Scenic Rivers eligibility. In addition, the San Juan Public Lands Draft Land Management Plan identifies a segment of the Dolores River as eligible. The northernmost 11.8-mile downstream portion of this segment is managed and will be evaluated by the UFO during the Suitability Phase, resulting in 35 eligible river segments.

Management constraints were not considered during the eligibility phase, but will be assessed during the suitability analysis. A final determination of suitability will be issued in the RMP Record of Decision.

2.3.4 ☀ Wilderness Areas & Wilderness Study Areas

WILDERNESS STUDY AREAS

Under FLPMA, wilderness preservation is part of the BLM's multiple use mandate, and wilderness is recognized as part of a spectrum of resource values to be considered during land use planning. Under the wilderness review program, existing designated wilderness study areas (WSAs) are managed in accordance with the BLM's Interim Management Plan. The status of these WSAs will not change as a result of the Uncompahgre RMP revision.

WSAs contain wilderness characteristics and are managed to preserve those values until Congress either designates them as wilderness or releases them for other uses. This applies to the four WSAs that lie all or partially within the planning area: Camel Back (10,402 acres), Adobe Badlands (10,425 acres), Dolores River Canyon (13,354 acres within the UFO), and Sewemup (1,803 acres within the UFO).

With the passage of FLPMA in 1976, Congress directed the BLM to inventory, study, and recommend public lands under its jurisdiction for wilderness designation. In 1991, the BLM issued a Record of Decision that included wilderness recommendations for WSAs throughout the state of Colorado.

TABLE 2.35 - WILDERNESS RECOMMENDATIONS IN THE PLANNING AREA

WSA	ACRES IN PLANNING AREA RECOMMENDED FOR WILDERNESS
Camelback	**0**
Adobe Badlands	**0**
Dolores River Canyon	**13,354**
Sewemup	**1,803**

Camelback WSA

The Camelback WSA is located nine miles southwest of Delta and 20 miles northwest of Montrose, adjacent to the Uncompahgre National Forest. It contains 10,402 acres of BLM-administered public land, all within the planning area. The BLM did not recommend Camelback WSA for wilderness designation in the 1991 Wilderness Study Report. The entire area is closed to motorized and mechanized travel.

Adobe Badlands WSA

The Adobe Badlands WSA is located three miles northwest of Delta, and contains 10,425 acres of BLM public land, all within the planning area. The area is surrounded by both public and non-public lands, and the northern boundary is contiguous with the Grand Mesa National Forest. The WSA was recommended as not suitable for wilderness designation in the Wilderness Study Report.

Approximately 6,783 acres in the southern two-thirds of the area is managed as an Outstanding Natural Area and Area of Critical Environmental Concern to protect scenic values, threatened and endangered plants, and reduce active erosion. The area is closed to motorized travel. Approximately 1,927 acres in the northern portion is managed for deer and elk winter range. Motorized travel is restricted to designated roads and trails from December 1 through April 30. Motorized travel is restricted yearlong to designated roads and trails on 1,715 acres of highly erodible saline soils along the western and northern boundary of the WSA.

Dolores River Canyon WSA

The Dolores River Canyon WSA is located 18 miles west of Naturita and is surrounded by BLM land. The area contains 28,668 acres of public land (with the northernmost 13,354 acres in the planning area). Approximately 29,415 acres (including an additional 947 acres from outside the WSA boundary) were recommended for wilderness designation by the BLM in the San Juan/San Miguel RMP. This WSA is closed to motorized travel.

Sewemup Mesa WSA

The Sewemup Mesa WSA is located south of Gateway, west of Highway 141, approximately 15 miles northwest of Uravan. The southwest portion is adjacent to Manti-LaSalle National Forest. The WSA contains 19,140 acres of public land (with the southernmost 1,803 acres in the planning area). Of the entire WSA, approximately 18,835 acres were recommended by the BLM as suitable for wilderness designation and 305 acres were recommended as non-wilderness. The entire suitable area is closed to motorized travel.

SPECIAL DESIGNATION

Tabeguache Area

The Tabeguache Area is located on the west-central side of the Uncompahgre Plateau, approximately seven miles north of Nucla and adjacent to the Uncompahgre National Forest. The Colorado Wilderness Act (H.R. 631) passed by Congress in 1993, designated 17,240 acres consisting of 7,748 acres of the BLM Tabeguache WSA (within the planning area) and 9,492 acres of land in the Uncompahgre National Forest (adjacent to the WSA) as the Tabeguache Area. Under the new law, the Tabeguache Area must be managed by the BLM and USFS in order to maintain the area's "presently existing wilderness character and potential for inclusion in the National Wilderness Preservation System." The entire Tabeguache Area is closed to motorized and mechanized travel.

2.3.5 ☀ Special Recreation Management Areas

Special Recreation Management Areas are discussed in Recreation Section 2.2.4 beginning on page 172.

2.4

Social and Economic Conditions and Characteristics

THE SOCIAL AND ECONOMIC CONDITIONS AND CHARACTERIZATIONS SECTION INCLUDES:

TRIBAL INTERESTS
Identifies Tribes with interests in the planning area.

PUBLIC SAFETY
Identifies areas or conditions where public safety is an issue.

SOCIAL AND ECONOMIC CONDITIONS
Presents the baseline socio-economic report.

2.4.1 ☀ Tribal Interests

BACKGROUND

The BLM has traditionally viewed its responsibility toward Native American concerns and tribal interests within the narrow scope of consultation on specific issues, typically involving development and individual NEPA actions on public lands. The BLM is mandated to consult with Native American tribes concerning the identification of cultural values, religious beliefs, and traditional practices of Native American people that may be affected by actions on federal lands. The 1989 RMP does not contain any specific decisions or guidance relating to tribal interests.

The BLM has developed several sets of guidelines for consulting with Native American groups and evaluating cultural resources, with an emphasis on traditional use values. BLM manuals 8160 and H-8160-1 provide consultation requirements and procedural guidance to ensure that the consultation record demonstrates, "that the responsible manager has made a reasonable and good faith effort to obtain and consider appropriate Native American input in decision making" (BLM 2002). BLM Handbook H-8110 offers guidelines for determining authorized uses of a cultural resource, including considerations for traditional use values.

INDICATORS

As part of the cultural resource management planning program, the UFO (in cooperation with the Grand Junction and Glenwood Springs field offices) has initiated consultation in connection with the Ute Ethnohistory Project. A series of face-to-face consultations and field visits were conducted with representatives of the Northern Ute Tribe (inhabiting the Uintah and Ouray Reservation in Utah), and the Ute Mountain Ute Tribe. Representatives of the Southern Ute Tribe also participated in the initial planning stages.

The project has thus far produced a report that will serve as the foundation for addressing tribal interests during the upcoming RMP. Titled "Perspectives on Ute Ethnohistory in West Central Colorado" (Dominguez Archaeological Research Group 2009), the report identifies the following key issues in the continued identification and protection of tribal interests:

- Legal, social, scientific and religious points of view attach(ed) to cultural resources on public lands. Each of those perspectives must be considered, in good faith, in land management planning, policy and programs.
- The traditional and historical culture of the Utes is based in nature and places deeply-held values on the living landscapes that were home to their ancestors. Their

spiritual and emotional connections to their Colorado homelands remain strong and are growing.

- Consultation and partnership with the Utes is vitally important to BLM's planning and cultural resource management decisions in its efforts to keep pace with increasing development and population pressures on public lands in the project area.
- Cultural programs that provide opportunities for Ute people – including elders, families, and young people --- to widely participate in and contribute to cultural resources research and preservation efforts are of immense benefit to all heritage stakeholders.
- Partnership and collaboration requires information parity. Much work is needed to improve information flow between tribal and agency cultural resource departments.
- Meaningful and effective tribal consultation, as well as informed land management decision-making, requires more than narrowly focused archaeological site information. Landscape-scale inventories, including environmental, ethnohistorical, and ethnographic contexts, are generally lacking in the project area.
- Consultation processes are inconsistent across both tribal and agency cultural programs. Past efforts to clarify and improve communication and procedural protocols, including those undertaken in the course of this project, should be continued and expanded.

A number of recent trends in cultural heritage preservation and cultural resource management, and within the disciplines of archaeology, anthropology, and history, are beginning to address past shortcomings in regard to Native American culture and history. This project is a good beginning toward integrating and applying these new ways of understanding to the challenges of preserving and protecting Ute heritage on the public lands of Colorado.

The report examines these themes in some detail, looks at how they may apply to current and future BLM planning activities, and recommends future actions that the BLM can take to more fully integrate Ute heritage concerns into cultural programs (Ott 2009).

CURRENT CONDITION

Present practices in the protection of tribal interests are limited to project and site specific Native American consultations. Tribal leaders and historians generally view the process of consultation in its entirety as one in which representatives of Sovereign Nations meet to discuss and resolve potential conflicts. From tribal perspectives, most issues center on the appropriate use and protection of landscapes and places. The BLM's approach has been far narrower, and places emphasis on specific sites, with the goal of protection of tribal interests in the framework of archaeological resources. The resulting miscommunications are frequently frustrating to all parties concerned.

Places (as opposed to sites) of traditional cultural importance to Native American people may include:

- locations associated with traditional beliefs (such as tribal and human origins, oral tales and tribal history, religious and ceremonial practices, and past or present significance and use)
- ancestral habitation and burial sites
- trails
- areas where food, mineral, and water resources possessing healing powers or used for subsistence may be obtained.

Some of these locations may also be regarded as sacred by particular Native American tribes or individuals. Under the framework of existing laws (including the National Historic Preservation Act of 1966, the American Indian Religious Freedom Act of 1978, Executive Order 13007 regarding Indian Sacred Sites, and the Native American Graves Protection and Repatriation Act of 1990), the BLM must take into account the effects of federally linked projects or land uses on these types of locations.

The planning area is not contiguous with any current tribal lands, nor have any trust assets or resources been identified by tribes. Portions of the planning area in San Miguel and southern Ouray counties are within lands covered by the Brunot Treaty of 1873, though none of the provisions of that agreement or the subsequent Colorado DOW/Southern Ute Tribe Memorandum of Understanding are administered by the BLM.

The BLM and area tribes currently have not entered into any programmatic agreements, memoranda of understanding, or joint plans. The UFO has invited the Southern Ute Indian Tribe, the Northern Ute Indian Tribe, and the Ute Mountain Ute Tribe to become cooperating agencies during the RMP revision process. To date, none of the tribes has signed a memorandum of understanding with the BLM to become a cooperating agency.

TRENDS

During previous consultation, the Ute Tribes have indicated that the UFO is part of their ancestral homeland, thereby increasing the potential of traditional cultural properties and sacred sites. At present, the Ute Tribes have identified several sacred/religious sites and special use areas. Continuing consultation with Native American tribes will help redevelop traditional ties to the landscape, and identify and protect sacred and traditional use areas.

Native American consultation on both a programmatic and project-specific basis continues to identify traditional cultural properties, sacred/religious sites, and special use areas through letters, phone calls, and on-site visits. Field site visits have been conducted to share the results of compliance projects when sites affiliated with the Ute tribes are recorded.

Native American heritage considerations are just being discovered through consultation with the Ute tribes. The BLM perspective of managing significant cultural resources as distinct properties differs from that of traditional tribal leaders who view cultural resources as part of a larger heritage setting. The following management practices are seen as important for the UFO to continue in managing tribal interests within the planning area:

- Continue consultation with Ute tribal members to identify traditional areas of importance.
- Continue programs to redevelop traditional ties to the landscape, and identify and protect sacred and traditional use areas.
- Designate heritage areas as ACECs or special management areas to meet the BLM's commitment to the Ute tribes to recognize areas to manage as traditional landscapes and protect cultural resources holistically by focusing on community stewardship.

FORECAST

The UFO will continue to consult with Native American tribes to identify traditional cultural properties, sacred/religious sites, and special use areas within the planning area. Consultation will expand from the current practice of sending informational letters, to a program that includes written communication, face-to-face meetings, and programmatic agreements. Letters requesting comments and input will continue to be sent to the Southern Ute, Ute Mountain Ute, and Northern Ute tribes. Phone contact will be made to confirm tribal interest in providing comments and input, and consultation with interested tribes will continue throughout the planning process. If tribally sensitive areas are identified through the notification or consultation process, concerns will be addressed through planning. The UFO will protect and preserve Native American cultural and sacred sites, and access to these sites whenever possible, and will take no action that would adversely affect these areas or locations without consulting the appropriate tribes.

UTE ETHNOHISTORY PROJECT

The Ute Ethnohistory Project is a long-term partnership and research project with the Ute tribes dedicated to identifying areas and sites of cultural and religious importance to the Ute people. The project was initiated by the BLM in 2007 during early scoping for the RMP revision. It involved presentations to the three Ute Councils. This project actively involves Ute cultural resource staff and traditional leaders in identifying issues and concerns. To date, one of the major issues is conserving heritage landscapes. These are large areas that embody not only physical cultural sites, but also have natural environmental conditions relatively unaffected by the change in cultural use over the past 100 years that could be used by Ute tribal members for field workshops and resource gathering areas. The Ute

Ethnohistory Project will continue throughout the RMP revision process. As sensitive heritage areas are identified through the Native American notification or consultation process, their concerns will be addressed through the RMP revision process. The BLM is obligated to protect and preserve Native American cultural and sacred sites and Native American access to these sites, but that is only possible through better communication between the BLM and tribes.

2.4.2 Public Safety

Visitor safety is a high priority for the UFO. The BLM is required to address abandoned mines, target shooting, unexploded ordnance, mass movement, hazardous waste, and other public hazards. The primary concern for public safety within the planning area is the illegal use, storage, and disposal of hazardous materials.

MAJOR SAFETY CONCERNS IN THE PLANNING AREA

Abandoned Mines

The Abandoned Mine Lands Program is a national and state BLM safety priority, with an emphasis on ensuring public safety and protecting watersheds from hazardous materials and mine drainage. At the field office level, the program's role is to identify and characterize inactive mine sites, inventory hazards or potential hazards to human health, safety, and the environment, and store data in a national or state database. Specific sites may be closed or remediated in order to protect human health or the environment.

There are over 400 documented abandoned uranium mines in the planning area (Buria 2008). Abandoned mines and prospects are found throughout the planning area. Workers conducting natural resource extraction and development may encounter hazardous, abandoned mine sites. In addition, visitors often find abandoned mines and prospects attractive to explore and may be exposed to hazards at these sites. Features that could pose public safety hazards at abandoned mine sites include open and unstable shafts, adits, drifts, pits, tailings, wells, or other excavations, dilapidated, unstable, or collapsed buildings and other structures, mining implements, construction debris, and hazardous or toxic materials.

The uranium mining industry began in the 1940s, primarily to produce uranium for weapons and later for nuclear fuel. Although there are about 4,000 mines with documented production, a database compiled by EPA, with information provided by other federal, state, and tribal agencies, includes 15,000 mine locations with uranium in 14 western states. Most of those locations are found in Colorado, Utah, New Mexico, Arizona, and Wyoming, with about 75% of those on federal and tribal lands (as shown in Map 2-29 on page 604).

The majority of these sites were conventional (open pit and underground) mines. The mining of uranium ores by both underground and surface methods produces large amounts of bulk waste material, including bore hole drill cuttings, excavated top soil, barren overburden rock, weakly uranium-enriched waste rock, and subgrade ores (or protore). At some abandoned mine sites, ore enriched with uranium was left on site when prices fell, while transfer stations at some distance from remote mines may contain residual radioactive soil and rock without any visible facilities to mark their location. While most pose minimal

risk to the public, since radiation exposure is likely to be short and intermittent (involving visitation and recreation), they may pose other physical safety risks (BLM 2008).

According to the Colorado Division of Reclamation, Mining and Safety, approximately 23,000 abandoned mines are located in Colorado, and of those, only 6,127 have been made safe by this state agency.

Target Shooting

While there are no designated target shooting areas within the planning area, target shooting is generally allowed on public lands. The planning area has several unofficial shooting areas in old barrow pits, gravel pits, and other disturbed areas where there is a history of such use. Cleanup of targets, shell casings, and trash is required. Due to public safety concerns, shooting is specifically prohibited at developed recreation sites and in other posted areas.

Unexploded Ordnance

The amount of unexploded ordnance within the planning area is unknown. Areas in and around northwest Delta where inherent ordnance dangers exist require continued regulated access, close monitoring, and notification of users. In public access areas, any identified unexploded ordnance reported would be cleared and disposed of according to applicable U.S. Army policies and procedures.

Hazardous Materials

There are no approved hazardous waste disposal facilities within the planning area. Hazardous material is defined as any material that, because of its quantity, concentration, or physical or chemical properties, may pose a real hazard to human health or the environment. Hazardous materials include flammable, combustible, toxic, poisonous, infectious, and corrosive materials, oxidizers, aerosols, biohazards, and compressed gases.

Hazardous materials may legitimately be brought onto BLM-administered lands during authorized weed and insect control or resource development projects. Hazardous materials used for weed and insect control include herbicides, algaecides, and pesticides. The general types of hazardous materials that may be present during resource development projects include, but are not limited to, petroleum products (fuels and lubricants), solvents, surfactants, paints, explosives, batteries, acids, biocides, gases, and antifreeze. Many hazardous material incidents involve illegal disposal of hazardous materials on public lands. These types of materials include, but are not limited to, petroleum products, household wastes, paints, biocides, and methamphetamine manufacturing wastes. The majority of illegal dumping activity within the planning area involves solid waste, which is problematic regardless of whether hazardous materials are involved.

Mass Movement

Unstable slopes occur on hillsides or cliffs, or in areas that are susceptible to landslides, mudflows, rock falls, or accelerated creep of slope-forming materials. Unstable slopes occur

naturally and are widespread in the planning area. Most unstable slopes consist of weathered sedimentary strata and/or recent colluvium deposits that move downhill due to gravity. Unstable slopes can be active or inactive. Slope failure can be initiated by a change of conditions, either natural or man induced. Natural factors contributing to slope instability include weathering and erosion, changes in the hydrologic characteristics of the hillside, loss of vegetation cover, earthquakes, and the slow natural deterioration of slope strength. Artificial factors that can undermine slope strength include cut and fill operations, alteration of surface drainages, removal of vegetation cover, excessive irrigation, blasting, and vehicular traffic.

Within the UFO, there is an area of mass movement in the Paonia-McClure Pass area. Here the Cretaceous Mesa Verde Group and Tertiary Wasatch Formations have resistant sandstone units overlying weaker, more easily erodible shale, siltstone and mudstone units. These weaker units are easily weathered and eroded, undercutting the more competent sandstone. This differential weathering causes the sandstone to slide and fall once its underlying support is removed.

In general, mass movement is a dynamic process that can be activated by earthquakes, rapid snowmelt, intense rainstorms, or gravity. Whereas mass movement plays a major role in the evolution of a hillslope by modifying slope morphology and transporting material from the slope to the valley, it also poses a potential natural hazard. Prediction of the location and volume of transported mass on potentially unstable slopes is an important issue in the assessment of mass movement hazards and hillslope evolution. A promising approach is to examine the relationships of area, volume, length, height, and width of existing movements through ratio quantification (Regmi et al 2008).

A technical study mapped 683 movement features in the Paonia to McClure Pass area of western Colorado from aerial photographs and field surveys. The area covers approximately 600 kilometers^2. The total area of movement was classified as debris flows (29%), rockslides (26%), debris slides (23%), soil slides (15%), and forest road and highway-influenced landslides (7%). (Regmi, et al, 2008) Future hazard analysis studies will produce landslide hazard zone maps that BLM can use in its planning process.

Flood/debris flow hazards are discussed under Soil Resources in Section 2.1.3.

2.4.3 Social & Economic Conditions

The BLM UFO will make the Social and Economic Baseline Assessment Report available on the Uncompahgre planning webpage at www.UFORMP.com as soon as it is finalized.

CHAPTER THREE
Current Management Direction

This chapter describes the current management direction provided by the existing RMPs and amendments (shown in Table 3.1). This current management becomes the basis for the No Action Alternative in the new RMP/Environmental Impact Statement (EIS). Management direction from these RMPs determined to be still valid may be carried forward to the Uncompahgre RMP as an element of one or more action alternatives.

Current management direction addresses resources, resources uses, special designations, and social and economic conditions and characterizations in the planning area.

THE CURRENT MANAGEMENT DIRECTION CHAPTER INCLUDES:

MANAGEMENT OBJECTIVES

Identify objectives from existing RMPs, amendments, and other relevant mandates

MANAGEMENT DECISIONS

Identify decisions made and actions taken based upon existing RMPs, amendments, and other relevant mandates

TABLE 3.1 RELEVANT PLANS AND AMENDMENTS

DOCUMENT TITLE	YEAR	DESCRIPTION
San Juan/San Miguel RMP	1985	Current RMP guiding management actions in the San Juan Resource Area and portions of the Uncompahgre Basin Resource Area
Uncompahgre Basin RMP	1989	Current RMP guiding management actions in the Uncompahgre Basin Planning Area
Oil and Gas Leasing Amendment	1991	Amends the San Juan/San Miguel RMP to require lease stipulations, lease notices, and conditions of approval for field operations on all new oil and gas leases and new operations on existing leases
Fire Management Amendment	1992	Amends the Uncompahgre Basin RMP to allow the use of fire as a management tool on all public lands in the planning area, subject to site-specific environmental analysis and approved burn plans
San Miguel River Area of Critical Environmental Concern (ACEC) and Special Recreation Management Area (SRMA) Amendment	1993	Amends the San Juan/San Miguel RMP to establish an SRMA for the management of recreation resources and within that, an ACEC for the protection of unique riparian resources and scenic values
Land Disposal Amendment	1994	Amends the Uncompahgre Basin RMP to classify public lands in the planning area (excluding special management retention areas) into one of two categories for disposal or multiple use management purposes
Standards for Public Land Health and Guidelines for Livestock Grazing Management in Colorado	1997	Amends both RMPs to establish standards and guidelines for improving and sustaining soil productivity, riparian function, water quality, plant density and diversity, and wildlife habitat on public lands using a landscape approach
Gunnison Interim Travel Management Amendment	2001	Amends the Uncompahgre Basin RMP to prohibit cross-country, off-route travel using motorized or mechanical vehicles and limit use to existing road and trails

3.1.1 Air Quality

MANAGEMENT OBJECTIVES

UNCOMPAHGRE BASIN RMP

- Present air quality standards will be adhered to throughout the entire planning area. This is required by law.

SAN JUAN/SAN MIGUEL RMP

Objectives and decisions for managing air quality are not identified in this plan.

MANAGEMENT DECISIONS

- Activities and projects on public land will comply with applicable local, state, and federal air quality regulations. Mitigation to minimize air quality degradation will be incorporated into project proposals as appropriate.

Implementation Priorities

1. Assist other agencies in obtaining baseline air quality data.
2. Incorporate mitigation into any project proposal which would degrade air quality.

SUPPORT

Support will be needed from the State of Colorado Department of Health Air Pollution Control Division, the U.S. Environmental Protection Agency, the USFS and the National Park Service.

3.1.2 Geology

Objectives and decisions for managing geological resources are not identified in either plan. Geologic resources are managed according to BLM policies.

3.1.3/3.1.4 ☀ Soil and Water Resources

MANAGEMENT OBJECTIVES

UNCOMPAHGRE BASIN RMP

- Water quality and erosion conditions will continue to be monitored throughout the planning area to establish baseline conditions, identify problem areas, and to measure changes due to management actions. Measures designed to minimize erosion and water quality deterioration will be required in the site specific plans for surface-disturbing land use activities.
- Management Units: 1, 2, 3, 7, 8, 9, 10, 13, 14, and 15 are available for erosion and salinity control objectives, and projects which do not conflict with the primary objectives of each of these management units.

SAN JUAN/SAN MIGUEL RMP

- Soil and water resources will continue to be evaluated in activity planning or on a case-by-case basis as part of project level planning. Such an evaluation will consider the significance of the proposed projects and the sensitivity of soil and water resources in the affected areas. Stipulations will be attached as appropriate to ensure compatibility of projects to soil and water resource management. Soils will be managed to maintain productivity and to minimize erosion.
- Water quality will be maintained or improved in accordance with State and Federal laws and approved standards, including consultation with State agencies on proposed projects that may significantly affect water quality. Management actions on public land within municipal watersheds will be designed to protect water quality and quantity. Management activities in aquatic and riparian areas will be designed to maintain or, where possible, improve riparian habitat condition. Roads and utility corridors will avoid aquatic and riparian areas to the extent practicable.

MANAGEMENT DECISIONS

UNCOMPAHGRE BASIN RMP

Management Unit 1

- Non-conflicting (does not conflict with the objective of the management unit) erosion control objectives, projects, and mitigating measures will be incorporated into new and existing allotment management plans (AMPs).
- In-channel structures and land treatment projects designed to reduce runoff and soil erosion will be developed.

Management Unit 2

- Non-conflicting erosion control objectives, projects, and mitigation measures will be incorporated into new wildlife habitat management plans.
- Land treatment and erosion control projects will be permitted if they are compatible with wildlife habitat management objectives.

Management Unit 3

- Non-conflicting erosion control objectives, projects, and mitigating measures will be incorporated into new forest management plans (FMPs).
- Existing erosion control projects will be maintained and new projects developed if they will not decrease the woodland base.

Management Unit 5

- Management Unit 5, totaling 24,177 acres, consists of Mancos shale hills commonly known as the "adobes". The management unit will be managed to reduce salinity loads in the Upper Colorado River Basin.
- In-channel structures and land treatment projects designed to reduce runoff, erosion, and sedimentation will be developed, and surface protection measures will be implemented.
- Forage utilization will be managed to achieve the basal ground cover objectives identified in Table XX.

TABLE 3.2 - OBJECTIVES FOR GROUND COVER PERCENTAGE IN MANAGEMENT UNIT 5

RANGE SITE	LOCATION	PERCENT BASAL GROUND COVER
Stony salt desert	North of Delta	10%
Clayey salt desert	South of Hotchkiss	10%
Salt flats	South of Hotchkiss	7%
Clayey salt desert	Bone Mesa	10%

- Surface disturbing activities will be curtailed from March 1 through May 31 when saturated soils are most vulnerable to damage.
- Activities and other land uses which are consistent with maintaining the soil and vegetative conditions necessary to reduce erosion and salt contributions to the river basin will be permitted.
- To protect highly saline soils, vehicle use in the entire management unit will be limited to designated roads and trails yearlong.

Management Unit 9

- Non-conflicting erosion control and water quality improvement objectives and projects will be incorporated into new riparian/aquatic system management plans.

Management Unit 10

- Stipulations designed to maintain soil stability and prevent soil slumping will be incorporated into plans for all surface disturbing land use activities.

Management Unit 15

- Erosion and salinity control measures will not utilize structures or land treatments which would alter scenic values.

Management Unit 16

- Unit will not be available for any project development due to the low potential economic return.

Implementation Priorities

1. Maintain existing water quality and erosion monitoring studies;
2. Determine existing basal ground cover (an indicator of soil erosion potential) on:
    - Management Unit 15
    - Management Unit 5
3. Develop Watershed Management Objectives on Management Unit 5
4. Implement Watershed Management

UNCOMPAHGRE BASIN RMP AMENDMENTS

Uncompahgre Basin Wilderness Environmental Impact Statement (1989)

Adobe Badlands WSA (CO-030-370B) - No Wilderness Alternative (Proposed Action). Under the Proposed Action, all 10,425 acres of the Adobe Badlands WSA are being recommended as nonsuitable for wilderness designation. The area would be divided in to three management units. One unit would be 1,715 acres and managed as a Salinity Control Unit (Unit C) with seasonal restrictions on ORV use, grazing, oil and gas leasing, and mineral activities to control active erosion and salinity contributions.

Gunnison Travel Interim Restrictions

On March 28, 2001, a travel management plan was finalized for portions of the UFO. The Environmental Assessment (EA) was titled Gunnison Travel Interim Restrictions." The purpose and need for the proposed action in the EA was, in part, to maintain soil and water quality. Under the Purpose and Need, the EA states that the goal of maintaining and restoring healthy ecosystems and watersheds is not being met. The EA was also intended to bring the area into compliance with the Colorado Public Land Health Standards to ensure healthy upland soils, and water quality meets minimum Colorado water standards.

Uncompahgre Basin RMP Management Units amended by this travel plan for soil and water resources are as follows:

Management Unit 5

- Description of the OHV designation in the unit in the Uncompahgre Basin RMP dated July 1989: Off-Road Vehicles. To protect high saline soils, vehicle use in the entire management unit will be limited to designated roads and trails.
- Description of the proposed amendment to the above language: On approximately 1,329 acres of public lands on highly saline soils in the part of the unit located east or north of Colorado Highways 62 and 92 in Montrose, Delta, and Gunnison Counties, off-route, off highway use by wheeled, motorized or non-motorized mechanical vehicles, including mountain bikes, will be prohibited yearlong. Use by wheeled, motorized or non-motorized mechanical vehicles will be permitted for camping, picnicking, and forest gathering only 300 feet either side of existing established routes or trails as long as that use does not result in resource damage. The use of motorized vehicles will not be permitted cross-country or off existing established routes to retrieve game.
- Vehicle use on public lands in the remainder of the unit in the UFO will be limited to designated roads and trails yearlong to protect these highly saline soils.

Management Unit 9

- Description of the OHV designation in the unit in the Uncompahgre Basin RMP on Off-Road Vehicles dated July 1989. A total of 680 acres in Roubideau and Potter creeks will be closed to ORV use. Vehicle use in the remainder of the management unit will be limited to designated roads and trails yearlong.
- Description of the Proposed Amendment to the above language: On approximate1y 726 acres of public lands in riparian areas in the part of the unit located north of Colorado Highways 62 and 92 in Montrose, Delta, and Gunnison Counties off-route, off-highway use by wheeled, motorized or non-motorized mechanical vehicles, including mountain bikes, will be prohibited yearlong.
- Use by wheeled, motorized or non-motorized mechanical vehicles will be permitted for camping, picnicking, and forest product gathering only within 300 feet either side of existing established routes or trails as long as that use does not result in resource

damage. The use of motorized vehicles will not be permitted cross-country or off existing established routes to retrieve game.

- On public lands in the remainder of the unit in the UFO, off road vehicle use will be limited to designated roads and trails year long, with the exception of a total of 680 in Roubideau and Potter creeks, which will remain closed to ORV use.

Management Unit 16

- Description of the OHV designation in the unit in the Uncompahgre Basin RMP dated July 1989: Off-Road Vehicles. Public lands within the management unit will be open to ORV use.
- Description of the Proposed Amendment to the above language: On approximately 12,748 acres of public lands in that part of the unit located east or north of Colorado Highways 62 and 92 in Montrose, Delta, and Gunnison Counties, off route, off-highway use by wheeled, motorized or non-motorized mechanical vehicles, including mountain bikes, will be prohibited year long. Use by wheeled, motorized or non-motorized mechanical vehicles will be permitted for camping, picnicking, and forest product gathering only within 300 feet either side of existing established routes or trails as long as that use does not result in resource damage. The use of motorized vehicles will not be permitted cross-country or off existing established routes to retrieve game. This limitation of use is to protect resources, including soils and watershed values.
- The remainder of the public lands in management unit 16 is outside of the affected area and will remain open to ORV use.

Uncompahgre Basin RMP Amendment - Project Design Criteria BLM Programmatic Consultation for Resource Management Plan Implementation 3/13/06

These criteria apply to both the Uncompahgre Basin RMP and the San Juan/San Miguel RMP.

BLM has defined conservation measures discussed in the Consultation Initiation letter (February 2006) as Project Design Criteria. These include actions that the BLM is currently implementing or can commit to implementing immediately that will reduce or minimize adverse effects to threatened and endangered species resulting from BLM actions. The subsets of these actions that have implications for soil and water resource management are as follows:

Colorado River Endangered Fishes

Project Design Features

All new pipelines and other controlled surface uses that cross or affect any critical or occupied habitat of the Colorado River fishes will adhere to the following stipulations:

- No work in the active river channel will take place between July 1 and September 30. This will avoid adverse affects from sedimentation during spawning and when larval fishes are drifting in the river channel;
- After construction, the stream bed will be returned to pre-construction contours;
- A spill/leak contingency plan will be developed.

Preble's Meadow Jumping Mouse

Project Design Features

- Require the use of erosion controls (such as silt fence, erosion blankets, hay bales, mulching, tackifiers, and surface roughening) on all projects within, adjacent to, or upstream from Preble's habitat to control erosion and sedimentation problems. Photo or biodegradable erosion blankets that will not entangle Preble's and other wildlife should be used where appropriate. Exposed surfaces should be minimized.

Greenback Cutthroat Trout

Project Design Features

Require that measures be taken to minimize impacts to water quality and riparian and aquatic habitats during construction activities in occupied Greenback habitat. These measures include:

- the use of erosion controls and construction fencing on all projects within, adjacent to, or upstream from Greenback habitat to control erosion and sedimentation problems;
- the minimization of exposed surfaces; the avoidance of known spawning sites or backwaters; restrict the timing of all BLM-authorized activities occurring in occupied Greenback spawning habitat on a site-specific basis in consultation with the Fish and Wildlife Service; construction project personnel will be responsible for monitoring erosion control effectiveness and modifying control techniques as needed (especially after precipitation events); the maintenance and repair of erosion controls throughout project completion and site recovery; and develop spill/leak contingency plans for pipelines constructed in occupied Greenback habitat.
- avoiding aerial application of chemical fire retardant or foam, and excluding fire fighting-surface disturbing activities (such as fire lines) within 300 feet of any body of water that may be occupied Greenback habitat, except where human safety is involved.

Colorado Public Land Health Standards

The Uncompahgre Basin RMP is amended to include the standards for public land health and guidelines for livestock grazing management dated November 1996. Existing RMP decisions modified or replaced by adoption of standards for public land health and guidelines for livestock grazing management, include:

The first sentence of the second paragraph under Management Unit 8 was modified, by adding, "Commensurate with public land health standards" so that it reads, "The management unit will be managed as open to OHV use, commensurate with public land health standards."

This modification is needed to assure consistency with Colorado land health standards. The soil and water public land health standards include the following:

Standard 1: Up/and soils exhibit infiltration and permeability rates that are appropriate to soil type, climate, land form, and geologic processes. Adequate soil infiltration and permeability allows for the accumulation of soil moisture necessary for optimal plant growth and vigor, and minimizes surface runoff.

Indicators:

- Expression of rills and soil pedestals is minimal.
- Evidence of actively-eroding gullies (incised channels) is minimal.
- Canopy and ground cover are appropriate.
- There is litter accumulating in place and is not sorted by normal overland water flow.
- There is appropriate organic matter in soil.
- There is diversity of plant species with a variety of root depths.
- Upland swales have vegetation cover or density greater than that of adjacent uplands.
- There are vigorous, desirable plants.

Standard 5: The water quality of all water bodies, including groundwater where applicable, located on or influenced by BLM lands will achieve or exceed the Water Quality Standards established by the State of Colorado. Water Quality Standards for surface and ground waters include the designated beneficial uses, numeric criteria, narrative criteria, and antidegradation requirements set forth under State law as found in (5 CCR 1002-81, as required by Section 303(c) of the Clean Water Act.

Indicators:

- Appropriate populations of macroinvertebrates, vertebrates, and algae are present.
- Surface and ground waters only contain substances (such as sediment, scum, floating debris, odor, and heavy metal precipitates on channel substrate) attributable to humans within the amounts, concentrations, or combinations as directed by the Water Quality Standards established by the State of Colorado (5 CCR 1002-8).

SAN JUAN/SAN MIGUEL RMP

- Protect water quality in aquifers used for domestic and municipal purposes in the Tabeguache Creek watershed.

- Manage defined acreage in Paradox Valley and Dry Creek Basin to reduce erosion and sediment yield.
- Develop watershed management plans for all accelerated erosion, salinity, riparian, and other water quality improvement areas detailing specific management goals and actions.
- All monitoring will be conducted according to BLM policy and manuals, subject to available funding and personnel.

SAN JUAN/SAN MIGUEL RMP AMENDMENTS

Colorado Public Land Health Standards

The San Juan San Miguel RMP is amended to include the standards for public land health and guidelines for livestock grazing management dated November 1996. Existing RMP decisions modified or replaced by adoption of standards for public land health and guidelines for livestock grazing management include:

- ***Page 26 of Final RMP:*** Modify the second sentence under Management Guidance for Area A by adding: "Contingent on meeting public health standards" so that it reads: *Emphasis is on increasing forage, red meat and animal fiber production, and improving forage composition and watershed conditions, contingent on meeting public land health standards*.

  Rationale: This objective is modified to assure consistency with public land health standards.

- ***Page 27 of Final RMP:*** Modify livestock management, specific management direction by replacing 77 Allotment Management Plans (AMPs) on 810,000 acres with "where needed" so that it reads: *Develop AMPs where needed*.

  Rationale: Developing 71 AMPs is probably not realistic considering the limited resources of the BLM, and setting a specific number of AMPs is inconsistent with the prioritization process described for implementing standards and guidelines.

- ***Page 33 of Final RMP:*** Modify the second paragraph under Management Guidance for Area C by adding, "contingent on developments being able to meet public land health standards" so it reads,' The primary management goal is to ensure the continued availability of outdoor recreation opportunities which the public seek and which are not readily available from other public or private entities, contingent on developments being able to meet public land health standards."

  Rationale: This goal is modified to ensure consistency with public land health standards.

The soil and water public land health standards for Colorado include the following:

Standard 1: Upland soils exhibit infiltration and permeability rates that are appropriate to soil type, climate, land form, and geologic processes. Adequate soil infiltration and

permeability allows for the accumulation of soil moisture necessary for optimal plant growth and vigor, and minimizes surface runoff.

Indicators:

- Expression of rills and soil pedestals is minimal.
- Evidence of actively-eroding gullies (incised channels) is minimal.
- Canopy and ground cover are appropriate.
- There is litter accumulating in place and is not sorted by normal overland water flow.
- There is appropriate organic matter in soil.
- There is diversity of plant species with a variety of root depths.
- Upland swales have vegetation cover or density greater than that of adjacent uplands.
- There are vigorous, desirable plants.

Standard 5: The water quality of all water bodies, including ground water where applicable, located on or influenced by BLM lands will achieve or exceed the Water Quality Standards established by the State of Colorado. Water Quality Standards for surface and ground waters include the designated beneficial uses, numeric criteria, narrative criteria, and antidegradation requirements set forth under State law as found in (5 CCR 1002-81, as required by Section 303(c) of the Clean Water Act.

Indicators:

- Appropriate populations of macroinvertebrates, vertebrates, and algae are present.
- Surface and ground waters only contain substances (e.g. sediment, scum, floating debris, odor, heavy metal precipitates 'on channel substrate) attributable to humans within the amounts, concentrations, or combinations as directed by the Water Quality Standards established by the State of Colorado (5 CCR 1002-8).

Oil and Gas Leasing

Controlled Surface Use Stipulations

- Prior to surface disturbance on Slopes of, or greater than, 40 percent, an engineering/reclamation plan must be approved by the Authorized Officer. Such plans must demonstrate how the following will be accomplished:
    - Site productivity will be restored.
    - Surface runoff will be adequately controlled.
    - Off-site areas will be protected from accelerated erosion such as drilling, gullying, piping, and mass wasting.
    - Surface-disturbing activities will not be conducted during extended wet periods.
    - Construction will not be allowed when soils are frozen.

- For the protection of perennial water impoundments and streams, and/or riparian/wetland vegetation zones, activities associated with oil and gas exploration and development including roads, transmission lines, storage facilities, are restricted to an area beyond the riparian vegetation zone.
- **Exceptions:** This stipulation may be excepted subject to an on-site impact analysis with consideration given to degree of slope, soils, importance to the amount and type of wildlife and fish use, water quality, and other related resource values.
- This stipulation will not be applied where the Authorized Officer determines that relocation up to 200 meters can be applied to protect the riparian system during well sighting.

San Miguel River ACEC and SRMA Amendment

Management Guidance for Area L1 - Area of Critical Environmental Concern

- Maintain soil productivity, minimize man-caused erosion and strive to achieve adequate vegetation for watershed protection and plant vigor. Maintain or improve water quality and quantity for multiple-use resource needs. Secure sufficient water rights to provide for recreation and riparian management needs.
- Where possible, facility development will be located outside the 100-year floodplain.

3.1.5 ☀ Vegetative Communities

MANAGEMENT OBJECTIVES

Objectives for managing noxious weeds are not identified in either RMP.

UNCOMPAHGRE BASIN RMP

- Riparian zones and aquatic habitats will be inventoried and monitored where necessary to provide information to determine proper management. Vegetation conditions and streambank cover will be maintained or improved. Measures designed to minimize site-specific riparian and aquatic deterioration will be required in site specific plans for surface disturbing land use activities.

Other objectives pertaining to vegetation are found in the Threatened and Endangered Species, Wildlife Habitat, Livestock Grazing, Forestry, and Fire Management sections.

UNCOMPAHGRE BASIN RMP AMENDMENTS

Standards for Public Land Health and Guidelines for Livestock Grazing Management in Colorado

Standard 2: Riparian systems associated with both running and standing water, function properly and have the ability to recover from major disturbance such as fire, severe grazing, or 100-year floods. Riparian vegetation captures sediment, and provides forage, habitat and biodiversity. Water quality is improved or maintained. Stable soils store and release water slowly.

Standard 3: Healthy, productive plant and animal communities of native and other desirable species are maintained at viable population levels commensurate with the species and habitats' potential. Plants and animals at both the community and population level are productive, resilient, diverse, vigorous, and able to reproduce and sustain natural fluctuations, and ecological processes.

Other objectives pertaining to vegetation are listed under the Threatened and Endangered Species, Soil Resources, and Water Resources sections.

Fire Management Amendment

Objectives pertaining to vegetation are listed under the Fire Management section.

SAN JUAN/SAN MIGUEL RMP

Objectives pertaining to vegetation are listed under the Livestock Grazing Management and Wildlife Management sections.

SAN JUAN/SAN MIGUEL RMP AMENDMENTS

Standards for Public Land Health and Guidelines for Livestock Grazing Management in Colorado

See the previous Uncompahgre Basin RMP Amendments section for a full listing of objectives.

San Miguel River ACEC and SRMA Amendment

Within the ACEC, the primary emphasis is on the protection of unique, high quality, riparian vegetation resources and the scenic values of the corridor, and the preservation of relic riparian communities.

Within the Special Recreation Management Area, recreation is identified as the principal management objective. The primary goal of management in this area is to continue to provide a quality recreation experience, with diverse recreation opportunities, while protecting the riparian and scenic values of the San Miguel River Canyon and its tributaries.

MANAGEMENT DECISIONS

UNCOMPAHGRE BASIN RMP

Management Unit 1

- The management unit will be managed to improve vegetation conditions and forage availability for livestock grazing.
- Other management decisions pertaining to vegetation are listed under the following sections: Wildlife Habitat, Forestry and Fire Management.

Management Unit 2

- The management unit will be managed to improve the areas' capabilities to support wintering deer, elk, and bighorn sheep populations.
- Other management decisions pertaining to vegetation are listed under the following sections: Livestock Grazing, Wildlife Habitat, Forestry and Fire Management.

Management Unit 3

- The management unit will be managed for sustained yield production of the woodland resource within the allowable cut restrictions determined by the TPCC inventory.

- Other management decisions which pertain to vegetation are listed under the following sections: Wildlife Habitat, Livestock Grazing, and Fire Management.

Management Unit 5

- The management unit will be managed to reduce salinity loads in the Upper Colorado River Basin.
- Other management decisions pertaining to vegetation are listed under the following sections: Livestock Grazing, and Fire Management.

Management Unit 7

- Riparian/aquatic zones up to one-quarter mile wide will be protected. Activities that disturb these areas could be approved on a site-specific basis after consultation with affected entities and development of mitigating measures.
- Other management decisions pertaining to vegetation are listed under the following sections: Wildlife Habitat, Forestry, Access, and Fire Management.
- Vehicle use in the riparian zones associated with Bear and Roatcap creeks will be limited to designated roads and trails yearlong.

Management Unit 8

- The management unit will be managed as open to ORV use.
- Other management decisions pertaining to vegetation are listed under the following sections: Livestock Grazing, and Fire Management.

Management Unit 9

- The management unit will be managed to restore and enhance riparian vegetation along 40 miles of streams.
- Objectives and projects designed to accelerate improvement of species diversity, streambank cover and stability, and instream structure, and to raise the water table will be incorporated into existing activity plans or developed in new riparian/aquatic system management plans.
- All areas will be intensively monitored for vegetation, aquatic habitat, and erosion conditions.
- Other management decisions pertaining to vegetation are listed under the following sections: Wildlife Habitat, Forestry, Livestock Grazing, and Fire Management.

Management Unit 10

- The management unit will be managed to enhance its use as an elk calving area.
- Other management decisions pertaining to vegetation are listed under the following sections: Forestry and Fire Management.

Management Unit 13

- The entire management unit is designated as the Fairview Research Natural Area/Area of Critical Environmental Concern (RNA/ACEC).

- Plant monitoring studies will be developed in cooperation with the Colorado Natural Areas Program.
- Other management decisions pertaining to vegetation are listed under the following sections: Livestock Grazing, and Fire Management.

Management Unit 14

- The entire management unit is designated as the Needle Rock Outstanding Natural Area/Area of Critical Environmental Concern (ONA/ACEC).
- Other management decisions pertaining to vegetation are listed under the following sections: Livestock Grazing, and Fire Management.

Management Unit 15

- The entire management unit is designated as the Adobe Badlands Outstanding Natural Area/Area of Critical Environmental Concern (ONA/ACEC).
- Other management decisions pertaining to vegetation are listed under the following sections: Threatened and Endangered Species, Wildlife Habitat, Livestock Grazing, and Fire Management.

Management Unit 16

- In general, the public lands in Management Unit 16 (48,422, acres) will be managed according to the policy assumptions and standard resource program management guidance developed for the RMP.
- Other management decisions pertaining to vegetation are listed under the following sections: Forestry and Fire Management.

UNCOMPAHGRE BASIN RMP AMENDMENTS

Standards for Public Land Health and Guidelines for Livestock Grazing Management in Colorado

- Native plant species and natural revegetation are emphasized in the support of sustaining ecological functions and site integrity. Where reseeding is required, on land treatment efforts, emphasis will be placed on using native plant species. Seeding of non-native plant species will be considered based on local goals, native seed availability and cost, persistence of non-native plants and annuals and noxious weeds on the site, and composition of non-natives in the seed mix.
- Natural occurrences such as fire, drought, flooding, and prescribed land treatments should be combined with livestock management practices to move toward the sustainability of biological diversity across the landscape, including the maintenance, restoration, or enhancement of habitat to promote and assist the recovery and conservation of threatened, endangered, or other special status species, by helping to provide natural vegetation patterns, a mosaic of successional stages, and vegetation corridors, and thus minimizing habitat fragmentation.

- Other management decisions pertaining to vegetation are listed under the Livestock Grazing section.

Fire Management Amendment

- Management decisions pertaining to vegetation are listed under the Fire Management section.

SAN JUAN/SAN MIGUEL RMP

- Objectives to protect or improve aquatic and riparian habitat will become part of AMPS and habitat management plans.
- Management actions within flood plains and wetlands will include measures to preserve, protect, and, if necessary, restore their natural functions (as required by Executive Orders 11988 and 11990). Management techniques will be used to minimize degradation of aquatic and riparian habitats. Bridges and culvert installations will be designed to maintain adequate passages for fish.
- Improve aquatic and riparian habitat on these areas listed in priority order: the upper San Miguel River and its tributaries (44 miles), the upper Dolores River and its tributaries (30 miles), and the lower San Miguel River and its tributaries (20 miles). Develop needed habitat management plans and improvements for implementation (including monitoring plans).
- Other management decisions pertaining to vegetation are listed under the Livestock Grazing and Wildlife Management sections.

Area A (Emphasis on Livestock Management)

- All perennial streams within the planning area that have the potential of providing quality fisheries and/or riparian habitat (approx. 400 mi have been identified) should receive special management consideration through the activity planning process & monitoring systems to maintain, improve, or enhance resource conditions associated with aquatic/riparian habitat.
- Other management decisions pertaining to vegetation for this unit are listed under the Wildlife Management, Forestry and Fire Sections.

Area B (Emphasis on Wildlife)

- Invest wildlife funds for structural improvements & vegetation restoration projects to improve high priority riparian habitat at the following drainages: Roc, North & South Mesa and La Sal Creeks.
- Improve or enhance aquatic/riparian habitat on the following priority areas: -Upper San Miguel River & its tributaries (44 miles), -Upper Dolores River (30 miles), -Lower San Miguel & its tributaries (20 miles). Develop aquatic/riparian habitat management plans for these three priority areas (including intensive monitoring plans).

- Other management decisions pertaining to vegetation for this unit are listed under the Livestock Grazing, Wildlife Management, Forestry and Fire Sections.

Area C (Emphasis on Recreation)

- Management decisions pertaining to vegetation for this unit are listed under the Livestock Grazing, Wildlife Management, Forestry and Fire Sections.

Area D (Emphasis on Wilderness)

- Allow non-impairing aquatic/riparian improvements & introduction or reintroduction of bighorn sheep & river otters into the Dolores River Canyon WSA.
- Other management decisions pertaining to vegetation for this unit are listed under the Livestock Grazing, Wildlife Management, Forestry and Fire Sections.

Area E (Emphasis on Mineral Development)

- Management decisions pertaining to vegetation for this unit are listed under the Livestock Grazing, Wildlife Management, Forestry and Fire Sections.

Area F (Emphasis on Cultural Resources)

- Apply for water rights & protect riparian zones on springs associated with cultural sites.
- Other management decisions pertaining to vegetation for this unit are listed under the Livestock Grazing, Wildlife Management, Forestry and Fire Sections.

Area G (Emphasis on Natural Resource Management)

- Management decisions pertaining to vegetation for this unit are listed under the Livestock Grazing, Wildlife Management, Forestry and Fire Sections.

Area H (Emphasis on Public Land Disposal)

- Management decisions pertaining to vegetation for this unit are listed under the Livestock Grazing, Wildlife Management, Forestry and Fire Sections.

Area J (Emphasis on Forestry and Wood Products)

- Coordinate efforts on a case-by-case basis to ensure aquatic/riparian resources are protected & in some cases, improved.
- Other management decisions pertaining to vegetation for this unit are listed under the Livestock Grazing, Wildlife Management, Forestry and Fire Sections.

Area K (Emphasis on Soils and Water)

- Management decisions pertaining to vegetation for this unit are listed under the Livestock Grazing, Wildlife Management, Forestry, Soils and Water and Fire Sections.

SAN JUAN/SAN MIGUEL RMP AMENDMENTS

Standards for Public Land Health and Guidelines for Livestock Grazing Management in Colorado

- Native plant species and natural revegetation are emphasized in the support of sustaining ecological functions and site integrity. Where reseeding is required, on land treatment efforts, emphasis will be placed on using native plant species. Seeding of non-native plant species will be considered based on local goals, native seed availability and cost, persistence of non-native plants and annuals and noxious weeds on the site, and composition of non-natives in the seed mix.
- Natural occurrences such as fire, drought, flooding, and prescribed land treatments should be combined with livestock management practices to move toward the sustainability of biological diversity across the landscape, including the maintenance, restoration, or enhancement of habitat to promote and assist the recovery and conservation of threatened, endangered, or other special status species, by helping to provide natural vegetation patterns, a mosaic of successional stages, and vegetation corridors, and thus minimizing habitat fragmentation.
- Other management decisions pertaining to vegetation are listed under the Livestock Grazing section.

San Miguel River ACEC and SRMA Amendment

- Within the ACEC: Restoration of disturbed sites will be accomplished with species native to the sites. The use of trees and shrubs will be required, if appropriate to the site.
- Damaged riparian areas in the ACEC will receive top priority for restoration and management compared to other areas within the SRMA.
- To protect riparian and aquatic systems within the SRMA, instream flow needs will be determined and filed with the State Water Conservation Board.
- Other management decisions which pertain to vegetation for this unit are listed under the Livestock Grazing, Wildlife Management, Forestry and Fire Sections.
- Within the SRMA: The riparian systems of the San Miguel River, Leopard Creek, and Fall Creek will be maintained in good condition. Restoration efforts would also be undertaken on Fall Creek, if feasible.
- Work with the highway department to prevent further damage to these systems from road maintenance and construction.
- To protect the riparian and aquatic systems within the SRMA, instream flow needs will be determined and filed with the State Water Conservation Board.
- Other management decisions which pertain to vegetation for this unit are listed under the Livestock Grazing, Wildlife Management, Minerals, Forestry and Fire Sections.

Oil and Gas Leasing Amendment

While there are no specific management decisions pertaining to vegetation or riparian areas, standard permit stipulations do apply.

OTHER AUTHORITY AND GUIDANCE

Vegetation Treatments using Herbicides on Bureau of Land Management Lands in 17 Western States Programmatic Environmental Impact Statement (2007)

The BLM has put into place several measures to reduce the spread of noxious weeds and exotics. In June 2007, Vegetation Treatments using Herbicides on Bureau of Land Management Lands in 17 Western States Programmatic Environmental Impact Statement was completed. This document contains direction as to how herbicides will be applied to BLM-administered lands, and includes mitigation measures, standard operating procedures, and analysis of active ingredient/inactive ingredients by herbicide.

UFO Integrated Weed Management Program (2007)

The UFO created an Integrated Weed Management (IWM) Program for control of noxious weeds on the Colorado Noxious Weed List and BLM Species of Concern within the UFO in 2007. The BLM cooperates with counties and other entities in implementing IWM. This cooperation supports the IWM program and promotes the success of Early Detection Rapid Response, and the treatment and re-treatment of small and larger patches of noxious weeds. With a coordinated strategy, there are more people looking for and treating noxious weeds in a strategic manner on public lands. Integrated Weed Management is supported by the following executive orders, legislation, and strategy documents:

- Colorado Noxious Weed Act 8 CCR 1203-15 (2003)
- Presidents Executive Order 13112 (1999)
- Federal Noxious Weed Act of 1974 P.L. 93-692
- BLM Partners Against Weed Plan (BLM's strategic plan)
- Colorado Governor's Executive Order D 00699
- UFO Weed Management Strategy (2007)
- Record of Decision on Vegetation Treatments Using Herbicides on BLM Lands in 17 Western States (September 2007)

UFO Fire Management Plan

The UFO has implemented fire management policies to keep fire on the landscape where feasible. The foundation for this is in the Uncompahgre Field Office Fire Management Plan. This plan includes vegetation mosaic objectives which describe desired future conditions of vegetation in terms of proportions of successional stages within a given area. These objectives are important to help coordinate fire management together with other vegetation projects to achieve desired vegetation conditions at a landscape level. Two activity plans for vegetation treatments have been developed based on this approach.

CDOW Habitat Partnership Program

The UFO has managed vegetation in some areas with the intent of holding big game away from private lands. The Habitat Partnership Program, which is associated with the Colorado Division of Wildlife and has the mission of reducing game damage on private lands, has been the primary mechanism for accomplishing this. The program has also been an important source of funding for BLM projects.

In order to implement the Colorado Public Land Health Standards, it has been BLM policy to write stipulations into ten-year grazing permits that mandate best range management practices. These include: requiring short duration grazing during the growing season; no spring and fall use in the same year; no more than 30% use on native woody species in riparian areas; no more than 50% use on palatable species in the dormant season; striving to have occasional year-long rest for grazing areas; striving to vary timing of grazing in different use areas; and resting treatments or seeded areas for two growing seasons.

The BLM has helped fund natural area inventory work by the Colorado Natural Heritage Program and by The Nature Conservancy. These efforts have resulted in identification of important areas for biodiversity conservation. The BLM acknowledges these areas as valuable and strives for a higher level of protection in some of its activities. The Dry Creek Travel Management Plan is one such protective measure.

3.1.6 Fish and Wildlife

MANAGEMENT OBJECTIVES

UNCOMPAHGRE BASIN RMP

- Wildlife forage allocations will remain at current levels until studies determine adjustments are needed to achieve management directives. Additional forage allocations will be divided equally between wildlife and livestock grazing.
- Wildlife habitat monitoring studies will be established and/or maintained on all crucial winter ranges.
- The planning area will be open to land treatments [for wildlife] and project facility development. Existing wildlife facilities and land treatments will be maintained.
- Supplemental releases and reintroduction of native or naturalized fish and wildlife species (excluding federal or state listed endangered, threatened, or candidate species) may be authorized by the District Manager following environmental analysis.
- Riparian zones and aquatic habitats will be inventoried and monitored where necessary to provide information to determine proper management.
- Vegetation conditions and streambank cover will be maintained and improved.
- Measures designed to minimize site-specific riparian and aquatic deterioration will be required in site specific plans for surface-disturbing land use activities.

UNCOMPAHGRE BASIN RMP AMENDMENTS

Standards for Public Land Health and Guidelines for Livestock Grazing Management in Colorado

- Establish standards and criteria for healthy plant and animal communities, healthy riparian communities, and healthy aquatic resources

Fire Management Amendment

- Improve the UFO's ability to use fire as a management tool to enhance deer and elk habitat, especially winter range and other crucial habitats.

Land Disposal Amendment

- Acquire lands to improve and benefit public lands and resources.

Gunnison Travel Analysis Area Travel Restriction EA (2000)

- Reduce OHV-related impacts on terrestrial and aquatic wildlife and habitats

Oil and Gas Leasing Amendment

- Standardize oil and gas leasing, exploration, and development and mitigate impacts on wildlife and biological resources

SAN JUAN/SAN MIGUEL RMP

- Compliance with the Federal Lands Policy Management Act of 1976 (FLPMA) to maintain and enhance fish and wildlife habitats on public lands.
- Protection, maintenance, and enhancement of the following:
    - Critical habitats for big game, upland game birds, and waterfowl
    - Crucial habitats for nongame species of special interest or concern to state and other federal agencies
    - Wetland and riparian habitats
    - Existing or potential fish habitat
- Continue to evaluate fish and wildlife habitat on a case-by-case basis as a part of project level planning.
- Attach stipulations as appropriate to assure that projects are compatible with management objectives established in the RMP for fish and wildlife habitat.
- Implement habitat improvement projects where necessary to stabilize and/or improve unsatisfactory or declining habitat conditions. Such projects will be identified through habitat management plans or coordinated resource management plans. Key habitats include big game winter range; winter raptor concentration areas; aquatic/ riparian habitats; bighorn sheep habitat; pronghorn antelope habitat.
- Seasonal restrictions will continue to be applied where they are needed to mitigate impacts of human activities on important seasonal wildlife habitat.

SAN JUAN/SAN MIGUEL RMP AMENDMENTS

Standards for Public Land Health and Guidelines for Livestock Grazing Management in Colorado

- Establish standards and criteria for healthy plant and animal communities, healthy riparian communities, and healthy aquatic resources

Oil and Gas Leasing Amendment

- Standardize oil and gas leasing, exploration, and development and mitigate impacts on wildlife and biological resources

MANAGEMENT DECISIONS

UNCOMPAHGRE BASIN RMP

Standard Decisions (where appropriate)

- To protect bald eagles, all oil and gas development activities will only be allowed in these areas from May 1 through November 30.
- Disturbances will be minimized from December 1 through April 30 on crucial deer and elk winter range.
- Disturbances will be minimized in elk calving areas from May 1 through June 15.
- Oil and gas development activities will only be allowed in waterfowl habitats from July 1 through March 14.

Decisions by Management Unit

Note: Refer to other resource sections for management decisions that influence or affect wildlife and fish resources (such as seasonal restrictions on oil and gas activities, soil and water resources).

Management Unit 1

- Non-conflicting wildlife habitat management objectives, projects, and mitigating measures will be incorporated into new and existing range allotment management plans.
- Existing wildlife habitat projects will be maintained.
- Bighorn sheep may be transplanted into the Winter Mesa area if they will not conflict with livestock. The objective would be to reestablish this species in historically occupied habitat, increase total population numbers, and ensure species viability in the region.
- Land treatment projects designed to improve livestock forage will be developed. As additional forage becomes available, livestock will have priority for allocation; additional forage will be available for wildlife only if not needed by livestock.
- Wildlife will have first priority for all additional forage made available as a result of rangeland improvement projects designed to improve wildlife habitat funded by non-BLM sources.
- Riparian and aquatic systems will continue to be inventoried and monitored per BLM policy.
- Riparian vegetation will, at a minimum, be maintained or preferably improved.
- Measures designed to mitigate adverse riparian impacts will be required for all surface-disturbing activities.

Management Unit 2

- The management unit will be managed to improve the areas' capabilities to support wintering deer, elk, and bighorn sheep populations.
- Habitat management plans will be developed and land treatment projects and other facilities will be designed to improve the quality and quantity of winter habitat.
- Wildlife will have first priority for all additional forage made available as a result of BLM habitat improvement projects.
- All other land uses will be permitted if they do not degrade the areas' winter range capabilities.
- Habitat in the Camel Back-Roubideau Creek area will be available for possible introduction of desert bighorn sheep to increase population numbers and genetic diversity.
- Riparian and aquatic systems will continue to be inventoried and monitored per BLM policy.
- Riparian vegetation will, at a minimum, be maintained or preferably improved.
- Measures designed to mitigate adverse riparian impacts will be required for all surface-disturbing activities.

Management Unit 3

- Non-conflicting wildlife habitat management objectives, projects, and mitigating measures will be incorporated into new and existing forest management plans (area identified as a productive pinyon-juniper woodland important to wildlife and livestock).
- Existing wildlife habitat projects will be maintained and new projects developed if they will not decrease the woodland base.
- Habitat trend studies will be established on crucial deer and elk winter range.
- Additional forage will be divided equally between wildlife and livestock.
- Supplemental releases and reintroduction of wildlife species may be authorized to increase numbers.
- Riparian and aquatic systems will continue to be inventoried and monitored per BLM policy.
- Riparian vegetation will, at a minimum, be maintained or preferably improved.
- Measures designed to mitigate adverse riparian impacts will be required for all surface-disturbing activities.

Management Unit 5

- Riparian and aquatic systems will continue to be inventoried and monitored per BLM policy.
- Riparian vegetation will, at a minimum, be maintained or preferably improved.

- Measures designed to mitigate adverse riparian impacts will be required for all surface-disturbing activities.
- Existing wildlife habitat projects will be maintained and new projects developed if they will not decrease the woodland base.
- Habitat trend studies will be established on crucial deer and elk winter range.
- Additional forage will be divided equally between wildlife and livestock.
- Supplemental releases and reintroduction of wildlife species may be authorized to increase numbers.

Management Unit 7

- Riparian/aquatic zones up to one-quarter mile wide will be protected. Activities that disturb these areas could be approved on a site-specific basis after consultation with affected entities and development of mitigating measures.
- Riparian and aquatic systems will continue to be inventoried and monitored per BLM policy.
- Riparian vegetation will, at a minimum, be maintained or preferably improved.
- Measures designed to mitigate adverse riparian impacts will be required for all surface-disturbing activities.
- Wildlife will have priority for forage allocations on crucial deer and elk winter range (1,730 acres).

Management Unit 8

- Riparian and aquatic systems will continue to be inventoried and monitored per BLM policy.
- Riparian vegetation will, at a minimum, be maintained or preferably improved.
- Measures designed to mitigate adverse riparian impacts will be required for all surface-disturbing activities.
- Existing wildlife habitat projects will be maintained and new projects developed if they will not decrease the woodland base.
- Habitat trend studies will be established on crucial deer and elk winter range.
- Additional forage will be divided equally between wildlife and livestock.
- Supplemental releases and reintroduction of wildlife species may be authorized to increase numbers.

Management Unit 9

- The management unit will be managed to restore and enhance riparian vegetation along 40 miles of streams.
- Objectives and projects designed to accelerate improvement of species diversity, streambank cover and stability, and instream structure, and to raise the water table

will be incorporated into existing activity plans or developed in new riparian/ aquatic system management plans.

- Riparian Improvement Plans will be prepared and designed to accelerate the improvement of riparian vegetation.
- All areas will be intensively monitored for vegetation, aquatic habitat, and erosion conditions.
- Non-conflicting wildlife habitat management objectives, projects, and mitigating measures will be incorporated into new management plans for riparian/ aquatic systems.
- Existing wildlife habitat projects will be maintained and new projects developed if they will not decrease the woodland base.
- Habitat trend studies will be established on crucial deer and elk winter range.
- Additional forage will be divided equally between wildlife and livestock.
- Supplemental releases and reintroduction of wildlife species may be authorized to increase numbers.

Management Unit 10

- The management unit will be managed to enhance its use as an elk calving area.
- Any disturbance during the calving season (May 1 through June 15) will be limited as much as possible.
- Habitat in elk calving areas will be improved, and wildlife will have first priority for allocation of new forage.
- A habitat management plan will be prepared to improve elk calving habitat.
- Riparian and aquatic systems will continue to be inventoried and monitored per BLM policy.
- Riparian vegetation will, at a minimum, be maintained or preferably improved.
- Measures designed to mitigate adverse riparian impacts will be required for all surface-disturbing activities.

Management Unit 13

- Riparian and aquatic systems will continue to be inventoried and monitored per BLM policy.
- Riparian vegetation will, at a minimum, be maintained or preferably improved.
- Measures designed to mitigate adverse riparian impacts will be required for all surface-disturbing activities.
- Existing wildlife habitat projects will be maintained and new projects developed if they will not decrease the woodland base.
- Habitat trend studies will be established on crucial deer and elk winter range.
- Additional forage will be divided equally between wildlife and livestock.

- Supplemental releases and reintroduction of wildlife species may be authorized to increase numbers.

Management Unit 14

- Riparian and aquatic systems will continue to be inventoried and monitored per BLM policy.
- Riparian vegetation will, at a minimum, be maintained or preferably improved.
- Measures designed to mitigate adverse riparian impacts will be required for all surface-disturbing activities.
- Existing wildlife habitat projects will be maintained and new projects developed if they will not decrease the woodland base.
- Habitat trend studies will be established on crucial deer and elk winter range.
- Additional forage will be divided equally between wildlife and livestock.
- Supplemental releases and reintroduction of wildlife species may be authorized to increase numbers.

Management Unit 15

- Wildlife forage allocations will remain at current levels. No additional forage allocations will be made.
- Existing wildlife habitat projects will be maintained and new projects developed if they will not decrease the woodland base.
- Habitat trend studies will be established on crucial deer and elk winter range.
- Additional forage will be divided equally between wildlife and livestock.
- Supplemental releases and reintroduction of wildlife species may be authorized to increase numbers.
- To protect scenic values, no new habitat improvement projects or maintenance of existing projects will be permitted.
- Riparian and aquatic systems will continue to be inventoried and monitored per BLM policy.
- Riparian vegetation will, at a minimum, be maintained or preferably improved.
- Measures designed to mitigate adverse riparian impacts will be required for all surface-disturbing activities.

Management Unit 16

- Habitat, vegetation and other resource studies will be minimal.
- Riparian and aquatic systems will continue to be inventoried and monitored per BLM policy.
- Riparian vegetation will, at a minimum, be maintained or preferably improved.
- Measures designed to mitigate adverse riparian impacts will be required for all surface-disturbing activities.

Implementation Priorities

Note: Refer to other resource sections for priority implementation decisions that influence wildlife and fish resources.

1. Establish and maintain monitoring studies on crucial deer and elk winter range to determine habitat condition and trend.
2. Cooperate with CDOW on reintroduction of desert bighorn sheep into the Camelback area.
3. Prepare habitat management plans for the following areas:
4. Baldy Peak
5. Jumbo Mountain-McDonald Mesa
6. Grand Mesa
7. Uncompahgre Plateau
8. Billy Creek
9. Management Unit 10
10. Incorporate the Gunnison Forks Habitat Management Plan into the Gunnison Gorge Range Allotment Management Plan.

UNCOMPAHGRE BASIN RMP AMENDMENTS

Standards for Public Land Health and Guidelines for Livestock Grazing Management in Colorado

- Adopted the standards for terrestrial and aquatic resources (Standards 2-5 relate to wildlife and fish resources)
- As of 2008, all of the UFO has been evaluated according to these standards, appropriate management changes were implemented as necessary, and future evaluations will continue to monitor land health

Fire Management Amendment

- A central aspect of this administrative action was to improve the UFO's ability to use fire as a management tool to enhance deer and elk habitat, especially winter range and other crucial habitats. The EA amended the RMP to allow the use of fire through prescribed and planned ignitions on all 483,037 acres within the planning area. Prior to the amendment, only about 25% of the planning area had fire identified as an acceptable and usable management tool.

Land Disposal Amendment

- "In [land] exchanges, sensitive or critical habitats…would be acquired [where possible]. This would have a positive impact on public lands and resources as a whole." (The document contains no other references or decisions that might affect fish or wildlife resources.)

Gunnison Travel Analysis Area Travel Restriction EA (2000) (for portions of the Uncompahgre Basin resource area)

- Restricted OHV (ATVs, motorcycles, and 4-WD vehicles) and mountain bike travel to existing, established routes within the planning area; i.e., eliminated authorized cross-country, off-route travel by motorized and mechanized vehicles to minimize impacts on biological resources

Oil and Gas Leasing Amendment

- Lease stipulations will be attached to mitigate impacts on wildlife and habitats
- On-sites will be conducted and biological surveys conducted by qualified individuals
- COA's will be attached to APD's to mitigate impacts on wildlife and habitats

SAN JUAN-SAN MIGUEL RMP

Standard Decisions

- Sufficient forage and cover will be provided for wildlife on their seasonal habitat. Forage and cover requirements will be incorporated into AMPS and will be specific to primary wildlife use areas. Generally, range improvements will be designed to achieve both wildlife and range objectives.
- A goal of this land use plan (subject to the availability of manpower and funds to complete necessary wildlife habitat improvements) will be to manage the habitat for current levels of deer and elk (20,000 and 1,600, respectively). Monitoring the vegetative resource may indicate wildlife reductions may be needed in localized areas to maintain use within the carrying capacity. The reductions may be shared with domestic livestock depending on monitoring results.
- Manage for 300 head of pronghorn antelope and allow for reintroducing (not to exceed a total of 300) bighorn sheep in the Dolores River Canyon.
- Complete necessary improvements and habitat management plans necessary for implementation.
- The following riparian areas should be managed to improve aquatic and(or) riparian habitat; Roc, North Mesa, South Mesa, La Sal and Dry creeks; the East and West forks of Dry Creek Canyon; and Cross, Cow, Cahone, Hovenweep, and Bridge canyons.
- Objectives to protect or improve aquatic and riparian habitat will become part of AMPS and habitat management plans. Develop needed habitat management plans and improvements for implementation (including monitoring plans).
- Management actions within flood plains and wetlands will include measures to preserve, protect, and, if necessary, restore their natural functions (as required by Executive Orders 11988 and 11990).

- Management techniques will be used to minimize degradation of aquatic and riparian habitats. Bridges and culvert installations will be designed to maintain adequate passages for fish.
- Wildlife reintroductions and fish stocking proposals will be evaluated, and recommendations will be made to the CDOW.
- Improve aquatic and riparian habitat on these areas listed in priority order: the upper San Miguel River and its tributaries (44 miles), the upper Dolores River and its tributaries (30 miles), and the lower San Miguel River and its tributaries (20 miles).
- Development of habitat management plans for key species and their related habitat will occur over the term of the plan. Completion of these plans will be dependent upon need, availability of funding, and manpower. Several key habitats in which plans might be developed include: big game winter ranges; aquatic/ riparian habitats; bighorn sheep habitat; and pronghorn antelope habitat. Development of habitat management plans for terrestrial and aquatic species will be closely coordinated with CDOW, the U.S. Forest Service, and where appropriate FWS. Project development will require input from all resource programs to assess impacts through the environmental process.
- All monitoring will be conducted according to BLM manuals and policies. A detailed wildlife monitoring plan for the planning area will be used. Monitoring for all wildlife species will be closely coordinated with the CDOW.
- Seasonal restrictions will continue to be applied where they are needed to mitigate the impacts of human activities on important seasonal wildlife habitat. The major types of seasonal wildlife habitat and the time periods when restrictions may be needed are provided in Table 3.3.

TABLE 3.3 SEASONAL WILDLIFE RESTRICTIONS

HABITAT	RESTRICTED PERIOD
Elk and mule deer winter range	December 1 - April 15
Elk calving grounds	May 1 - July 15

Decisions by Management Unit

Note: Refer to other resource sections for management decisions that influence or affect wildlife and fish resources (such as seasonal restrictions on oil and gas activities, soil and water resources).

Area A (Livestock Management)

- All perennial streams within the planning area that have the potential of providing quality fisheries or riparian habitat should receive special management consideration

through the activity planning process to maintain, improve, or enhance resource conditions associated with aquatic and riparian habitat.

- Allow CDOW to introduce Chukar and to expand pronghorn herds. Other game species would be allowed if site specific analysis indicates that significant conflicts with livestock will not occur.
- In all vegetation types, 5% to 15% of the existing vegetation should be maintained as leave strips or islands interspersed throughout the project areas to maintain dispersed, ecologic communities for wildlife.

Area B (Wildlife)

- Manage big game for the following numbers of animals, subject to monitoring results and availability of funds and personnel to implement needed improvements:
- 20,000 mule deer
- 1,600 elk
- 300 antelope
- 300 big horn sheep
- Maintain or improve habitat for migratory bird species of high federal interest.
- Complete habitat improvements. Invest wildlife funds for structural improvements and vegetation restoration projects to improve high priority riparian habitat at the following drainages: Rock, North and South Mesa, La Sal, Dry Creeks (East and West Forks, Dry Creek Canyon); and Cross, Cow, Cahone, Hovenweep, and Bridge Canyons
- Reestablish river otters in the Dolores River.
- Improve or enhance aquatic/riparian habitat on the following priority areas:
- Upper San Miguel River and its tributaries (44 miles)
- Lower San Miguel and its tributaries (20 miles)
- Upper Dolores River (30 miles)
- Develop aquatic/riparian habitat management plans for these above three priority areas (including intensive monitoring plans).

Area C (Recreation)

- Allow for introduction of bighorn sheep and river otters in Dolores River.
- Improve fishery values on Dolores and San Miguel (including Beaver and Fall Creeks) rivers to improve recreation values. Also, improve recreation access to Beaver Creek and San Miguel River.

Area D (Wilderness)

- Allow non-impairing aquatic/riparian improvements and introduction or reintroduction of bighorn sheep & river otters into the Dolores River Canyon WSA.
- Permit fish and wildlife research or inventories.

Area E (Mineral Development)

- Provide for minimal investments to enhance key wildlife species.

Area F (Cultural Resources)

- Protect and maintain wildlife habitat. Where feasible, complete wildlife habitat improvements to enhance wildlife viewing in association with cultural values.

Area G (Natural Resource Management)

- Manage all other habitat [non-T&E types] to provide satisfactory conditions.

Area I (Wild Horses)

- Provide minimal investments to enhance key wildlife species.

Area J (Forestry)

- Provide investments to enhance wildlife species which will benefit from uneven-aged timber management.
- Coordinate efforts on a case-by case basis to ensure aquatic/riparian resources are protected and, in some cases, improved.

Area K (Soil and Water)

- Maintain or improve wildlife habitat through interdisciplinary design of water or vegetation improvements and maintenance of diversity of vegetation. Allow wildlife habitat improvements compatible with the goals of the soil and water program for specific areas.

Area L (ACECs)

- Maintain species of special importance to maintain viable population levels.
- Invest wildlife funds for structural improvements and vegetation restoration projects to improve the following high priority riparian habitats: Cross, Cow, Cahone, Hovenweep, and Bridge canyons.

Implementation Priorities

1. Monitor, maintain or improve crucial winter ranges for pronghorn antelope, elk, and mule deer focusing initially on the "I" and "M" category grazing allotments.
2. Monitor, maintain or improve known, active fisheries habitat. This effort will focus initially on the San Miguel and Dolores rivers and their major tributaries.
3. Monitor, maintain or improve winter raptor concentration areas.
4. Maintain all existing wildlife habitat improvement facilities. This effort will focus on guzzlers, exclosures, and vegetation treatments.
5. Maintain or improve riparian habitat to good or excellent ecological condition, utilizing acceptable grazing systems and fencing where needed.
6. Initiate development of new wildlife habitat management plans and related enhancement projects.

SAN JUAN-SAN MIGUEL RMP AMENDMENTS

Standards for Public Land Health and Guidelines for Livestock Grazing Management in Colorado

- Adopted the standards for terrestrial and aquatic resources (Standards 2-5 relate to wildlife and fish resources)
- As of 2008, all of the UFO has been evaluated according to these standards, appropriate management changes were implemented as necessary, and future evaluations will continue to monitor land health

Oil and Gas Leasing Amendment

- Lease stipulations will be attached to mitigate impacts on wildlife and habitats
- On-sites will be conducted and biological surveys conducted by qualified individuals
- Conditions of Approval will be attached to Applications for Permit to Drill to mitigate impacts on wildlife and habitats

3.1.7 Special Status Species

BACKGROUND

Special status plant and animal species are either listed as endangered or threatened or are proposed or candidate species for listing under the ESA, or those species designated by the BLM State Director as sensitive (BLM Manual 6840. Rel. 6-121). Section 7 of the ESA requires that BLM land managers ensure that any action authorized, funded, or carried out by the BLM is not likely to jeopardize the continued existence of any threatened or endangered species and that it avoids any appreciable reduction in the likelihood of recovery of affected species. Consultation is required on any action proposed by the BLM or another federal agency that may affect a listed species or jeopardize or modify critical habitat. The BLM Special Status Species Policy outlined in BLM Manual 6840 is to conserve listed species and the ecosystems on which they depend and to ensure that actions authorized or carried out by the BLM are consistent with the conservation needs of special status species and do not contribute to the need to list any of these species.

BLM policy is intended to ensure the survival of those plants that are rare or uncommon, either because they are restricted to specific uncommon habitat or because they may be in jeopardy due to human or other actions. Per BLM policy, species proposed for federal listing are to be managed with the same level of protection provided for threatened and endangered species. The policy for federal candidate species and BLM sensitive species is to ensure that no action that requires federal approval should contribute to the need to list a species as threatened or endangered. Other management direction is based on RMP management objectives, activity level plans, and other aquatic habitat and fisheries management direction.

Note: Only those management objectives and decisions that apply specifically to special status species are listed in this section. For decisions that benefit wildlife or fish resources as a whole and indirectly benefit or affect special status species or habitats (such as terrestrial habitat improvement), refer to Section 3.1.6 on Fish and Wildlife.

MANAGEMENT OBJECTIVES

UNCOMPAHGRE BASIN RMP

- Threatened and endangered species and unique plant associations will be inventoried and monitored where necessary to provide information to determine proper management.
- Clearances will be conducted on all proposed surface-disturbing activities, and the FWS will be consulted as required.
- Measures designed to protect threatened and endangered species and their habitat will be required in all land use activity plans.
- Supplemental releases and reintroduction of federal and state listed endangered, threatened, and candidate species may be authorized following environmental analysis and consultation with the FWS, CDOW, and other affected parties.

UNCOMPAHGRE BASIN RMP AMENDMENTS

Standards for Public Land Health and Guidelines for Livestock Grazing Management in Colorado

- Establish standards and criteria for healthy threatened, endangered, and sensitive plant and animal communities and habitats

Land Disposal Amendment

- Acquire lands which contain crucial and rare habitats to improve and benefit public lands and resources.

Gunnison Travel Analysis Area Travel Restriction EA (2000)

- Reduce OHV-related impacts on special status species and habitats

Oil and Gas Leasing Amendment

- Standardize oil and gas leasing, exploration, and development and mitigate impacts on special status species and habitats

SAN JUAN-SAN MIGUEL RMP

- No activities will be permitted in threatened, endangered, or sensitive species habitat that would jeopardize their continued existence.
- CDOW and the FWS will be consulted prior to implementing projects that may affect threatened and endangered species' habitat. If such a situation is determined through the BLM biologic assessment process, then consultation with the FWS will be initiated as per Section 7 of the Endangered Species Act of 1973, as amended.

- Threatened and endangered species will be protected and the habitat generally enhanced through the implementation of habitat management plans. Key habitats identified in the RMP include raptor winter concentration areas; aquatic/ riparian; and threatened and endangered species habitat. Priority will generally be given to the development of a habitat management plan for threatened and endangered species.
- The BLM wildlife habitat management program will place special emphasis on, but is not limited to, the protection, maintenance, and enhancement of habitat for state or Federally listed threatened and/or endangered species.
- Seasonal restrictions will continue to be applied where they are needed to mitigate the impacts of human activities on important seasonal wildlife habitat. The major types of seasonal special status wildlife habitat and the time periods when restrictions may be needed are provided in Table 3.4.

TABLE 3.4 - SPECIAL STATUS SPECIES HABITATS AND RESTRICTIONS

HABITAT	RESTRICTION PERIOD
Eagle winter concentration areas	December 1 - April 15
Sage grouse strutting grounds	March 15 - May 15
Peregrine falcon habitat	March 1 - September 1

SAN JUAN/SAN MIGUEL RMP AMENDMENTS

Standards for Public Land Health and Guidelines for Livestock Grazing Management in Colorado

- Establish standards and criteria for healthy plant and animal communities, healthy riparian communities, and healthy aquatic resources

Oil and Gas Leasing Amendment

- Standardize oil and gas leasing, exploration, and development and mitigate impacts on wildlife and biological resources

MANAGEMENT DECISIONS

UNCOMPAHGRE BASIN RMP

Standard Decisions (where appropriate)

- Clearances and mitigation for threatened and endangered species will be required for all surface-disturbing activities throughout the planning area.

Decisions by Management Unit

Note: Refer to other resource sections, including Fish and Wildlife Section 3.1.6, for additional management decisions that influence or affect wildlife and fish resources (such as terrestrial habitat improvements, seasonal restrictions on oil and gas activities, and soil and water resources).

Management Unit 1-3, 5, 7, 9, 10, 16

- Measures designed to protect threatened and endangered species and their habitat will be incorporated into all activity plans.

Management Unit 8

- Prior to management of the area for ORV use, an inventory will be conducted to identify threatened and endangered plant populations.
- The OHV management unit's proposed boundary will be adjusted to exclude threatened and endangered plants. If plants or plant communities cannot be excluded from the management unit, protective fencing or other measures will be implemented to protect the plants.
- The FWS will be consulted.
- Measures designed to protect threatened and endangered species and their habitat will be incorporated into all activity plans.

Management Unit 13

- The entire management unit is designated as the Fairview Research Natural Area/Area of Critical Environmental Concern (RNA/ ACEC).
- Plant monitoring studies will be developed in cooperation with the Colorado Natural Areas.
- A management plan will be developed for this unit and intensive studies established to increase our basic knowledge about these threatened and endangered species.
- Program actions designed to improve habitat conditions will be initiated.
- Surface-disturbing activities will be restricted to protect threatened and endangered species and their potential habitat.

Management Unit 14

- Needle Rock Outstanding Natural Area/ Area of Critical Environmental Concern (although not specified in the RMP, the area harbors several rare and sensitive species, plants and animals)
- Measures designed to protect threatened and endangered species and their habitat will be incorporated into all activity plans.

Management Unit 15

- The management unit contains populations of the threatened Uinta Basin hookless cactus and is potential habitat for the endangered clay-loving wild buckwheat and the candidate Montrose penstemon (Montrose, or the Adobe, penstemon is no longer a candidate or special status species).
- The Adobe Badlands Outstanding Natural Area/ Area of Critical Environmental Concern will be managed to protect its unique scenic qualities and threatened and endangered species' habitats, and to reduce active erosion.
- A management plan will be developed for this unit and intensive studies established to increase our basic knowledge about these threatened and endangered species.
- A complete inventory for threatened and endangered species will be conducted. Research and monitoring studies will be established.

Implementation Priorities

1. Conduct a threatened and endangered species inventory of Management Unit 8 (completed).
2. Prepare a management plan for Management Unit 13 (completed).
3. Establish studies in Management Unit 13 (several studies ongoing).
4. Conduct a threatened and endangered species inventory in Management Unit 15 (completed).
5. Conduct threatened and endangered species clearances on potential disposal tracts (ongoing).
6. Continue general monitoring of threatened and endangered species.

UNCOMPAHGRE BASIN RMP AMENDMENTS

Standards for Public Land Health and Guidelines for Livestock Grazing Management in Colorado

- Adopted the standards for terrestrial and aquatic resources (Standards 2-5 relate to wildlife and fish resources)
- As of 2008, all of the UFO has been evaluated according to these standards, appropriate management changes were implemented as necessary, and future evaluations will continue to monitor land health.

Land Disposal Amendment

- In [land] exchanges, sensitive or critical habitats…would be acquired [where possible]. This would have a positive impact on public lands and resources as a whole. (The document contained no other references or decisions that might affect special status species or resources.)

Gunnison Interim Travel Management Amendment

- Restricted OHV (including ATVs, motorcycles, and 4-WD vehicles) and mountain bike travel to existing, established routes within the planning area; i.e., eliminated authorized cross-country, off-route travel by motorized and mechanized vehicles to minimize impacts on biological resources

Oil and Gas Leasing Amendment

- Lease stipulations will be attached to mitigate impacts on special status species and habitats
- On-sites will be conducted and biological surveys conducted by qualified individuals
- COA's will be attached to Applications for Permit to Drill to mitigate impacts on special status species and habitats
- ESA Section 7 will be conducted for "may affect" situations.

SAN JUAN-SAN MIGUEL RMP

Standard Decisions

- The FWS will be consulted prior to implementing projects that may affect threatened and endangered species. If such a situation is determined through the BLM biologic assessment process, then consultation with the FWS will be initiated as per Section 7 of the Endangered Species Act of 1973, as amended.
- No activities will be permitted in threatened, endangered, or sensitive species habitat that would jeopardize their continued existence.
- Stipulations will be attached as appropriate to assure that projects are compatible with management objectives established in the RMP for special status species and habitats.
- Development of habitat management plans for key species and their related habitat will occur over the term of the plan. Completion of these plans will be dependent upon need, availability of funding, and manpower. Several key habitats in which plans might be developed include: winter raptor concentration areas; aquatic/ riparian habitats; and threatened and endangered (T&E) species habitat. Priority will generally be given to the development of a habitat management plan for T&E species. Development of habitat management plans for terrestrial and aquatic species will be closely coordinated with CDOW, the U.S. Forest Service, and where appropriate

FWS. Project development will require input from all resource programs to assess impacts through the environmental process.

- All monitoring will be conducted according to BLM manuals and policies. A detailed wildlife monitoring plan for the planning area will be used. Monitoring for all wildlife species will be closely coordinated with the CDOW and the FWS.

Decisions by Management Unit

Note: Refer to other resource sections, including the Fish and Wildlife Section 3.1.6, for management decisions that influence or affect wildlife and fish resources (such as terrestrial habitat improvement, seasonal restrictions on oil and gas activities, and soil and water resources).

Area B (Wildlife)

- Maintain or improve historically occupied or potentially suitable threatened and endangered species habitat.
- Maintain or improve habitat for sensitive plants, wildlife, and migratory bird species of high federal interest.
- Continue management of Perins Peak and Paradox peregrine falcon eyries
- Continue management of bald eagle nests and winter eagle concentration areas.
- Reintroduce river otters in the upper Dolores River.
- Continue to monitor and provide protection for endangered, candidate, and sensitive plant species in Paradox Valley and Spring Creek.

Area C (Recreation)

- Continue to provide necessary management for T&E species.
- Allow reintroduction of river otters in the upper Dolores River.

Area D (Wilderness)

- Allow reintroduction of river otters in the upper Dolores River Canyon WSA.
- Provide protection for sensitive plant species in the Coyote Wash area of Dolores Canyon.
- Permit fish and wildlife research or inventories.
- Allow natural distribution and population of vegetation and wildlife species indigenous to area to maintain natural balance with each other, their habitats, and man.

Area E (Mineral Development)

- Protect T&E species and maintain or improve their habitats. Provide for minimal investments to enhance key wildlife species.

Area F (Cultural Resources)

- Continue to manage T&E species habitat to protect species.

Area G (Natural Resource Management)

- Protect T&E species and maintain or improve their habitats.

Area H (Public Land Disposal)

- Provide for T&E species inventories and clearance prior to disposal.

Area I (

- Protect T&E species and maintain or improve their habitats. Provide for minimal investments to enhance key wildlife species.

Area J (Forestry)

- Protect T&E species and maintain or improve their habitats. Provide investments to enhance wildlife species which will benefit from uneven-aged timber management.

Area K (Soil and Water)

- Protect T&E and sensitive species habitat.

Area L (ACECs)

- Manage important or critical habitat for T&E and sensitive species to maintain viable population levels.

Implementation Priorities

1. Monitor, maintain or improve sensitive habitats for threatened or endangered species.
2. Upon identification of an occupied habitat area or introduction of any T&E species into an area, a Habitat Management Plan would be initiated as funding is available.
3. Monitor, maintain or improve winter raptor concentration areas.

SAN JUAN-SAN MIGUEL RMP AMENDMENTS

Standards for Public Land Health and Guidelines for Livestock Grazing Management in Colorado

- Adopted the standards for terrestrial and aquatic resources (Standards 2-5 relate to wildlife and fish resources)
- As of 2008, all of the UFO has been evaluated according to these standards, appropriate management changes were implemented as necessary, and future evaluations will continue to monitor land health

Oil and Gas Leasing Amendment

- Lease stipulations will be attached to mitigate impacts on wildlife and habitats
- On-sites will be conducted and biological surveys conducted by qualified individuals
- COA's will be attached to APD's to mitigate impacts on wildlife and habitats
- ESA sec.7 will be conducted for "may affect" situations

3.1.8 Wild Horse and Burro

MANAGEMENT OBJECTIVES

SAN JUAN/SAN MIGUEL RMP

- The Naturita Ridge Herd Area will continue to be managed as closed to wild horse herds.

MANAGEMENT DECISIONS

SAN JUAN/SAN MIGUEL RMP

- Manage for approximately 50 wild horses in the Spring Creek area.
- Remove all wild horses from the Naturita Ridge area.

3.1.9 ☀ Wildland Fire Ecology and Management

MANAGEMENT OBJECTIVES

UNCOMPAHGRE RMP FIRE AMENDMENT

- Allow the use of fire through prescribed and planned ignitions on all areas within the Uncompahgre Basin Planning Area.

SAN JUAN/SAN MIGUEL RMP

Objectives for wildland fire management are not identified in this plan.

MANAGEMENT DECISIONS

UNCOMPAHGRE BASIN RMP

Fire Management Amendment

- Any fire that occurs in a fire use category area before a prescribed burn plan is approved, or that is not in the limits of the prescription, or that threatens life or property will be suppressed as a conditional suppression area fire.
- On all units, prescribed and planned ignitions throughout the unit will be allowed as a management tool. Prior to any ignitions, an environmental analysis, burn plan, and burning permit would be prepared or obtained.

SAN JUAN/SAN MIGUEL RMP

Area A (Livestock Management)

- Continue and expand (where appropriate) the limited fire suppression plan to enhance vegetation conditions for livestock grazing.

Area B (Wildlife)

- Provide the level of protection from wildfire that will result in least total cost and will generally enhance wildlife management values. Use prescribed fire when possible to enhance wildlife habitat.

Area C (Recreation)

- Utilize fire management techniques that maintain long-term recreation quality objectives. Suppression of wildfires will generally occur but prescribed fire will be allowed if it will meet or exceed recreation objectives.

Area D (Wilderness)

- Perpetuate and maintain ecosystems within wilderness by natural occurrence of fire, insects, and disease. Suppression may be taken on man-caused fires, fires threatening human life and property, or fires which threaten to escape from wilderness to adjacent areas with more restrictive fire prescriptions.

Area E (Mineral Development)

- Provide a level of protection from wildfire resulting in the least total cost and protection of mineral developments on the public lands.

Area F (Cultural Resources)

- Provide a level of protection on all fires that will protect the cultural resource values.

Area G (Natural Resource Management)

- Provide a level of protection from wildfire that will result in least total cost and will generally enhance resource conditions of the vegetation. Use prescribed fire when possible to enhance resource conditions.

Area H (Public Land Disposal)

- Provide for a limited level of fire management. Suppress wildfires which may be threatening adjacent private, state or Federal property.

Area J (Forestry)

- Provide a level of protection from wildfire that will result in least total cost and will enhance forest resources. Use prescribed fire when possible to enhance forest management objectives.

Area K (Soils and Water)

- Provide a level of protection from wildfire that will result in least total cost and will generally enhance soil and water values. Use prescribed fire when possible to enhance soil and water conditions.

Area L (ACECs)

- Use fire management techniques that maintain the ACEC values. Wildfire suppression would generally not occur unless needed to protect ACEC values.

3.1.10 ☀ Cultural and Heritage Resources

MANAGEMENT OBJECTIVES

UNCOMPAHGRE BASIN RMP

- Cultural Resources. Cultural and historical sites will be inventoried. Clearances will be conducted on sites of all proposed surface disturbing activities. Measures designed to protect cultural and historical resources will be developed in consultation with the Advisory Council on Historic Preservation and the State Historic Preservation Officer and will be required in all land use activity plans.

SAN JUAN/SAN MIGUEL RMP

- Cultural resources will continue to be inventoried and evaluated as part of project level planning. Recommendations will be generated from the evaluations and will consider all impacts to the proposed projects and the important cultural resources in the affected areas. Stipulations will be attached to assure that projects are compatible with management objectives for cultural resources. Avoidance will continue to be the primary measure used.

MANAGEMENT DECISIONS

UNCOMPAHGRE BASIN RMP

Common to All Units

- Clearances, and mitigation for cultural resources will be required for all surface-disturbing activities throughout the planning area. This is required by. law.
- Measures will be designed to protect cultural sites, and will be incorporated into all activity plans; this is required by law.

Management Unit 1

- Conduct a Class III cultural inventory on 5,800 acres between Highway. 90 and Sandy Wash to identify the presence of cultural resources and determine the areas' cultural significance.

SAN JUAN/SAN MIGUEL RMP

Areas A (Livestock Management), B (Wildlife), E (Mineral Development), F (Cultural Resources), J (Forestry), K (Soils and Water), and L (ACECs)

- Protect and manage important cultural resource properties.

Area C (Recreation)

- Develop and protect suitable cultural resource properties for public enjoyment through practices such as interpretive signing and stabilization.

Area D (Wilderness)

- Allow no development of cultural resources (other than stabilization) for recreation purposes. Allow use of cultural resource properties for religious or research purposes only when such use will not degrade wilderness values.

Area G (Natural Resource Management)

- Manage cultural resource properties in accordance with applicable laws, regulations and public interest.

Area H (Public Land Disposal)

- Provide cultural resource inventories and clearances so disposal of tracts can occur. Pending disposal, manage the cultural resources under present laws and regulations.

Consultation

The BLM continues Native American consultation to identify any traditional cultural properties, sacred/religious sites, or special use areas through letters, phone calls, and on-site visits. Consulting partnerships have been established and should be continued and expanded, with the Northern Ute Tribe, Southern Ute Tribe and Ute Mountain Ute Tribe. If any areas are identified or become known through the Native American notification or consultation process, their concerns are addressed through the planning process. The BLM would like to protect and preserve Native American cultural and sacred sites and Native American access to these sites whenever possible. The BLM will take no action that would adversely affect these areas or locations without consultation with the appropriate Native American tribes.

3.1.11 ☀ Paleontological Resources

MANAGEMENT OBJECTIVES

Current management direction is based on paleontology resource management direction, including H-8270-1- Paleontological Resources Management Handbook, H-1601-1-Land Use Planning Handbook, Appendix C, I. Natural, Biological, and Cultural Resources, Part H-Paleontology.

UNCOMPAHGRE BASIN RMP

- Protective measures will be developed as this resource is discovered. Little is known about this resource in this area. As information is obtained, specific management will be identified.

SAN JUAN/SAN MIGUEL RMP

Objectives for managing paleontological resources are not identified in this plan.

MANAGEMENT DECISIONS

UNCOMPAHGRE BASIN RMP

- Paleontological resources will be inventoried and appropriate protective measures will be developed if necessary; protective measures will be developed as this resource is discovered. As information is obtained, specific management will be identified.

SAN JUAN/SAN MIGUEL RMP

Decisions for managing paleontological resources are not identified in this plan.

3.1.12 ☀ Visual Resources

MANAGEMENT OBJECTIVES

UNCOMPAHGRE BASIN RMP

- Public lands will be managed under current visual resource management classifications and guidelines.

SAN JUAN/SAN MIGUEL RMP

- Objectives for managing visual resources are not identified in this plan.

MANAGEMENT DECISIONS

UNCOMPAHGRE BASIN RMP

Management Unit 1

- Manage under VRM Class III, except for Escalante Canyon which will be Class II to protect its scenic qualities.

Management Unit 2

- Manage under VRM Class III to protect its-scenic qualities while permitting some intrusion.

Management Units 3,5,7,9,10,13, and 16

- Manage under the existing VRM classifications as no changes were deemed necessary.

Management Units 14 and 15

- Manage under VRM Class I to protect the area's scenic qualities.

Management Unit 8

- Manage under VRM Class IV to allow substantial change.

SAN JUAN/SAN MIGUEL RMP

Common to All Areas

- Establish site-specific visual quality objectives and design guidelines for landscape development projects during activity planning.

Area C (Recreation)

- Preserve scenic values, enhance viewing opportunities and increase variety, where appropriate.

Area D (Wilderness)

- Establish visual Class I low contrast design standards for Dolores River Canyon WSA.

3.1.13 ☀ Wilderness Characteristics

MANAGEMENT OBJECTIVES

UNCOMPAHGRE BASIN RMP

Objectives for managing wilderness are not identified in this plan.

SAN JUAN/SAN MIGUEL RMP

- In the Dolores River Canyon, the objective will be to manage the area to preserve the wilderness values while allowing other resource uses only where such use will not cause damage to or loss of wilderness values.

Area D (Wilderness)

- Provide predominantly untrammeled, natural environments for the physical, biologic and social components of wilderness. The physical and biologic components are managed so that natural process are unimpeded by human activities or use. Natural processes, including naturally occurring fire, soil erosion, and insect and disease cycles, proceed unrestricted by man. Emphasize high levels of solitude, few party encounters, and high opportunities for challenge, risk and self-reliance.

MANAGEMENT DECISIONS

UNCOMPAHGRE BASIN RMP

- The Camel Back WSA and Adobe Badlands WSA (a total of 20,827 acres) would, be recommended as non-suitable for designation as wilderness.
- Manage the Camelback area with emphasis on riparian aquatic system management, wildlife habitat, and livestock grazing.
- Manage 8,783 acres of the Adobe Badlands WSA as an ONA/ACEC to protect the scenic qualities, and T&E plants; and to reduce active erosion. Manage the remainder of the Adobe Badlands, WSA (3,842 acres) as wildlife habitat.
- All Wilderness Study Areas (WSAs) will be managed to be consistent with the Wilderness Interim Management Policy until the final Congressional decision on wilderness designation or non-designation is made.

SAN JUAN/SAN MIGUEL RMP

- Pending Congressional action, all WSAs will be managed under BLM's Interim Management Policy.

General Guidelines

Area D (Wilderness)

- Manage any recommended WSAs per the Wilderness Act of 1964.

Specific Management Direction

- Protect & interpret unique & significant values in the Dolores River Canyon WSA.
- Recommend the Dolores River Canyon WSA for wilderness designation.

Wilderness Amendment (Colorado Wilderness Bill H.R. 631)

- The "Tabeguache Area" was congressionally designated in 1993 (7,748 acres within the Uncompahgre planning area)

3.2.1 ☀ Livestock Grazing Management

MANAGEMENT OBJECTIVES

UNCOMPAHGRE BASIN RMP

- Suitable public lands will be available for livestock grazing use.
- Livestock utilization will be managed at current forage allocation levels until studies indicate adjustments are needed to achieve management objectives.
- New or additional available forage will be divided equally between livestock and wildlife. Existing livestock facilities will be maintained.
- Existing allotment management plans (AMPs) will be updated as needed and new AMPs will be developed.
- New livestock facilities and land treatment projects will be developed if needed to achieve AMP objectives.
- Vegetation condition and trend monitoring studies will be established and/or maintained.
- Maximum sustained livestock utilization levels of key forage species will be 50 percent.
- Allotment categorization will determine management and monitoring intensity.

SAN JUAN/SAN MIGUEL RMP

General

The planning area is a complex ecosystem composed of plant and animal communities and basic soil types, all responsive in one way or another to natural processes such as rain, wind, sunlight, and man's activities. No single element in the range ecosystem is so readily managed and with such far reaching effects as is vegetation. Consequently, maintaining or improving the vegetation component of this ecosystem is the key to enhancing the resource values of the planning area to permit a balanced mix of uses to ensure sustained yield. The components of the rangeland program are familiar ones; they have been part of the program for some years. The main emphasis of the range program is considered in the following component.

Allotment Categorization

All grazing allotments in the planning area have been assigned to one of three management status "I", "M" or "C". "I" is the most intensive management, with the objective of improving existing resource conditions, "M" less intensive management, with the objective of maintaining existing resource conditions, and "C" the least intensive or custodial management. Categories are based on present conditions such as potential for

improvement, whether other resource conflicts exist, and what opportunities exist for positive economic return on public investments. The management status category for an allotment may be changed when resource conditions change, or when new data becomes available.

MANAGEMENT DECISIONS

UNCOMPAHGRE BASIN RMP

Management Unit 1

- Public Lands within the management unit will be managed as "I" category, "M" category, and "C" category grazing allotments. Also, 2,109 acres that are presently unallotted for livestock use will be available for grazing application.
- This unit will be managed to improve vegetation conditions and forage availability for livestock grazing. Land treatment projects and other facilities designed to improve livestock forage and distribution will be developed.
- Intensive monitoring studies will be developed and maintained on all "I" and "M" category allotments.
- Existing AMPs will be updated as needed and new AMPs will be developed for allotments without plans.
- As additional forage becomes available, livestock will have priority for allocation.
- Relinquished, cancelled, or acquired livestock grazing permits will be reissued according to regulations.

Management Unit 2

- Livestock grazing will continue at current forage allocation levels and seasons of use unless studies determine adjustments are needed.
- Livestock will have first priority for all additional forage made available as a result of livestock operator-funded rangeland improvement projects.
- Non-conflicting livestock management objectives, projects, and mitigation measures will be incorporated into new wildlife habitat management plans.
- Facility development and land treatment projects will be permitted if they would be compatible with wildlife habitat management objectives.

Management Unit 3

- Non-conflicting livestock grazing management objectives, projects, and mitigating measures will be incorporated into new FMPs.
- Existing livestock projects will be maintained and new projects developed if they will not decrease the woodland base.
- No livestock projects will be permitted which would reduce the woodland base.

Management Unit 5

- Livestock grazing will be allowed except from March 20 to range readiness to protect plant species during the spring growth period, and to prevent soil disturbance when saturated soils are most vulnerable to damage.
- If the basal ground cover is less that the objectives identified in Table 3 (pg 18 of the RMP), livestock forage utilization will be managed at 35 percent of key forage species to increase basal ground cover.
- Additional forage will be divided equally between livestock grazing and wildlife to provide forage for both resources.

Management Unit 8

- Grazing use will continue in the management unit but construction of facilities, such as livestock control fences, that create safety hazards or impede free vehicle use will not be permitted.

Management Unit 9

- Livestock grazing use will be permitted in riparian zones except from March 1 through range readiness, during which time it would be eliminated to accelerate improvement of riparian vegetation.
- To improve the condition of riparian zones, management practices and principles will be established in activity plans. Utilization of 35 percent by weight of key forage species will be used as a general guidance for improvement; this may vary depending on the individual riparian system.
- Trailing use will be limited as much as possible and confined to established roads.
- Trailing livestock will not be permitted to bed in riparian zones unless absolutely necessary.

Management Unit 10

- Wildlife will have first priority for any additional forage.

Management Unit 13

- Livestock grazing will continue at current levels unless studies determine "threatened and endangered" plant species and unique plant associations or their potential habitats are being degraded.

Management Unit 14

- The management unit will remain unallotted for livestock grazing use.

Management Unit 15

- Livestock grazing will continue at current levels unless studies determine threatened and endangered plant species or their potential habitat are being degraded.
- If basal groundcover is less than 10 percent, livestock forage utilization will be managed at 35 percent utilization of key forage species.
- No additional forage allocations will be made.

- To protect scenic values, no new livestock improvement projects or maintenance of existing projects will be permitted.

SAN JUAN/SAN MIGUEL RMP

Area A (Livestock Management)

- Management direction will emphasize increasing forage and livestock production on a sustained yield basis. Emphasis is upon increasing forage, red meat and animal fiber production, and improving forage composition and watershed conditions.
- Significant investments may be made in livestock improvements which will be multiple use oriented (i.e., wildlife, watershed, etc.). Investments for other resources will be minimal, although resource management activities compatible with livestock production will continue.
- Fire will be utilized to enhance forage production.
- Manage suitable vegetation types for increased, sustained livestock production. One goal is to improve range condition and productivity on native rangeland.
- Use improved management systems such as rest-rotation and deferred-rotation, if appropriate. Invest in range improvements necessary to implement management systems.
- Develop 71 AMPS (810,000 acres).

Area B (Wildlife)

- Manage suitable vegetation types under low to moderate intensity for livestock production, with intent to utilize available forage and maintain forage vigor, while not degrading wildlife habitat.
- Constrain range treatment projects in size, layout and type with intent to enhance wildlife & livestock forage, vegetation & habitat diversity.
- Reduce number of livestock and change season-of-use where needed to provide sufficient forage for wildlife & to protect aquatic/riparian resources, especially on big game winter & spring ranges.
- Limit total utilization of forage species current year's growth. Livestock use should be limited where necessary to protect highly preferred species of plants.
- Maintain an overall cover/forage ratio of 40:60. Limit width of vegetation openings to approximately 150 to 200 yards in big game winter ranges.
- In pinyon-juniper and shrub vegetation types, retain 35% to 40% of original cover when completing vegetation treatments.

Area C (Recreation)

- Manage livestock under reduced intensity to utilize available forage & maintain plant vigor while not degrading recreation values.

- Do not attempt to maintain or improve forage composition and production through range vegetation treatments with the exception of prescribed fire where appropriate.
- Use "rustic" range improvements near developed recreation areas.
- Manage livestock grazing to make it compatible with recreation use.

Area D (Wilderness)

- Manage for improved range condition.
- Do not use vegetation manipulations to improve forage production. Emphasize primitive, natural material for water developments and range structures that are approved in wilderness management plan.

Area E (Mineral Development)

- Manage suitable vegetation types under moderate intensity for livestock production, with the intent to use available forage and maintain forage vigor.

Area F (Cultural Resources)

- When necessary, reduce or control livestock grazing to protect cultural resources.

Area G (Natural Resource Management)

- Manage vegetation so it maintains itself satisfactorily with a generally upward trend.

Area H (Public Land Disposal)

- Allow limited management of the rangeland to occur. Spend no public funds on rangeland improvements. Complete procedural notifications to grazing permittees.

Area I (Wild Horses)

- Manage livestock to reduce or eliminate conflicts with wild horses. Maintain forage in fair condition with an upward trend. All livestock waters should be provided year round. Reduce numbers and/or season-of-use to eliminate forage competition. Assure that all range projects are compatible with wild horse use. Restrict licensing of domestic horses in wild horse areas.

Area J (Forestry)

- Allow livestock grazing on those areas and at times of the year when it will have no negative effects on timber management operations and objectives for the area.

Area K (Soils & Water)

- Manage suitable vegetation types under low to moderate intensity for livestock production with the intent to use available forage and maintain plant vigor.
- Reduce the number and/or season-of-use for livestock where needed to achieve soil and water program objectives.
- Maintain or improve range condition through soil and water improvements and diversifying the vegetation.

Area L (ACECs)

- Manage livestock under low to moderate intensity to use available forage and maintain vigor while not degrading any present ACEC values.
- Develop and implement AMPS on "I" and "M" category allotments within ACECs. Consider cultural, mineral, wildlife, and recreation values during development.

UNCOMPAHGRE BASIN AND SAN MIGUEL RMP AMENDMENTS

Standards for Public Land Health and Guidelines for Livestock Grazing Management in Colorado

- Colorado's rangeland health standards were developed to assess and protect ecological communities and their associated values. Standards are descriptions of the desired condition of the biological and physical components and characteristics of rangelands that are applied to management of all public land resources and uses. Guidelines are management approaches, methods, and practices intended to achieve established standards.

3.2.2 Forest and Woodland Products

MANAGEMENT OBJECTIVES

UNCOMPAHGRE BASIN RMP

- Suitable commercial forest lands and pinyon-juniper woodlands will be managed for sustained yield production within the allowable cut restrictions determined by the Timber Production Capabilities Classification inventory.

SAN JUAN/SAN MIGUEL RMP

- Public land within forest management areas will be available for a full range of forest management activities. Major forest activity plans generally will be required prior to initiating those activities in such areas. Pending completion of the activity plan, timber and woodland stand treatments will be evaluated by an environmental assessment and implemented on a case-by-case basis. Forested areas within other emphasis areas will also be available for a full range of forest management activities; plans will be modified to be compatible with the management emphasis areas. Firewood harvesting will be permitted on most accessible forest land available for harvesting forest products.

SAN MIGUEL RIVER ACEC AND SRMA AMENDMENT

- Manage the public lands within the San Miguel River Canyon and its tributaries as an Area of Critical Environmental Concern and Special Recreation Management Area.

MANAGEMENT DECISIONS

UNCOMPAHGRE BASIN RMP

Management Unit 1

- Woodland harvest areas will be managed for increased forage production and will be compatible with AMPs.

Management Unit 2

- The management unit will be available for woodland product harvests.
- The forest resource will be managed to improve wildlife habitat.

- On 37,007acres of crucial deer and elk winter range, seasonal restrictions on harvest may be necessary from December 1 through April 30 to reduce stress on wintering deer and elk.
- Woodland harvest will be designed to increase forage production and will be compatible with wildlife habitat management objectives.

Management Unit 3

- The forest resource will be intensively managed for woodland product harvest within sustained yield production limits to increase available woodland products.
- Forest Management Plans will be prepared, and if needed, plantations established to increase forest product availability.

Management Units 5, 7, 8, 13, 15, and 16

- Manage for sustained yield production of forest products to meet current and future demands for woodland products.

Management Units 9

- Closed to harvest protect riparian vegetation.

Management Unit 10

- Design timber and woodland harvests to improve elk calving habitat.
- Skid trails and other roads will be closed and rehabilitated; main haul roads will remain available for public use.

Management Unit 14

- Closed to harvest to protect their scenic values.

Management Unit 16

- The reserved federal timber (123 acres) on 168 acres of land deeded to the Girl Scouts of America will be removed from the timber base and not considered for harvest. The management and harvest of this timber would be inconsistent with use of the land as a Girl Scout camp.

SAN JUAN/SAN MIGUEL RMP

Area A (Livestock Management)

- Manage woodland products & timber to enhance range resources & for insect & disease control.
- Timber species should be managed at a stocking level that maintains moderate to high herbage production. Utilize woodland products to the maximum extent practicable through commercial sales under the principle of sustained yield. Manage aspen forest types to perpetuate aspen, using even-aged silviculture. Limit clearcuts in aspen to a maximum of 40 acres or the size of an aspen clone, whichever is smaller.

- Provide reasonable opportunity to salvage forest products prior to & following range habitat improvement treatments.
- Provide legal & physical access to vegetation treatments to facilitate salvage of forest products when feasible.

Area B (Wildlife)

- Manage forest lands to enhance wildlife resource. Plan wood product sales in wildlife areas to improve big game forage & other wildlife needs.
- Provide reasonable opportunity to salvage forest products prior to & following habitat improvement treatments.

Area C (Recreation)

- Manage lands suitable for timber & woodland production to enhance recreational opportunities & to maintain healthy stand conditions.
- Allow no regulated sales of wood products in the Silverton SRMA, except to control disease & insect outbreaks where necessary. Allow no sales of wood products in the Dolores River SRMA.

Area D (Wilderness)

- Allow no harvesting of forest products. Available forest land will remain in the commercial forest lands base until the area has been designated as wilderness.

Area E (Mineral Development)

- Allow for the sale or disposal of forest products or timber that may be lost in mineral development or that is needed for managing the resource. Meet demand without degradation or conflict.

Area F (Cultural Resources)

- Allow removal of forest products only when compatible with cultural, wildlife, or recreation values or when done to improve safety.

Area G (Natural Resource Management)

- Provide a sustained yield of forest products consistent with land capability, suitability, protection needs, & other resource values.

Area J (Forestry)

- Manage lands suitable for timber production. Invest necessary funds to provide for intensive management of the forest resource. Provide firewood, Christmas trees, & other wood products.
- Manage timber and woodland species on all available & capable lands with a combination of even & uneven-age systems. Manage aspen under an even-age system. Limit open patch cuts to 20 acres or less in commercial forest types & 40 acres in woodland types. Regenerate all patch cuts, shelter wood, & selection harvest cuts, naturally or artificially, within 15 years. Continue management of all operable woodland & commercial saw timber in other emphasis areas.

- Manage approx. 10,960* acres for intensive forest management. Estimated allowable harvest would be 6.5 MMBF per decade. Manage approx. 42,130* acres to provide woodland products (firewood, posts, poles, etc.). Estimated allowable harvest would be 6.4 MMBF (12,800 cords) per decade.

  *Only 6,993 acres of the suitable commercial timber base occur within the current decision area boundary and will be considered within the Uncompahgre RMP revision.

Area K (Soils and Water)

- Manage forest products & woodlands to meet goals & objectives of the soil & water program for specific areas.

Area L (ACECs)

- Manage lands suitable for timber & woodland production to enhance ACEC values & to maintain healthy stands.

SAN MIGUEL RIVER ACEC AND SRMA AMENDMENT

- Approximately 20,166 acres of the San Miguel ACEC and 298 acres of the remainder of the SRMA would be closed to forest product disposal.

3.2.3 Energy and Minerals

MANAGEMENT OBJECTIVES

UNCOMPAHGRE BASIN RMP

Objectives for managing renewable energy resources, as well as Potash and other leasable minerals, are not identified in this plan.

Leasable Minerals - Coal

- Coal development will be considered on a site-specific basis after consultation with affected entities and formulation of mitigating measures. Development of existing coal leases will continue, and unleased federal coal will be identified as acceptable for further coal leasing consideration with a minimum of multiple-use restrictions.
- Activities and land uses that are consistent with maintaining existing coal operations and the potential for coal development will be permitted. Federal coal lands that are acceptable for further leasing consideration, acceptable for further leasing consideration with stipulations, or unacceptable for leasing will be identified and open for leasing if appropriate.
- Standard stipulations provide conditions for leasing. Analyses of a management unit could result in special stipulations and conditions that apply to federal surface and split-estate lands. Any special stipulations (i.e., seasonal closures) prescribed for a management unit will also apply to exploration drilling activities.

Leasable Minerals - Fluid

- Federal oil, gas, and geothermal estate on both federal surface and split-estate lands will be open to leasing with standard lease terms: Other conditions for leasing such as no surface occupancy and seasonal stipulations are assigned in each management unit prescription; special stipulations and conditions also apply to federal surface and split-estate lands. Any special stipulations (i.e., seasonal closures) prescribed for a management unit will also apply to seismic and drilling activities.

Locatable Minerals

- All existing withdrawals that segregate federal mineral estate from location and entry under the general mining laws will be recommended for retention. Federal mineral estate in areas not under withdrawal will be open to entry and location.

Mineral Materials

- Federal mineral estate will be open to disposal of mineral materials.

SAN JUAN/SAN MIGUEL RMP

Objectives for managing renewable energy resources, as well as Potash and other leasable minerals, are not identified in this plan.

Leasable Minerals - Coal

- Approximately 1,480 acres in the Nucla Known Recoverable Coal Resource Area (26.6 million tons) would be available for further consideration for coal leasing.
- 280 acres of Alluvial Valley Floor and Floodplains within the Nucla Known Recoverable Coal Resource Area were eliminated from all methods of mining.
- The priority of this Known Recoverable Coal Resource Area is based on 1983 coal data & indications of interest by industry. The remaining coal lands determined to be suitable or identified as priorities for future leasing will be managed for other multiple use considerations. These lands would be made available for future leasing only when the coal priority areas had been depleted or a significant demand was expressed that could not be met by the existing coal priority area.

Leasable Minerals - Fluid

- As a general rule, public land is available for oil and gas leasing. In many areas, oil and gas leases will be issued without special lease stipulations. In highly sensitive areas, where special stipulations or information notices are not sufficient to protect important surface resource values, no surface occupancy stipulations will be implemented. Stipulations and information notices are located in Appendix Two.

Locatable Minerals

- All public land is open to mineral entry and development unless previously withdrawn (i.e., wilderness, administrative withdrawals, etc.). Mineral exploration and development on public land will be regulated under 43 CFR 3800 to prevent unnecessary and undue degradation of the land.
- Continue cooperative management to protect surface resources on the Department of Energy lease tracts. Provide for necessary permits for sand and gravel. Provide protective stipulations to protect the unique fossils in the Placerville area.

Mineral Materials

- Applications for removing common variety mineral materials, including sand and gravel, will continue to be processed on a case-by-case basis. Stipulations to protect important surface values will be attached based on interdisciplinary review of each proposal.

SAN JUAN/SAN MIGUEL RMP AMENDMENT

Oil and Gas Leasing Amendment

- Facilitate orderly, economic, and environmentally-sound exploration and development of oil and gas resources using balanced multiple use management.

MANAGEMENT DECISIONS

UNCOMPAHGRE BASIN RMP

Decisions for managing renewable energy resources, as well as Potash and other leasable minerals, are not identified in this plan.

Leasable Minerals - Coal

Standard Management Direction

- Federal coal estate will be identified as acceptable for further leasing consideration.

Management Units 1, 3, 7, 8, and 16

- Acceptable for further leasing consideration with no special restrictions.

Management Unit 2

- Federal coal estate will be open to leasing within crucial deer and elk winter range; seasonal stipulations on new road and facility construction may be necessary from December 1 through April 30 to reduce stress on wintering deer and elk.

Management Unit 5

- Open for further leasing consideration with possible restrictions on surface disturbing activities from March 1 through May 31 to prevent excessive erosion on wet saline soils

Management Unit 9

- May be acceptable for further leasing consideration on a site-specific basis after consultation with affected entities and formulation of mitigating measures designed to protect riparian vegetation.

Management Unit 10

- Acceptable for further leasing consideration with possible restriction on any disturbances from May 1 through June 15 to protect elk calving areas.

Management Unit 11

- Acceptable for further leasing consideration with possible restrictions on any disturbance from March 15 through June 30 to protect nesting waterfowl.

Management Units 13 and 14

- Acceptable for further leasing consideration with possible restrictions on surface disturbing activities to protect threatened, endangered, or unique species and their potential habitat, and to protect scenic values.

Management Unit 15

- Closed to leasing to protect its scenic quality.

Leasable Minerals - Fluid

Management Units 1, 2, 3, 7, and 16

- Open to oil and gas leasing with seasonal stipulations from December 1 through April 30 on crucial deer and elk winter range and on bald eagle hunting habitat to protect crucial deer and elk winter range and bald eagle hunting habitat from disturbance.

Management Unit 5

- Open to oil and gas leasing with seasonal stipulations on seismic and drilling from March 1 through May 31 to protect wet saline soils.

Management Unit 6

- Closed to oil and gas leasing to protect its wilderness values.

Management Units 8 and 9

- Open to oil and gas leasing with only standard stipulations.

Management Unit 10

- Open to oil and gas leasing with seasonal stipulations from May 1 through June 15 to protect elk calving areas.

Management Units 13,14, and 15

- Open to oil and gas leasing with a no surface occupancy stipulation to protect threatened and endangered species habitat and the areas scenic quality.

Locatable Minerals

Management Units 1, 2, 3, 5, 7, 8, 9, 10, 11, 15, and 16

- Open to mineral entry and location due to the lack of resource conflicts. Existing BLM and BOR withdrawals will be recommended for lifting as they are no longer needed.

Management Unit 6

- Closed to protect its wilderness values.

Management Units 13 and 14

- Closed to mineral entry and location. These units will be placed under a BLM protective withdrawal.

Mineral Materials

Management Units 1, 3, 7, 8, 10, and 16

- Open to mineral material disposal.

Management Unit 2

- Open to mineral material disposal with possible restrictions on surface disturbing activities from December 1 through April 30 on crucial deer and elk winter range to protect crucial deer and elk winter range from disturbance.

Management Unit 5

- Open to mineral material disposal with possible, restrictions on surface disturbing activities from March 1 through May 31 on wet saline soils to protect wet saline soils from rutting and erosion.

Management Units 9, 13, 14, and 15

- Closed to mineral material disposal.

SAN JUAN/SAN MIGUEL RMP

Decisions for managing renewable energy resources are not identified in this plan.

All Minerals

Areas A (Livestock Management), G (Natural Resource Management), J (Forestry), and K (Soil and Water)

- Allow mineral development in all areas not withdrawn from entry. Provide protective stipulations to limit impacts to livestock improvements or management practices.

Area B (Wildlife)

- Allow mineral development in all areas not withdrawn from entry. Provide protective stipulations to limit impacts to wildlife habitat or species. Limit and/or provide protective stipulations for mineral development on habitat for T&E species.
- Continue present leasing stipulations with changes for wildlife winter ranges & eagle concentration areas as shown in the Resource Conservation Alternative.

Area C (Recreation)

- Manage mineral development to limit conflict with management of high recreational values. When possible, schedule activities so conflicts are minimized between recreational and mineral activities. Ensure site rehabilitation activities follow operating plans and address recreation management objectives.
- Provide for no surface occupancy stipulations for mineral leasing in the Dolores River SRMA (from the Bradfield Bridge to the confluence with Disappointment Creek and from Big Gypsum Valley to 1 mile above Bedrock).

Area D (Wilderness)

- Administer all mineral activity as required by Section 4(d) of the Wilderness Act of 1964. Deny issuance of any future mineral leases within the wilderness area.

Area E (Mineral Development)

- Allow mineral development on all areas not specifically excluded from development. Provide protective stipulations to limit impacts to other resource values.

- Continue cooperative management to protect surface resources on 19,800 acres of Department of Energy lease tracts.
- Provide protective management of the unique fossils in the Placerville area through the use of stipulations on a case by-case basis in environmental documents.

Area F (Cultural Resources)

- Pursue withdrawal from mineral entry on any important cultural properties.
- In the event withdrawal is not made (& on areas not withdrawn), supervise the activities of claimants, lessees, & permittees to ensure minimum impacts on cultural values. Use no surface occupancy stipulations to protect important cultural values.

Area H (Public Land Disposal)

- Continue to manage the mineral program for development. Retain all mineral rights unless an exception can be documented for transferring the mineral rights.
- Transfer all mineral rights with the surface unless: (1) mineral values can be documented to justify retaining the mineral rights, or (2) transferring the mineral rights is prevented by law or regulation.

Area L (ACECs)

- Manage mineral development to limit conflict with present ACEC values. When possible, schedule activities so conflicts are minimized and site rehabilitation is addressed within ACEC guidelines. Some mineral development may need to be limited or excluded for proper ACEC management.

General Guidelines for All Areas

The following principles guide the BLM in managing mineral resources on public lands (per BLM Instruction Memorandum No. 84-568, dated June 28, 1984):

- Except for Congressional withdrawals, public lands shall remain open and available for mineral exploration and development unless withdrawal or other administrative action is clearly justified in the national interest.
- BLM actively encourages and facilitates the development by private industry of public land mineral resources so that national and local needs are satisfied and economically and environmentally sound exploration, extraction, and reclamation practices are provided.
- BLM will process mineral patent applications, permits, operating plans, mineral exchanges, leases, and other use authorizations for public lands in a timely and efficient manner.
- BLM's land use plans and multiple use management decisions will recognize that mineral exploration and development can occur concurrently or sequentially with other resource uses. BLM further recognizes that land use planning is a dynamic process and decisions will be updated as new data are evaluated.

- Land use plans will reflect geologic, energy, and mineral values on public lands through more effective data assessment of those values.
- BLM will monitor salable and leasable mineral operations to ensure proper resource recovery and evaluation, production verification, diligence and inspection, and enforcement of the lease, sale, or permit terms. BLM will ensure receipt of fair market value for minerals commodities unless otherwise provided for by statute.
- BLM will maintain effective professional, technical, and managerial personnel knowledgeable in mineral exploration and development.

Leasable Minerals - Coal

Area E (Public Land Disposal)

- Allow coal leasing on 1,480 acres in the Nucla KRCRA

Leasable Minerals - Fluid

Area E (Public Land Disposal)

- Continue oil, gas, & CO2 operations throughout planning area (183,000 acres in areas designated as KGSs).

Area F (Cultural Resources)

- Withdraw from mineral entry and provide for no surface occupancy stipulations for oil and gas leasing on Dolores Cave and Tabeguache Pueblo. Provide for no surface occupancy stipulations for oil & gas leasing on Tabeguache canyons to protect cultural values.
- See Appendix 2 of the San Juan/San Miguel RMP: Oil and Gas Lease Information Notices and Stipulations

Leasable Minerals - Other

Area E (Public Land Disposal)

- Continue sodium lease (120 acres).

Locatable Minerals

Area E (Public Land Disposal)

- Continue approved operations of 4,500 acres of hard rock mining under 43 CFR 3809 regulations.

Mineral Materials

Area E (Public Land Disposal)

- Continue sand & gravel operations (880 acres).

SAN MIGUEL RIVER ACEC AND SRMA AMENDMENT

- Close the river bottom areas to the sale of sand and gravel.

OIL AND GAS LEASING AMENDMENT

- The Dolores River Canyon and Tabeguache Creek will not be leased. This is 37,323 acres of BLM-administered mineral estate within the San Juan/San Miguel Planning Area (See Map 2 and Table 1 of the RMP).
- BLM administered mineral estate within the San Juan/San Miguel Planning Area are open to oil and gas leasing and development, subject to the lease terms and (as applicable) lease stipulations noted in Appendix A of the RMP.
- No Surface Occupancy stipulations will be used to protect: coal mines where oil and gas development would be incompatible with the planned coal extraction; grouse, raptor, bald eagle, peregrine falcon, Mexican spotted owl, waterfowl and shorebird nests; special status plant species; sites within the Dolores River Canyon.
- Timing Limitation stipulations will be used to protect crucial habitat, nesting, fledgling and birthing areas (See Map 3 and Appendix A of the RMP).
- Controlled Surface Use stipulations will be used to protect: coal mines where the mining method or location is such that location of subsequent wells can avoid significant conflicts, riparian/wetland vegetation, and steep slopes (see Map 4 and Appendix A of the RMP).
- Lease Notices will be used to alert lessees to Class I and II Paleontological Areas and Sage Grouse nesting areas (see Appendix A of the RMP).
- Conditions of Approval will be applied to operational approvals (Applications for Permit to Drill and Sundry Notices) as determined necessary by the Authorized Officer to protect other resources and values within the terms, conditions and stipulations of the lease contract. A list of the most common conditions of approval is found in Appendices D and F of the Final Plan Amendment EIS. Further details of these decisions are provided in the Final Plan Amendment/EIS.

3.2.4 Recreation

MANAGEMENT OBJECTIVES

UNCOMPAHGRE BASIN RMP

- Public lands will be managed for extensive and diverse recreational use.

SAN JUAN/SAN MIGUEL RMP

- The primary management goal is to ensure the continued availability of outdoor recreation opportunities which the public seek and which are not readily available from other public or private entities. Secondary goals include protecting resources, meeting legal requirements for visitor health and safety, and mitigating resource user conflicts involving recreation.
- Recreation objectives are to provide dispersed and resource-dependent types of recreation opportunities such as cross-country skiing, hunting, hiking, boating, jeeping, and fishing and to deal with the limited number of situations which require special or more intensive types of recreation management. Decreases in nonrecreational outputs may occur. Investments will be concentrated in SRMAs and in those ERMAs where these recreation program goals apply.
- Management objectives would include major investments in facilities and visitor management. Where recreation is not the principal management objective, management direction will largely emphasize the provision of access and visitor information.

MANAGEMENT DECISIONS

UNCOMPAHGRE BASIN RMP

Management Unit 1

- The BLM will manage recreation use in a manner that will minimize recreational impacts on interspersed and adjacent private land.

Management Units 2, 3, 5, 7, 9, 10, 13, and 16

- Managed for extensive recreational use to meet public demands for dispersed recreation.

Management Unit 8

- Open for ORV use. Develop for intensive ORV use.
- Loading ramps and informational signs will be constructed.
- This management will provide ORV users an area with limited hazards.
- A minimum of restrictions will be placed on surface-disturbing activities that do not impede or endanger ORV recreationists.

Management Unit 14

- Designated as an Outstanding Natural Area/ACEC to protect the areas scenic qualities. A management plan will be prepared.

Management Unit 15

- Designated as an Outstanding Natural Area to protect the area's threatened and endangered species and scenic qualities. A management plan will be prepared to manage the area for its primitive, non-motorized recreational use.

SAN JUAN/SAN MIGUEL RMP

Common to All Areas

- A wide range of outdoor recreation opportunities will continue to be provided for all segments of the public, commensurate with demand.
- Trails and other means of public access will continue to be maintained and developed where necessary to enhance recreation opportunities and allow public use.
- Developed recreation facilities receiving the heaviest use will receive first priority for operational and maintenance funds.
- Sites that cannot be maintained to acceptable health and safety standards will be closed until deficiencies are corrected.

Areas A (Livestock Management) and K (Soil and Water)

- Manage for dispersed recreation as the primary recreation activity.
- Permit yearlong, nonmotorized recreation activities throughout the area.

Area B (Wildlife)

- Manage for dispersed recreation as the primary recreation activity.
- Permit yearlong, nonmotorized recreation activities throughout the area, except restrict recreation use to resolve people and wildlife conflicts, favoring wildlife in such cases.

Area C (Recreation)

- Manage for a variety of recreation opportunities consistent with classifications determined in Recreational Opportunity Spectrum (ROS) inventories.
- Provide necessary visitor management services and facilities required to meet recreation program goals.

- Manage the Dolores River as an SRMA for water-based recreation opportunities.

Area D (Wilderness)

- Allow opportunities for primitive and unconfined recreation activities featuring solitude; the chance to experience unmodified, natural ecosystems; and to travel cross-country in an environment where success or failure is directly dependent on ability, knowledge and initiative; but in a way to prevent deteriorating the wilderness resource.
- Manage recreation use to provide users with experiences and psychological outcomes expected in wilderness/primitive setting.
- Control social & physical carrying capacity to provide such outcome.
- Establish site-specific visual quality objectives & design guide lines for landscape development projects during activity planning.
- Provide for primitive (nonmotorized) river running activities compatible with wilderness resource in the Dolores River Canyon WSA.

Area E (Mineral Development)

- Provide recreation opportunities that do not conflict with mineral development.

Area F (Cultural Resources)

- Make areas available for day use activities, where feasible. Construct public convenience developments such as restrooms, observation areas, or interpretative trails.

Area G (Natural Resource Management)

- Provide for dispersed types of recreation opportunities. Utilize sign, maps, etc., to help manage the dispersed use.

Area H (Public Land Disposal)

- Provide for very limited dispersed recreation activity.

Area J (Forestry)

- Manage for dispersed recreation as the primary recreation activities.

Area K (Soil and Water)

- Manage for dispersed recreation as the primary recreation activity.
- Permit yearlong, nonmotorized recreation activities throughout the area.

Area L (ACECs)

- Manage recreational opportunities according to ACEC guidelines.

SAN JUAN/SAN MIGUEL RMP AMENDMENTS

San Miguel River ACEC and SRMA Amendment

- Designation of public lands on the San Miguel River, including the tributary streams, from Deep Creek to the old town of Pinon, as a Special Recreation Management Area.

Recreation Management Guidelines to Meet Public Land Health Standards on Bureau of Land Management Lands in Colorado (2000)

In February 1997, Standards for Public Land Health in Colorado were approved by the Secretary of Interior and adopted as decisions in all of the BLM's RMPs. The standards describe natural resource conditions needed to sustain public land health and encompass upland soils, riparian systems, plant and animal communities, special, threatened, and endangered species, and water quality. The standards relate to all uses of the public lands, including recreational use. The recreation management guidelines are tools, methods, and techniques that can be used by managers to maintain or meet the standards as they implement various programs on the public lands. BLM Colorado has now recommended recreation guidelines designed to meet public land health standards. The recreation guidelines can be found on the Internet at http://www.co.blm.gov/rguideline/guidrv12.htm.

3.2.5 ☀ Travel and Transportation Management

MANAGEMENT OBJECTIVES

UNCOMPAHGRE BASIN RMP

- In addition to the specific access needs identified in the management unit prescriptions, the access needs identified in the resource area's transportation plan will be acquired as opportunities arise.

SAN JUAN/SAN MIGUEL RMP

- Travel planning, including the designation of areas open, limited, and closed to motorized vehicle access, will remain a priority for public land.

MANAGEMENT DECISIONS

UNCOMPAHGRE BASIN RMP

General

- Public lands will be open to off-road vehicle (ORV) use. See Section 3.1.6 on Fish and Wildlife for additional off-road vehicle decisions.

Management Unit 1

- Public road access will be acquired into the Olathe Reservoir area for hunting and other recreational purposes.
- Public trail access will be acquired on the McCarty Trail in lower Escalante Canyon to provide additional access into the Dominguez Canyon WSA.

Management Unit 2

- Public access will be acquired into the McDonald Mesa, Roatcap, Jay Creek, Spaulding Peak/Dry Creek, Oak Mesa, and Oak Ridge areas for hunting and other recreational uses, wildlife habitat management, and timber and woodlands management.

Management Unit 3

- Public access will be acquired into the Beaver Hills and Linscott Canyon areas for woodland harvest and recreation purposes.
- Use of ORVs for woodland management and harvest purposes will be authorized year-round.

Management Unit 8

- The management unit would be managed as open to ORV use.

Management Unit 9

- Public access will be acquired into the Terror Creek area for project development and recreation purposes.
- The Potter Creek road (five miles) and the Dry Fork of Escalante Creek road (two miles) will be closed, rehabilitated and removed from the transportation plan. A total of 680 acres in the Roubideau and Potter creeks will be closed to ORV use.
- Vehicle use in the remainder of the management unit will be limited to designated roads and trails yearlong.

Management Unit 10

- Public access will be acquired into the Storm King and High Park areas for timber harvest and extensive recreation purposes.
- Open to ORV use except during the elk calving season when all roads will be closed.
- Access for maintenance of the existing communications site will be permitted at all times.

Management Unit 14

- Vehicle use will be limited to designated roads and trails yearlong.

Management Unit 15

- Closed to ORV use to protect the scenic qualities and to prevent accidental destruction of threatened and endangered plant species and their potential habitat.

Management Unit 16

- Open to ORV use.

SAN JUAN/SAN MIGUEL RMP

Common to All Areas

- Public land within areas identified as open to motorized vehicle use generally will remain available for such use subject to existing laws and regulations.
- Public land within areas identified as limited to motorized vehicle use generally will receive priority attention. Major limited categories include: areas limited except for existing (or designated) roads (or ways) and trails, and other limitations as needed by management objectives.
- Public land within areas identified as closed to motorized vehicle use will be closed yearlong to all forms of motorized vehicle use.
- Exceptions may be allowed in WSAs based on applying BLM's Interim Management Policy (BLM Revised, July 12, 1983).

Area A (Livestock Management)

- Allow motorized, off-road vehicle (ORV) use.

- Provide administrative access to public land to enhance management of the range resource.
- Provide maintenance of roads in the BLM transportation plan to minimum standards for user safety.

Area B (Wildlife)

- Provide administrative access to public land for managing wildlife habitat.
- Provide very little or no maintenance to roads.
- Close and reclaim any abandoned or poorly designed roads.
- Acquire public access where needed to allow wildlife-related recreation (including hunting and fishing in underutilized areas).
- Acquire administrative access to Roc Creek.

Area C (Recreation)

- Provide public access to the public lands to enhance the recreation values.
- Provide a moderate level of maintenance on primary roads to promote user safety.
- Minimal levels of maintenance will be provided on secondary roads.
- Acquire and/or improve access to Beaver Creek for recreational pursuits.

Area D (Wilderness)

- Allow no motorized ORV use.

Area E (Mineral Development)

- Provide or maintain public access minimizing impacts to mineral development.
- Work with mineral developers to assure roads are maintained for public safety.

Area F (Cultural Resources)

- Provide administrative access to public land to enhance the management of the cultural resource.
- Provide public access to some of the cultural areas where public use will be managed.
- Provide maintenance of roads to a level of minimum standards for user safety.
- Close roads when necessary to limit access to protect cultural values.

Area G (Natural Resource Management)

- Provide administrative and public access, where possible.
- Maintain roads to a level of minimum standards for public safety.

Area H (Public Land Disposal)

- Acquire no access to these tracts unless an exception can be documented.
- Provide very little or no maintenance of roads.
- Reserve access rights across parcels when needed for public or resource management.

Area J (Forestry)

- Provide administrative and, where needed, public access to public land to enhance forest management.
- Provide necessary maintenance of roads to ensure timber management practices can occur as planned.

Area K (Soil and Water)

- Provide administrative access to public land to enhance management of the soil and water resource.
- Provide maintenance of roads or trails to reduce erosion.

Area L (ACECs)

- Provide administrative and public access where needed for ACEC management.
- Maintenance will be provided on only those roads needed for management purposes.

Note:

Due to the number and diversity of communities/counties within the planning area, travel management decisions are highly controversial. Few comprehensive travel management plans have been completed for the UFO, leaving many areas under-implemented from prior RMP decisions. These factors alone suggest that the UFO will need to establish Travel Management Areas and continue travel management plans area by area instead of designating routes within the RMP revision.

3.2.6 ☀ Utility Corridors and Communications Sites

MANAGEMENT OBJECTIVES

UNCOMPAHGRE BASIN RMP

Utility Corridors:

- Public lands will be open to development of major utility facilities. Stipulations and mitigating measures will be developed on a case-by-case basis.

Communications Sites:

Objectives for managing communications sites are not identified in this plan.

UNCOMPAHGRE BASIN RMP AMENDMENTS

Utility Corridors:

- The majority of public lands will be open to development of major utility facilities. Stipulations and mitigating measures will be developed on a case-by-case basis. The West-Wide Energy Corridor Programmatic EIS amended the plan to include the newly designated corridors.

SAN JUAN/SAN MIGUEL RMP

Utility Corridors:

- Public land is generally made available for utility corridor development; applicants will be encouraged to locate new facilities within existing corridors to the extent possible.
- Deviations from existing corridors may be permitted based on type and need of proposed facility, conflicts with other resources including potential values and uses, and availability of alternate routes and/or mitigation measures.
- Public land within areas identified as unsuitable will not be available for corridors.

Communications Sites:

Objectives for managing communications sites are not identified in this plan.

SAN JUAN/SAN MIGUEL RMP AMENDMENTS

Utility Corridors:

- The ACEC is closed to major utility corridors, except as described below. The SRMA would be open to utility corridors as described below. The West-Wide Energy Corridor Programmatic EIS amended the plan to include the newly designated corridors.

MANAGEMENT DECISIONS

UNCOMPAHGRE BASIN RMP

Management Units 1, 3, 8, 16

- Open to development of major utility corridors with minimal stipulations.

Management Unit 2

- Open to major utility development with possible restrictions, on construction activities: from December 1 through April 30 within crucial deer and elk winter range; to protect crucial deer and elk winter range from disturbance,

Management Unit 5

- Open to major utility development with possible restrictions on surface disturbing activities from March 1 through May 31 to protect wet saline soils.

Management Unit 7

- Corridors one-quarter mile wide and located on each side of Colorado Highway 133 will be open to development of major utility facilities. The remainder of the area would be closed to major utility facilities except for those needed for coal development.

Management Unit 9

- Open to major utility development, except no surface disturbing activities which will have long-term adverse effects will be permitted; to protect riparian vegetation.

Management Unit 10

- Open to major utility development, except no surface disturbing activities will be permitted from May 1 through June 15 to protect elk calving.

Management Unit 13

- Open to major utility development, except pipelines and any surface disturbance which would affect threatened or endangered plant species or their potential habitat.

Management Unit 14

- The management unit will be closed to development of major utility facilities.

Management Unit 15

- The management unit will be closed to development of major utilities to prevent accidental destruction of listed species and unique plant associations, and/or to maintain its scenic qualities.

SAN JUAN/SAN MIGUEL RMP

Utility Corridors

Areas A, E, G, H, I, and K

- Major utility corridors would be allowed with protective stipulations to prevent or limit impacts to mineral development, water and soil, natural resources values or range management.

Area B (Wildlife)

- Major utility corridors would generally be excluded except on a case-by-case basis to protect wildlife.

Area C (Recreation)

- Major utility corridors would not be allowed. However, to protect recreation resources, allow major corridors to cross the Dolores River between Disappointment Creek and the Big Gypsum Valley Bridge if needed.

Area D (Wilderness)

- Allow no utility corridors and no new facilities except those authorized through Wilderness Act provisions.

Area F (Cultural Resources)

- Major utility corridors (powerlines of 115 kV and above and pipelines 6" in diameter and above) would generally not be allowed to protect the cultural resources natural setting.

Area J (Forestry)

- Major utility corridors would generally not be allowed in commercial forests but would be allowed in woodland; exceptions could occur with specific analysis.

Area L (ACECs)

- Major utility corridors will be considered on a case-by-case basis.

SAN JUAN/SAN MIGUEL RMP AMENDMENTS

Utility Corridors

ACECs

- Major utility corridors would not be allowed, with the exception of a major overhead electric transmission line corridor across Beaver Creek and Saltado Creek. The selected corridor would allow only one overhead transmission line which must be located within one quarter-mile from the existing 69 kV line and one half-mile from the Beef Trail Road crossing Beaver Creek. The line must span the

riparian areas and visual impacts must be minimized. Stipulations will be developed on a specific project basis to protect natural and scenic values.

SRMAs

- The area would be open to major utility corridors subject to visual impact mitigation. The area downstream of Horsefly Creek would be open to major utilities until construction and maintenance impacts to the riparian zone reach 5% of the total riparian acreage.

3.2.7 Land Tenure

MANAGEMENT OBJECTIVES

UNCOMPAHGRE BASIN RMP

- A total of 143 tracts of public land totaling 11,026 acres have been identified for further consideration for disposal through sale or exchange under the RMP.

UNCOMPAHGRE BASIN RMP AMENDMENTS

- A total of 128 tracts of public land totaling 10,353 acres have been identified for consideration for disposal through sale or exchange under the RMP.

SAN JUAN/SAN MIGUEL RMP

- Public land will be made available for land sales or exchanges. Disposal may be accomplished by sale, exchange, State Indemnity Section or title transfer pursuant to any applicable federal authority. Transfers to other public agencies will be considered where management efficiency would result.
- The required criteria for land ownership adjustments will be considered in environmental assessments prepared for specific adjustment proposals.

SAN JUAN/SAN MIGUEL RMP AMENDMENTS

- Acquisition of lands will be considered when opportunities for riparian and recreation management will be enhanced.
- Land would be considered for disposal on a case-by-case basis. The intent is to retain lands in public ownership; however, disposal that would enhance management goals and serve public interest may be considered. Disposal could occur through exchange, boundary adjustment and the Recreation and Public Purposes Act.

MANAGEMENT DECISIONS

UNCOMPAHGRE BASIN RMP

Common to all Management Units

- Prior to disposal, resources within identified tracts will be managed according to the management prescription for the management unit in which they are located.
- Minimal funds, if any, will be spent on improvements on lands identified for disposal.
- When land is disposed, federal mineral estate will be conveyed with surface estate where it would be in the public interest.

Management Unit 1

- Private lands, if available, may be acquired if they would improve livestock management.

Management Unit 2

- Private lands, if available, may be acquired to increase crucial deer and elk winter range.

Management Unit 7

- Private lands, if available, may be acquired to improve riparian management or to increase crucial deer and elk winter range.

Management Unit 9

- Private lands, if available, may be acquired to improve riparian management.

Management Unit 10

- Private lands, if available, may be acquired to expand elk calving areas and to improve extensive recreational opportunities.

SAN JUAN/SAN MIGUEL RMP

- Dispose of approximately 21,700 acres of public lands throughout the planning area through sales, exchanges or any other title transfer means.

Implementation Priorities

1. Take action on the exchange and sale proposals currently on file.
2. Dispose of the lands identified as suitable for transfer.

Areas A, B, C, E, F, G, H, I, J, K, and L

- Allow for disposal of parcels of public land that are not significant or needed for cultural values, mineral development, water and soil, livestock, wildlife, wild horses, forestry, natural resources or recreation management.

- Acquire or exchange land and subsurface mineral estate when mineral development, cultural resources, water and soil, livestock, wildlife, forestry, natural resources, ACECs or recreation management opportunities will be enhanced.

Area B (Wildlife)

- Acquire fishing easements on acreages associated with priority streams.
- Pursue exchange of public lands to enhance wildlife values in Dry Creek Basin with primary consideration given to CDOW; however, other opportunities to enhance wildlife values will not be dismissed.

Area D (Wilderness)

- Acquire or exchange private lands and subsurface mineral estates within wilderness areas that will enhance wilderness values or manageability.
- Acquire easements between Bedrock and the northern boundary of the Dolores River Canyon WSA.
- Coordinate with the Dolores Downstream Site Selection Report, which recommended acquisition and development of a boating access site near Bedrock Bridge.

Area L (ACECs)

- Disposal of isolated tracts not needed for future public land management and that do not contain important resource values may be accomplished after site-specific reviews on a case-by-case basis.

The current trend nationwide within the BLM is to accomplish land tenure adjustments through land exchanges. Land sales are generally avoided whenever possible, with the exception of parcels located within urban interface areas. It is therefore unlikely that public lands would be disposed of through sales in the near future.

3.2.8 ☀ Land Use Authorizations

MANAGEMENT OBJECTIVES

UNCOMPAHGRE BASIN RMP

Objectives for managing land use authorizations are not identified in this plan.

SAN JUAN/SAN MIGUEL RMP

The lands program is primarily concerned with the authorization of uses on public lands by others; including private parties, state, county, and other federal agencies. The objective is to ensure the compatibility of various multiple uses with the environmental protection of natural resources.

- The BLM will make every reasonable effort to authorize primary access to private landowners via Rights-of-Way (ROWs), when such access will not cause significant adverse impacts to other resources. While county road standards will be required when environmental impacts can in no other way be mitigated, the BLM will not grant additional ROWs when reasonable access already exists (unless there is a compelling public need).

SAN JUAN/SAN MIGUEL RMP AMENDMENTS

- All land use authorizations would be designed to mitigate riparian system and recreational impacts.

MANAGEMENT DECISIONS

UNCOMPAHGRE BASIN RMP AND AMENDMENTS

Decisions for managing land use authorizations are not identified in this plan.

SAN JUAN/SAN MIGUEL RMP

Area A (Livestock Management)

- Allow other land actions when there is a clear and significant public need; when they will result in minimal adverse impacts or when they will be beneficial to grazing management.

Area B (Wildlife)

- Allow other land actions when there is a clear and significant public need; when they will result in minimal adverse impacts or when they will be beneficial to wildlife.

Area C (Recreation)

- Allow other land actions when there is a clear and significant public need. Other land actions will be allowed if they are designed to meet the established recreation management objectives.

Area D (Wilderness)

- Allow no new facilities except those authorized through Wilderness Act provisions. Remove any existing, nonconforming structures unless they are determined to be of cultural or historic value or necessary for administering the area.

Area E (Mineral Development)

- Allow other land actions as long as they don't limit mineral development, or when there is a clear and significant public need.

Area F (Cultural Resources)

- Allow other land actions when there is a clear and significant public need; when they will result in minimal adverse impacts or when they will be beneficial to cultural resource management.

Area G (Natural Resource Management)

- Allow other land actions to occur with appropriate stipulations, or when there is a clear and significant public need.

Area H (Public Land Disposal)

- Allow other land actions to proceed, especially when there is a clear and significant public need.

Area J (Forestry)

- Allow other land actions when they will result in minimal adverse impacts, when they will be beneficial to forest management, or when there is a clear and significant public need.

Area K (Soil and Water)

- Allow other land actions when they will result in minimal adverse impacts, when they will be beneficial to soil and water management, or when there is a clear and significant public need.

Area L (ACECs)

- Other land actions will be allowed only if they are designed to meet the ACEC management objective or when there is a clear and significant public need.

SAN JUAN/SAN MIGUEL RMP AMENDMENTS

ACECs

- Upgrades to existing major electric transmission lines would be authorized within the San Miguel Canyon.
- Authorizations, such as ROWs, would not be permitted in relic riparian communities; elsewhere such actions would be restricted to only those with an overriding public need which will not create long-term visual impacts or damage to the riparian system.

3.2.9 Withdrawals

MANAGEMENT OBJECTIVES

UNCOMPAHGRE BASIN RMP

Objectives for managing withdrawals are not identified in this plan.

SAN JUAN/SAN MIGUEL RMP

- New withdrawals will be processed on a case-by-case basis using current guidance to determine if a formal withdrawal is needed.
- By 1991, a review of withdrawals by other agencies will be completed to determine if they should be continued, modified or revoked. Upon modification or revocation, part or all of the withdrawn land will revert to BLM management.
- Minimize public land withdrawn from mining and mineral leasing.
- Where applicable, replace existing withdrawals with ROWs, leases, permits or cooperative agreements.

MANAGEMENT DECISIONS

UNCOMPAHGRE BASIN RMP

Power site Withdrawals

- Existing power site withdrawals will be maintained pending determination of potential. These lands will not be subject to further consideration for disposal. No significant long-term investments will be made on these lands unless the investment could be recovered prior to development.

Management Unit 16

- The BOR withdrawals on Fruitland Mesa and along the Gunnison River downstream of Delta will be recommended for revocation to allow for mineral exploration and development, facilitate resource management, permit long-term land use planning and allow for disposal of 806 acres of public land on Fruitland Mesa.
- Withdrawals on all other lands identified for disposal will be recommended for revocation. Portions of withdrawals which will be affected are those associated with 108 acres of the Paonia Project, 37 acres of the Gunnison/Arkansas Project, 72

acres of the Uncompahgre Valley Project and 25 acres along the East Canal. Federal mineral estate will be open to entry and location after the withdrawal is revoked.

SAN JUAN/SAN MIGUEL RMP

Areas A, B, C, E, F, G, I, J, and K

- Allow other land actions when there is a clear and significant public need, when they will result in minimal adverse impacts or when they will be beneficial to (depending on the emphasis area) mineral development, cultural resources, natural resource values, water and soil, grazing, forestry, wildlife, or recreation management.

Area D (Wilderness)

- Do not renew Federal Energy Regulatory Commission's (FERC) power site classifications on the Dolores River Canyon WSA when reviewed.

Areas L (ACECs)

- Other land actions will be allowed only if they are designed to meet the ACEC management objective or when there is a clear and significant public need.

3.3.1 ☀ Areas of Critical Environmental Concern

TABLE 3.5 - MANAGEMENT OBJECTIVES AND DECISIONS FOR ACECS

NAME AND DESIGNATION	MANAGEMENT OBJECTIVES AND DECISIONS
Fairview Research Natural Area/ACEC	**Management Objectives** • Plant monitoring studies will be developed in cooperation with the Colorado Natural Areas Program and actions designed to improve habitat conditions initiated. **Management Decisions** • Oil and gas leases will have a no-surface-occupancy stipulation, the area will be withdrawn from entry and location for locatable minerals and all surface-disturbing activities will be restricted to protect and enhance endangered species habitats.
Needle Rock Outstanding Natural Area/ACEC	**Management Objectives** • The area will be managed to protect the scientific and scenic qualities of this site. **Management Decisions** • Oil and gas leases will contain a no-surface-occupancy stipulation, the area will remain withdrawn from entry and location for locatable minerals, and the area will be managed under VRM Class I guidelines.
Adobe Badlands Outstanding Natural Area/ACEC	**Management Objectives** • The area will be managed to protect its unique scenic qualities, improve threatened and endangered species habitat, and reduce active erosion. **Management Decisions** • Oil and gas leases will contain a no-surface-occupancy stipulation; forage utilization will be limited if necessary to reduce erosion rates; and the area will be protected from surface-disturbing activities which would degrade scenic qualities or accelerate erosion.

NAME AND DESIGNATION	MANAGEMENT OBJECTIVES AND DECISIONS
San Miguel ACEC/SRMA	**Management Objectives** • Protection of the unique riparian resources, protection of scenic values, and recreation management **Management Decisions** • Management decisions are located in Appendix A of the San Juan/San Miguel RMP Amendment for the San Miguel River ACEC and SRMA

3.3.2 ☀ Scenic Byways

Objectives and decisions for managing scenic byways are not identified in either plan.

3.3.3 Wild and Scenic Rivers

Objectives and decisions for managing wild and scenic rivers are not identified in either plan.

A Wild and Scenic River (WSR) study was not completed during the Uncompahgre Basin RMP or the SanJuan/San Miguel RMP. A Wild and Scenic River Eligibility report, and later a Suitability report, is being completed as part of the Uncompahgre RMP revision as per the Land Use Planning Handbook, Appendix C. The BLM will assess all eligible river and stream segments to determine which are eligible.

3.3.4 ☀ Wilderness Areas and Wilderness Study Areas

MANAGEMENT OBJECTIVES

Objectives for managing wilderness and wilderness study areas are not identified in either plan, and the UFO does not manage any congressionally designated wilderness areas.

MANAGEMENT DECISIONS

UNCOMPAHGRE BASIN RMP

- Recommended 20,827 acres (10,402 in Camel Back WSA and 10,425 in the Adobe Badlands WSA) as preliminarily nonsuitable for wilderness designation under Section 603 of FLPMA. These areas will be managed under Interim Management Policy and Guidelines for Lands Under Wilderness Review, pending congressional action.

- Manage the Camelback area with emphasis on riparian/aquatic system management, wildlife habitat, and livestock grazing. Close the entire area to ORV use. Manage 6,783 acres of the Adobe Badlands WSA as an outstanding natural area/ACEC to protect the scenic qualities and T&E plants, and to reduce active erosion. Manage the remainder of the Adobe Badlands WSA (3,642 acres) as wildlife habitat.

Management Unit 6

- Recommended as suitable for wilderness designation to protect its wilderness characteristics.

SAN JUAN/SAN MIGUEL RMP

- Recommended 28,539 acres (13,354 acres in UFO planning area) in the Dolores River Canyon WSA as preliminarily suitable for wilderness designation (under Section 603 of FLPMA), pending mineral survey.
- Recommended 74,844 acres (only the first two are in the planning area) as preliminarily non-suitable for wilderness designation under Section 603 of FLPMA: 913 in Dolores River Canyon; 7,908 in Tabeguache Creek; 9,040 in Cahone Canyon; 12,742 in Cross Canyon; 19,562 in McKenna Peak; 7,129 in Menefee Mountain; 11,287 in Squaw/Papoose Canyon; and 6,303 in Weber Mountain. These areas will be managed under Interim Management Policy and Guidelines for Lands Under Wilderness Review, pending congressional action.

SAN JUAN/SAN MIGUEL RMP AMENDMENT

The Colorado Wilderness Act (H.R. 631)

- The Tabeguache Area (17,240 acres; 7,748 acres of BLM Tabeguache WSA) was designated by Congress in 1993 as the "Tabeguache Area." The Tabeguache Area must be managed by the BLM and USFS so as to maintain the area's "presently existing wilderness character and potential for inclusion in the National Wilderness Preservation System."

GRAND JUNCTION RESOURCE AREA RMP (*REVISED JANUARY 1987*)

- Recommended 18,835 acres (1,803 acres in the Uncompahgre planning area) in Sewemup Mesa WSA as preliminarily suitable for wilderness designation (under Section 603 of FLPMA), pending mineral survey.
- Recommended 305 acres in Sewemup Mesa WSA as preliminarily non-suitable for wilderness designation under Section 603 of FLPMA.
- These areas will be managed under Interim Management Policy and Guidelines for Lands Under Wilderness Review, pending congressional action.

3.3.5 ☀ Special Recreation Management Areas

Special Recreation Management Areas are addressed in Section 3.2.4 on Recreation.

3.4.1 ☀ Tribal Interests

Objectives and decisions for managing tribal interests are not identified in either plan.

Current management practices follow applicable laws and guidelines regarding Native American consultation and religious concerns.

To date, UFO management practices have treated Tribal Interests as a subset of Cultural Resources, and management decisions are made as part of the Section 106 process. See Section 3.1.10 on Cultural and Heritage Resources for additional information.

3.4.2 Public Safety

Objectives and decisions for managing public safety are not identified in either plan.

3.4.3 Social and Economic Conditions

The Social and Economic Conditions Section will be completed following release of the baseline socio-economic report.

CHAPTER FOUR Management Opportunities

Chapter Four provides an analysis of the ability of current management direction to achieve desired resource conditions and address resource demands. BLM resource specialists have identified potential management opportunities, which will serve as a starting point for formulating alternatives for the RMP.

The process of identifying management opportunities involves considering alternatives to and improvements in existing management in response to changing resource conditions and uses, new information, and deficiencies in current practices, as well as from issues raised and suggestions gathered through internal and external scoping.

THIS CHAPTER INCLUDES THE FOLLOWING SECTIONS:

- **ABILITY OF CURRENT MANAGEMENT DIRECTION TO ACHIEVE DESIRED FUTURE CONDITIONS AND ADDRESS RESOURCE DEMANDS**
- **POTENTIAL NEW DECISIONS FOR THE RMP REVISION**
- **AREAS OF RELATIVE ECOLOGICAL IMPORTANCE TO GUIDE LAND USES AND MANAGEMENT (IF APPLICABLE)**

4.1.1 Air Quality

A. ABILITY OF CURRENT MANAGEMENT DIRECTION TO ACHIEVE DESIRED FUTURE CONDITIONS AND ADDRESS RESOURCE DEMANDS

CURRENT PLANNING DECISION	IS MANAGEMENT RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
UNCOMPAHGRE BASIN RMP		
• Present air quality standards will be adhered to throughout the entire planning area. This is required by law. • Assist other agencies in obtaining baseline air quality data. • Incorporate mitigation into any project proposal which would degrade air quality.	**Yes and No:** Air Resource Management conditions are currently appropriate for rural conditions, and are anticipated to remain appropriate into the future. Without significant increases of industrial or minerals development, future Air Resource Management conditions are anticipated to remain appropriate.	• BLM activities (either directly or through use authorizations) will comply with all applicable local, state, and federal air quality laws, regulations, and standards. • The BLM will incorporate appropriate mitigation measures into all project proposals predicted to cause significant adverse air quality impacts. • The BLM will assist in obtaining air quality data.

B. POTENTIAL NEW DECISIONS FOR THE RMP REVISION

Change the decision to read as written above under *Options for Change*.

AIR QUALITY

The BLM must analyze the potential effects of BLM and BLM-authorized activities on air quality as part of the planning, environmental review, and decision-making processes.

In addition, the BLM will manage public lands in a manner that minimizes (to the extent practicable) air quality impacts from criteria hazardous air pollutants, as well as other physical or chemical contaminants with the potential to significantly harm air quality-related values (including visibility, atmospheric deposition, and impacts to flora and fauna). Site-specific requirements may be imposed where significant air quality impacts would otherwise occur.

Specific BLM requirements include:

- All BLM actions (either directly or through use authorizations) must comply with applicable air quality laws, statutes, regulations, standards, and implementation plans; and
- Within EPA-designated nonattainment and maintenance areas, the BLM will demonstrate that its actions (either directly or through use authorizations) will conform with applicable air quality requirements, before such actions are initiated.
- The BLM will apply the principle of multiple use, recognizing the need to protect air quality and atmospheric values.
- BLM activities (either directly or through use authorizations) will comply with all applicable local, state, and federal air quality laws, regulations, and standards. The BLM will incorporate appropriate mitigation measures into all project proposals predicted to cause significant adverse air quality impacts. The BLM will assist in obtaining air quality data.

NOISE

Although the BLM currently has no formal goals or objectives regarding noise, it is the general practice that noise levels generated by direct or authorized activities will not significantly inhibit the use or enjoyment of the Public Lands by authorized users or natural resource uses. Site-specific requirements may be imposed where significant noise impacts (such as to residences, recreation areas, and wildlife habitat) would otherwise occur.

MANAGEMENT ISSUES NOT ADEQUATELY ADDRESSED

Anticipated Future Conditions

Future climate and air quality conditions could be affected by regional climate changes, as well as regional transport of air pollutants. Future air quality conditions could also be affected by relatively small emission sources operating within the planning area (such as wildfire management, oil and gas development, and recreational activities), as well as continued increases in regional population growth and regional industrial activity. Discussions of these future conditions are provided in the following sections.

Natural Factors Causing Change in the Resource and Resource Use

If repeated drought (which has occurred in the past) continues, then annual precipitation would continue to be well below normal, affecting vegetation growth, water flows, and the likely increase in windblown dust and wildfires. Wildfires resulting from lighting strikes will continue to impact air quality, and could affect sensitive receptors. It is unlikely natural sources of noise would result in any significant noise impacts.

Emissions from Recreational Activity

The BLM has authority over the locations where motorized recreational activity is allowed within the Planning Area. Tailpipe and fugitive dust emissions from passenger vehicles, motorcycles, and OHVs can affect air quality in the immediate vicinity of the roads, trails, and campgrounds where those vehicles operate. It is anticipated that localized air quality impacts (such as in and around camping areas) caused by individual vehicle exhaust will improve due to reduced emissions through improved technology (such as the EPA's new emissions standards for off-highway motorcycles, ATVs, and snowmobiles), although these improvements could be offset due to increased numbers of vehicles. However, increased fugitive dust from vehicle use on unpaved roads is likely to increase with increasing total vehicle numbers. Vehicular traffic, recreational use of motorized vehicles, and other vehicle use will continue to generate noise within the planning area.

Emissions from Mineral Exploration and Extraction

Solid minerals activities (such as sand and gravel operations) and liquid mineral exploration, extraction, processing, and transport have traditionally occurred on a limited basis within the planning area, and the BLM has issued leases for future liquid mineral resource development. Activities may include geophysical exploration, the drilling of test wells, and construction of well pads and access roads, and the drilling, completion, testing, and operating. Typical air pollutant emissions include vehicle and equipment exhaust, fugitive dust from road use and exposed soils, testing venting and/or flaring, small wellhead engines, heaters, separators, and tanks. Most noise impacts are due to intermittent vehicle use and well-site equipment operations.

Prevention of Significant Deterioration

In order to prevent areas from deteriorating up to the level of the NAAQS, the Clean Air Act lays out provisions for the Prevention of Significant Deterioration (PSD). A classification system was established that identifies the amount of additional air quality degradation (increments) allowed above legally established baseline levels. PSD Class I areas have the greatest limitations, with little additional degradation allowed.

Mandatory federal PSD Class I areas (primarily consisting of large national parks and wilderness areas) were identified when the Clean Air Act was August 7, 1977 and cannot be redesignated. Remaining areas in the nation (outside nonattainment and maintenance areas) are designated as PSD Class II areas, where moderate deterioration and controlled growth are allowed. The Clean Air Act also established procedures by which PSD Class II areas could be redesignated as Class I, or as Class III (where a greater amount of deterioration would be allowed). To date, very few PSD Class II tribal lands have been redesignated as Class I, and no areas have been redesignated as Class III.

In addition to establishing PSD increments, the U.S. Congress established the National Visibility Goal of "the prevention of any future, and the remedying of any existing

impairment of visibility, in mandatory class I areas which impairment results from manmade air pollution." PSD Class I areas in and around the planning area include:

- Black Canyon of the Gunnison Wilderness Area
- Maroon Bells - Snowmass Wilderness Area
- West Elk Wilderness Area
- La Garita Wilderness Area
- Weminuche Wilderness Area
- Mesa Verde National Park
- Arches National Park
- Canyonlands National Park

Under Colorado law, the following federal PSD Class II areas (based on their boundaries as of August 7, 1977) in and around the planning area are subject to the same annual, 24-hour, and three-hour sulfur dioxide increments as those for the federal PSD Class I areas listed above:

- Black Canyon of the Gunnison National Monument (excluding the PSD Class I Wilderness Area)
- Gunnison Gorge Recreation Area (boundary as of October 27, 1977)
- Colorado National Monument
- Uncompahgre Mountain Primitive Area
- Wilson Mountain Primitive Area

As a federal land management agency, the BLM has an "affirmative responsibility to protect the air quality and related values (including visibility)" of PSD Class I areas that it administers, and to consider whether a proposed major emitting facility would have an adverse impact on those values.

Certain uses of BLM-administered public lands may require a state air quality permit. Compliance with such permits should be a term and condition of BLM authorization, including the actions necessary to determine compliance.

BLM Air Resource Management Manual

BLM Air Resource Management Manual MS-7300 sets forth the authority, policy, objectives, program structure, roles, and responsibilities for the BLM's Air Resource Management Program (including climate, climate change, air quality, visibility, smoke management, and noise). The manual addresses multiple use management responsibilities under FLPMA, and responsibilities under other authorities, including the Clean Air Act, that impact BLM management of air resources on public lands. The manual also describes the roles of the EPA, state, and local air quality regulatory agencies in addressing air resources.

The manual describes the legal authorities, management, and office responsibilities, program structures and functions, references, and a glossary of terms. Specific policies include:

General

The BLM recognizes air (air quality, climate, and climate change) as a valuable natural and public resource that needs to be protected through prudent management and appropriate mitigation. BLM activities, programs, and projects will be managed at an appropriate scale, consistent with BLM planning objectives, and in compliance with applicable laws. All BLM activities, programs, and projects will comply with applicable provisions of the Clean Air Act, FLPMA, NEPA, and other applicable air regulations, implementation plans, laws, standards, and directives.

The BLM will consult and coordinate with applicable regulatory agencies on the management of existing and future PSD increment consumption to provide for the protection of air quality, while accomplishing the BLM core mission. The BLM will coordinate, as appropriate, with federal, tribal, state, and local agencies responsible for or affected by air resource management. Coordination will occur on all appropriate resource management plans, NEPA documents, proposed rule changes affecting air quality, and revisions to state implementation plans. The BLM will develop, maintain, and/or acquire the knowledge and technical skills necessary to accomplish the objectives and adhere to the policies of the air resource management program.

AIR QUALITY

The BLM will review its use authorizations requiring air quality permits on a periodic basis to confirm that the authorized parties possess the necessary permits and will take appropriate actions to enforce BLM permit conditions. If BLM has information pertaining to violation of Federal or state air quality laws, it will provide that information to the appropriate enforcement agency. BLM activities, projects, and programs within designated nonattainment or maintenance areas must comply with applicable general and transportation conformity regulations.

Consistent with the BLM's multiple-use mandate, BLM actions and use authorizations will comply with appropriate direction in the Clean Air Act "to preserve, protect, and enhance the air quality in national parks, national wilderness areas, national monuments, national seashores, and other areas of special national or regional natural, recreational, scenic, or historic value." The BLM will consider the potential effects of BLM projects, programs, activities, and BLM-authorized activities on air quality at both the planning and the project level. Where appropriate and geographically applicable, managers should use other Federal and State agency air quality data to aid in the analysis of BLM-authorized activities. Visibility is an air resource value that may be affected by air quality. Where BLM activities, programs, and projects or BLM-authorized activities have the potential to impact visibility, the BLM will evaluate the extent of the potential impact and consider mitigation.

NOISE

When BLM programs, projects, and/or use authorizations have the potential to affect existing noise resources (including public health and safety, wildlife, cultural heritage, wilderness, wildland/urban interface areas, and other special management areas), the BLM will consider noise and its potential impacts on the public and the environment, as well as any appropriate mitigation measures, during the planning and authorization review process. This is especially important when land use proposals include high volumes of motorized vehicles or mechanized equipment. However, the BLM Safety and Occupational Health Program is responsible for assessing exposure to potentially high noise-producing work operations and activities (BLM Handbook H-1112-2).

SMOKE MANAGEMENT

BLM smoke management and planning activities will comply with applicable federal, state, and local smoke management programs, regulations and standards, and the BLM will conduct smoke management and planning activities in cooperation with regulatory agencies, other federal agencies, and Tribal governments to collectively reduce public health and welfare impacts of smoke. The BLM will plan the application of prescribed fire and wildland fire use in advance, including preparing prescribed fire burn plans and obtaining necessary air quality permits, consistent with applicable regulations and prescribed fire planning and implementation procedures guidance. The BLM will assist air quality regulatory agencies in the siting and operation of emergency episode air quality monitoring stations when necessary to assess smoke impacts from prescribed fire, wildland fire use, or wildfire.

EPA Interim Air Quality Policy on Wildland and Prescribed Fires

On May 15, 1998, the EPA established an Interim Air Quality Policy on Wildland and Prescribed Fires, which outlines how to achieve national clean air goals while enhancing the quality of wildland ecosystems by increasing the use of fires to achieve resource benefits. The EPA especially urged state air quality regulatory agencies to develop and implement at least basic smoke management programs, establishing procedures and requirements for minimizing emissions and managing smoke dispersion. In addition, the EPA intends to exercise its discretion not to redesignate an area as nonattainment if the evidence is convincing that fires managed for resource benefits caused or significantly contributed to violations of particulate matter standards.

NOISE

Unlike climate and air quality, there are no national programs designed to address noise. Most noise monitoring is conducted on an ad hoc, site-specific basis, without long-term data. Key areas of interest are aircraft and highway noise in residential areas and parklands. Additional information is available at Natural Sounds

(<http://www.nature.nps.gov/naturalsounds/>) and the non-profit Noise Pollution Clearinghouse (<http://www.nonoise.org/>).

Anticipated Foreseeable Condition of the Resource/Use

It is not anticipated that air pollution emissions, or the noise generated from the combination of natural and management-related factors will increase significantly over past levels. No foreseeable significant change in the level of traffic for recreational use or mineral exploration or extraction is anticipated.

Regional Conditions

Emissions from existing recreational and mineral developments operating within the planning area contribute a relatively small fraction of the total regional emissions that affect air quality. Therefore, BLM actions are unlikely to significantly affect the overall regional air quality or noise conditions. However, there are indications that regional population growth and expanded industrial operations could degrade regional air quality.

C. AREAS OF RELATIVE ECOLOGICAL IMPORTANCE TO GUIDE LAND USES AND MANAGEMENT

None identified.

4.1.2 Geology

A. ABILITY OF CURRENT MANAGEMENT DIRECTION TO ACHIEVE DESIRED FUTURE CONDITIONS AND ADDRESS RESOURCE DEMANDS

The existing RMPs do not discuss Geologic resources.

B. POTENTIAL NEW DECISIONS FOR THE RMP REVISION

Geologic resources should continue to be managed according to national BLM policy.

C. AREAS OF RELATIVE ECOLOGICAL IMPORTANCE TO GUIDE LAND USES AND MANAGEMENT

None identified.

4.1.3/1.4 Water and Soil Resources

A. ABILITY OF CURRENT MANAGEMENT DIRECTION TO ACHIEVE DESIRED FUTURE CONDITIONS AND ADDRESS RESOURCE DEMANDS

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
Uncompahgre Basin RMP • Water quality and erosion conditions will continue to be monitored throughout the planning area to establish baseline conditions, identify problem areas, and to measure changes due to management actions. **San Juan/San Miguel RMP** • Develop watershed management plans for all accelerated erosion, salinity, riparian, and other water quality improvement areas detailing specific management goals and actions. • Manage selected acres in the following watersheds to reduce erosion and sediment yield: the Paradox Valley and Dry Creek Basin.	**Yes:** The LHA process includes assessing and monitoring water quality and soil erosion potential, identifying problem areas, and recommending corrective actions. Public land health Standards #1 and 5 requires BLM to manage for healthy soils and water quality that meets state water standards.	• Continue with effectiveness monitoring of LHA areas and adjust management actions to achieve desired conditions.
UNCOMPAHGRE BASIN RMP		
Management Units 1, 2, 3, 7, 8, 9, 10, 13, 14, and 15 • Are available for erosion and salinity control objectives, and projects which do not conflict with the primary objectives of each of these management units. **Management Unit 5** Totals 24,177 acres and contains Mancos shale hills known as the Adobes. • The unit will be managed to reduce salinity loads in the Upper Colorado River Basin. In-channel structures and land treatment projects designed to reduce runoff, erosion, and sedimentation will be developed, and surface protection measures will be implemented.	**No**	• Managing the soil for adequate watershed cover and a healthy soil surface is more effective at controlling salinity and selenium than are structural projects. These conditions are assessed with the LHA process and follow-up effectiveness monitoring.

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
• The unit will be managed to reduce salinity loads in the Upper Colorado River Basin. Forage utilization will be managed to achieve the basal ground cover objectives identified in Table 3 for the RMP.	**Yes:** Although the target basal cover objectives were never incorporated in to activity level plans, the recently completed LHA identified areas where basal cover is below potential. Terms and conditions incorporated in to grazing permits should allow for improved cover conditions.	• Continue with effectiveness monitoring of LHA areas and adjust management actions to achieve desired conditions. To ensure healthy soil surface conditions may evaluate in addition to basal cover, total plant cover, plant litter, and biological soil crusts.
Final Wilderness Environmental Impact Statement for Uncompahgre Basin Resource Area Adobe Badlands WSA - No Wilderness Alternative (Proposed Action) • All 10,425 acres of the Adobe Badlands WSA are being recommended as non-suitable for wilderness designation. The area would be divided in to three management units. One unit would be 1,715 acres and managed as a Salinity Control Unit (Unit C) with seasonal restrictions on ORV use, grazing, oil and gas leasing, and mineral activities to control active erosion and salinity contributions.	**Yes:** Reducing salinity yields from public lands in the UFO is still a priority issue and is directed by Congress in the Colorado River Basin Salinity Control Act. Since the preparation of the Wilderness EIS, selenium concentrations in the lower Gunnison River has become a priority issue, with land management control efforts being similar to those for salinity.	• Managing soil surface disturbing activities to maintain a healthy soil surface and adequate watershed cover has become one of the more preferred strategies for salinity and selenium reduction efforts. The recently completed LHAs and continued effectiveness monitoring is a tool to assess degree of success in salinity and selenium management efforts.
GUNNISON INTERIM TRAVEL MANAGEMENT AMENDMENT		
On March 28, 2001a travel management plan was finalized for portions of the UFO. The purpose and need for the proposed action is, in part, to maintain soil and water quality. Under Purpose and Need, the EA states that the goal of maintaining and restoring healthy ecosystems and watersheds is not being met. The EA was also intended to bring the area into compliance with Colorado Public Land Health Standards to ensure healthy upland soils, and water quality meets minimum Colorado water standards. **Management Unit 5**	**Yes:** With increased population growth and few travel restrictions on public lands, soil surface and watershed cover disturbance is increasing, resulting in soil loss and higher sediment yields. On soil derived from Mancos shale, accelerated salinity and selenium yields are water quality issues.	• Continue ongoing efforts to prepare and implement travel management plans in the UFO. • Develop BMPs from USGS research results to better manage surface disturbing uses on Mancos shale. • Close Range Photographic Monitoring is a valuable tool to assess

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
• Off-Road Vehicles: To protect high saline soils, vehicle use in the entire management unit will be limited to designated roads and trails. **Management Unit 9** • Off-Road Vehicles: A total of 680 acres in Roubideau and Potter creeks will be closed to ORV use. Vehicle use in the remainder of the management unit will be limited to designated roads and trails yearlong. **Management Unit 16** • On approximately 12,748 acres of public lands in that part of the unit located east or north of Colorado Highways 62 and 92 in Montrose, Delta, and Gunnison Counties, off route, off-highway use by wheeled, motorized or non-motorized mechanical vehicles, including mountain bikes, will be prohibited year long. Use by wheeled, motorized, or non-motorized mechanical vehicles will be permitted for camping, picnicking, and forest product gathering only within 300 feet either side of existing established routes or trails as long as that use does not result in resource damage. The use of motorized vehicles will not be permitted cross-country or off existing established routes to retrieve game. This limitation of use is to protect resources, including soils and watershed values.		effectiveness of implemented actions.
PROJECT DESIGN CRITERIA - BLM PROGRAMMATIC CONSULTATION FOR RESOURCE MANAGEMENT PLAN IMPLEMENTATION		
Uncompahgre Basin and San Juan/San Miguel Resource Areas • The BLM has defined conservation measures discussed in the Consultation Initiation letter (of February 2006) as Project Design Criteria. These measures include actions the BLM is currently implementing or can commit to implementing immediately, that will reduce or minimize adverse effects to	**Yes:** As stated in the conservation letter, many of the project design criteria involve actions to promote healthy riparian and stream channel conditions by minimized ground surface disturbance and installing features to retain pollutants such as	• In addition to the subject design criteria, additional design features and related actions are contained in the Range-Wide Conservation Agreement and Strategy for Roundtail Chub (*Gila robusta)*, Bluehead

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
threatened and endangered species resulting from BLM actions. The subsets of these actions have implications to improved soil and water resource management.	sediment. These actions help promote surface water quality that meets both Public Land Health Standard 5 and Colorado Water Quality Standards.	Sucker (*Catostomus discobolus*), and Flannelmouth Sucker (*Catostomus latipinnis*), and BLM Technical Note 423, Hydraulic Considerations for Pipelines Crossing Stream Channels. Both of these data sources recommend actions that would provide additional protection to the riverine environment.
STANDARDS FOR PUBLIC LAND HEALTH AND GUIDELINES FOR LIVESTOCK GRAZING MANAGEMENT IN COLORADO		
• **Standard 1:** Upland soils exhibit infiltration and permeability rates that are appropriate to soil type, climate, land form, and geologic processes. Adequate soil infiltration and permeability allows for the accumulation of soil moisture necessary for optimal plant growth and vigor, and minimizes surface runoff. • **Standard 5:** The water quality of all water bodies, including ground water where applicable, located on or influenced by BLM lands will achieve or exceed the Water Quality Standards established by the State of Colorado. Water Quality Standards for surface and ground waters include the designated beneficial uses, numeric criteria, narrative criteria, and antidegradation requirements set forth under State law as found in (5 CCR 1002-81, as required by Section 303(c) of the Clean Water Act.	**Yes:** Colorado Public Land Health Standards have been incorporated into BLM RMPs by amendment, where BLM policy is to strive to meet these standards across public lands.	• The ten LHAs completed for public lands across the UFO have assessed and identified areas that meet and fail to meet soil and water health standards. Causal factors and recommended actions are included in the LHAs for problem areas. • Future effectiveness monitoring will assess the degree of success of implemented actions and allow adjustments to be made to management actions to achieve desired conditions.
SAN JUAN/SAN MIGUEL RMP		
• Protect water quality in aquifers used for domestic and municipal purposes in the Tabeguache Creek watershed.	**Yes:** Source water area protection is required by the Clean Water Act.	Additional source water areas have been established and delineated, and are discussed in Chapter 2 of Water

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
		Resources, along with management implications for the BLM.
OIL AND GAS PLAN AMENDMENT		
• Prior to surface disturbance on slopes of, or greater than, 40 percent, an engineering/reclamation plan must be approved by the Authorized Officer. Such plans must demonstrate how the following will be accomplished: a) Site productivity will be restored. b) Surface runoff will be adequately controlled. c) Off-site areas will be protected from accelerated erosion such as drilling, gullying, piping, and mass wasting. d) Surface-disturbing activities will not be conducted during extended wet periods e) Construction will not be allowed when soils are frozen.	**Yes:** It is BLM policy to manage surface disturbing activities to minimize both impacts to the soil surface and the receiving hydrologic systems.	• Controlled surface use stipulations and guidelines in the BLM Gold Book provide for designing and managing oil and gas activities that minimize impacts to both the soil and water resources.
SAN MIGUEL RIVER ACEC AND SRMA AMENDMENT		
Area L1- Area of Critical Environmental Concern • Maintain soil productivity, minimize man-caused erosion, and strive to achieve adequate vegetation for watershed protection and plant vigor. Maintain or improve water quality and quantity for multiple-use resource needs. Secure sufficient water rights to provide for recreation and riparian management needs.	**Yes:** The San Miguel River is one of a few remaining free flowing, large drainages in Colorado. The San Miguel River has many high value natural resources, including, riparian, aquatic, cultural, and scenic and recreation. Managing this riverine system for healthy resource conditions, which includes adequate river flow and water quality is a high priority.	• Instream flow water rights have been secured for the San Miguel River from the South Fork to Horsefly Creek. River survey data has been collected and analyzed to make recommendations for instream flow water rights on remaining reaches of the San Miguel River. A San Miguel River Instream Flow Assessment, in draft, identifies flow needs to satisfy the various resource values associated with the river system. Channel stabilization and

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
		enhancement projects are ongoing to provide channel stability, boater safety, and fishery protection. The Federal Energy Regulatory Commission relicensing of the Ames Hydroelectric facility contains conditions that will improve aquatic and riparian habitat conditions on the San Miguel River.

B. POTENTIAL NEW SOIL AND WATER RESOURCE DECISIONS FOR THE RMP REVISION

Develop a UFO-wide drought management strategy, identifying both conditions that define drought and actions that will be implemented when drought conditions occur.

Included droughty soils in priority areas identified and discussed in the Soil Section of Chapter 2.

The potential for the occurrence of and impacts to BSC should be considered in future EAs for land management activities across the UFO. Chapter 2 of the Soils Section identifies public lands with the highest potential to support BSC. BMPs to manage for BSC health are contained in BLM Technical Reference 1760-2, Biological Crusts: Ecology and Management, 2001.

During the spring of 2009, an inventory of BSC was conducted by Jessie Salix (Vernal FO Botanist) in the Paradox Valley, at the request of the UFO hydrologist. The target area was immediately southeast of the Dolores River, within sections 22, 23, 26, and 27, T. 48 N., R 18 W., N.M.P.M. The soils in this vicinity are derived from the Paradox Formation, and are highly gypsiferous. These soils tend to support a higher than normal density and species diversity of BSC. The inventory resulted in the documentation of the occurrence of *Lecanora gypsicola* and *Gypsoplaca macrophylla,* two species of BSC that are somewhat rare and typically found only on gypsiferous soils. The identification of these species was verified by Dr. Larry St. Clair, a Lichenologist at Brigham Young University. Dr. St. Clair conveyed to Jessie Salix that he felt the lichens were in need of protection because 1) they occur exclusively on gypsiferous soils, a limited habitat that is commonly mined, and 2) Dr. St. Clair has observed these two species on less than half of the gypsiferous sites he has

inventoried. The Paradox site supporting these two BSC species should be reviewed and measures taken to provide adequate protection.

Develop and implement a strategy to inventory, assess, and routinely maintain stock ponds. In addition to restored water storage capacity, maintenance should concentrate on minimizing sources of accelerated erosion (such as spillways) and controlling invasive weed establishment. Livestock water tank permits should be secured through the Colorado Division of Water Resources for all existing and future livestock ponds.

UFO land management actions aimed at reducing salinity, selenium, and erosion yields from areas dominated by Mancos shale should include:

- developing BMPs from the BLM/USGS Mancos shale research findings that could be applied to livestock management, recreation management (e.g. location and limitations of OHV use areas), rights-of-ways, and other surface disturbing activities
- continuing the ongoing effort to locate, assess, and remove the hundreds of non-functional, eroding earthen check dams in the Mancos shale areas north of Delta
- continuing to identify and minimize potential salinity and selenium yield increases from future land uses that could occur on exchanged or disposed parcels of public land
- continuing to collaborate and coordinate salinity and selenium management activities with both the Colorado River Basin Salinity Control Forum and the Gunnison Basin Selenium Task Force.

Soil resources across the UFO would benefit from the continued preparation and implementation of travel management plans, in which some existing routes are closed and rehabilitated, trail maintenance plans and public education programs (promoting ethics of responsible land use) are implemented, and allowed uses and seasonal restrictions (when conditions are excessively wet or droughty) are enforced.

UFO staff should remain educated about and trained in current Emergency Stabilization and Rehabilitation Policy, which benefits water resources in addition to soil resources. Funding to treat wildland fire impacts will become more competitive and restrictive. In addition, reviewing and updating the Normal Year Fire Rehabilitation Plan EA every five years would improve the efficiency of the emergency stabilization and rehabilitation process at the field office level, and allow new science to be incorporated into such plans.

UFO staff should continue to perform effectiveness monitoring on areas identified in LHAs as having soil or water problems will be an important part of the "adaptive management" process to ensure that land management actions are appropriate for the site. The soil erosion monitoring process "Close Range Photographic Monitoring" developed by the BLM National Science and Technology Center with assistance from the UFO should be used in selected situations where assessing and quantifying soil disturbance from land management activities is an important issue.

An inventory and assessment of, and maintenance program for the numerous small earthen structures (including stock ponds, contour furrows, and check dams) in the UFO would benefit soil and water resources. Many of these structures are actively eroding, adding excess sediment to local surface waters. Intensive management. could improve the natural hydrologic function of small drainages that have been altered by structures. Invasive weed establishment is also an issue on many existing structures. There are several databases that identify some of the existing facilities, but additional ground inventory would be necessary for a comprehensive program. The emphasis should be on structures derived from Mancos shale, rather than on soils (which are addressed under a different recommended action).

UFO staff must remain informed regarding climate change and its potential implications to resources. Resource monitoring using well-documented standard methods will be important for long-term future resource evaluations and comparisons with present conditions.

At present, guidelines for both recreation and livestock grazing are used to develop appropriate site management activities. LHAs identify causal factors responsible for water quality not meeting Public Land health Standards 1 or 5, which include activities in addition to grazing and recreation. In the future, management guidelines or BMPs should be developed for all significant land use activities that have the potential to degrade soil surface conditions or water quality.

With increasing water demand locally, statewide, and regionally (in the Colorado River Basin), and potential climate changes, obtaining, maintaining, and protecting water rights needed to meet management objectives on public land will be increasingly important. Water rights or permits should be secured for all water sources on public lands, including livestock ponds, wells, seeps, and springs for wildlife (flora and fauna), livestock, fire suppression and recreation uses. It is essential to review the Colorado water court resume and oppose water right applications when necessary to protect water resources on public lands.

Instream flow water rights should be quantified and recommended to the Colorado Water Conservation Board as soon as possible, as increasing water demands over time will make these more difficult to obtain. Many UFO streams have instream flow protection. Pursue protection for reaches of the San Miguel that remain unprotected. The San Miguel River Instream Flow Assessment (presently in draft and awaiting flow analysis from CDOW) should prove useful in quantifying needed flows and defining beneficial uses. Existing instream flow rights on some UFO streams may need to be enlarged.

The UFO should become more involved with assisting the Colorado Water Conservation Board in monitoring instream flows to ensure that these water rights are administered to provide benefits in accordance with state law.

As the region continues to grow, source water areas that provide domestic and municipal waters will become more common in the UFO. As source water areas are assessed for potential pollution sources and protection plans developed, the UFO must be a key player in collaborating with water users to ensure that public land management actions are compatible with source water area protection plans.

Local fire districts have made recent requests to the BLM to install dry fire hydrants on UFO-managed stream reaches. The UFO fire staff anticipates additional such requests and must establish a procedure for processing them that includes survey and design specifications for dry hydrant installation, as well as a requirement for the applicant to acquire a BLM right-of-way. The BLM would need to apply to the Colorado Division of Water Resources for a well permit under the category of fire suppression, which provides for an exemption from state administration.

Identify areas that need additional water developments for land management activities such as wildlife and livestock. Additional water supplies could replace or augment existing, natural water sources located in fragile areas such as riparian zones, erodible or saline soils.

Where stream or river flows are lower than what is needed to protect riverine values (such as below Highline Diversion on the San Miguel River), pursue win/win proposals with water users. An example would be the CC Ditch (in which a channel-wide cement weir diverts water into the ditch and delivers it to the town of Nucla) in the San Miguel Basin, where the diversion of late summer low flows is likely to affect aquatic fauna. Piping or sealing the canal could provide substantial water savings, part of which could be shared with the river.

Where streams with potential fisheries (such as warm water spawning habitat on mainstem tributaries to the San Miguel, Dolores, and Lower Gunnison rivers) are affected by physical barricades (such as dams and diversions), pursue win/win proposals with water users. An example would be the concrete dam on Lower Tabeguache Creek.

Collaborate with Montrose County on management of flood/debris hazard areas. In several locations in the UFO, especially along the sides of the Uncompahgre Valley floor, flash floods of significant magnitude commonly occur. The origin of the floods is typically on low order drainages on public lands. With increased growth in the county, development on these flood prone areas is a public health and safety issue. The county has the responsibility to properly zone and regulate development on these flood prone areas, while the BLM needs to manage the flood water source areas to minimize the potential for accelerated hydrologic response.

C. AREAS OF RELATIVE ECOLOGICAL IMPORTANCE TO GUIDE LAND USES AND MANAGEMENT

Locate, maintain, and monitor "relic or reference areas", including existing livestock and wildlife exclosures to document natural conditions as a means of comparison for soils experiencing soil surface disturbing management activities. Having these data would prove valuable in making management decisions under the principles of "Adaptive Management."

Within the planning area, many low order tributary streams (such as Roubideau and Mesa creeks) in both the Gunnison and Dolores river basins are important for warm-water fish spawn habitat. These fishes typically spawn in the spring and need sufficient flow and channel for successful reproduction to occur. Most UFO-managed streams with habitat potential

have some level of instream flow protection, but need to be managed to ensure adequate physical access for migrating fish. The Range-Wide Conservation Agreement and Strategy for Roundtail Chub (*Gila robusta)*, Bluehead Sucker (*Catostomus discobolus)*, and Flannelmouth Sucker (*Catostomus latipinnis*), is a good data source that describes needed habitat conditions and impacts to avoid. Especially with future ROW applications that potentially affect these stream systems, stipulations need to be imposed to protect the warm water fish habitat.

4.1.5 Vegetation Communities

Information regarding existing Forest/Woodland decisions is included in the Forest and Woodland Product Section.

RANGELANDS

A. ABILITY OF CURRENT MANAGEMENT DIRECTION TO ACHIEVE DESIRED FUTURE CONDITIONS AND ADDRESS RESOURCE DEMANDS

CURRENT PLANNING DECISION	RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
UNCOMPAHGRE BASIN RMP		
Management Unit 12: This unit is designated as the Escalante Canyon ACEC. This designation will enhance management and protection of the listed plant species and unique plant associations.	**Yes:** This designation better protects the rare plant communities found here.	Maintain this designation.
Management Unit 12: • Plant monitoring studies will be developed and activities designed to improve these plants' habitat conditions will be initiated.	**Yes:** Should be more clearly worded and expanded to describe: • monitoring adequate to detect changes or threats • special projects to restore habitat or repair damage will be implemented	Change wording to be more specific.
Management Unit 12: • Surface disturbing activities will be restricted.	**Yes:** Cite use of NEPA process to prevent, mitigate or modify activities which threaten	Change wording to be more specific.
Management Unit 13: • The entire management unit is designated as the Fairview Research Natural Area/ACEC.	**Yes:** This designation better protects the rare plant communities found here.	Maintain this designation. Add the need to prevent damage to and repair damaged habitat
Management Unit 13: • Plant monitoring studies will be developed in cooperation with the Colorado Natural Areas Program.	**Yes:** Should be more clearly worded to describe monitoring adequate to detect changes or threats,	Change wording to be more specific.

CURRENT PLANNING DECISION	RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
STANDARDS FOR PUBLIC LAND HEALTH AND GUIDELINES FOR LIVESTOCK GRAZING MANAGEMENT IN COLORADO		
• Native plant species and natural revegetation are emphasized in the support of sustaining ecological functions and site integrity. Where reseeding is required, on land treatment efforts, emphasis will be placed on using native plant species. Seeding of non-native plant species will be considered based on local goals, native seed availability and cost, persistence of non-native plants and annuals and noxious weeds on the site, and composition of non-natives in the seed mix.	**Yes and No:** This comprehensively describes a revegetation policy that should apply to most areas, but there should be stricter limitations requiring natives from local or regional sources in special areas like outstanding natural areas, ACECs, WSAs, WAs, and areas that are notable for being pristine or making important contributions to biodiversity. Additionally, this should apply to all revegetation, not just land treatments.	• Make more restrictive to natives only in areas that have important vegetation attributes. Apply to all revegetation activities, including mitigation revegetation triggered from other public land activities.
• Natural occurrences such as fire, drought, flooding, and prescribed land treatments should be combined with livestock management practices to move toward the sustainability of biological diversity across the landscape, including the maintenance, restoration, or enhancement of habitat to promote and assist the recovery and conservation of threatened, endangered, or other special status species, by helping to provide natural vegetation patterns, a mosaic of successional stages, and vegetation corridors, and thus minimizing habitat fragmentation.	**Yes:** This should be expanded in the RMP revision by describing the desired future condition for each unit in terms that are more concrete. This could be done generally by stating "desire to restore vegetation mosaic that would occur if natural processes were fully intact", or desire to restore mosaic that is within HRV but skewed to favor some particular management issue or resource", or by stating proportions and patch sizes of seral stages.	• Increase specificity of wording, and incorporate as part of desired future condition for each subunit in plan area.

MANAGEMENT ISSUES NOT ADEQUATELY ADDRESSED

- Vegetation has not been identified as a specific emphasis area or resource as have other resources (such as wildlife habitat, soil and water, and livestock management). This has made it difficult to develop a cohesive vision for managing for vegetation health and sustainability. With the exception of riparian areas, vegetation is largely described relative to sustaining the uses, and no desired future conditions are provided.

- Some of the RMP decisions have not been carried out. These include comprehensive route designations and OHV closures in the San Miguel ACEC, the redrawing of allotments in the San Miguel ACEC to exclude non-grazable areas, and identification of riparian pastures and management. Reasons for not implementing these decisions likely include a lack of resources, competing priorities, and failure to delegate.
- The forage allocation process between livestock and wildlife does not appear to have been fully implemented. Furthermore, livestock grazing preferences do not seem consistent with carrying capacity on every permit. There may be a problem with managing vegetation in this manner.
- Decisions to maintain past treatments/improvements for wildlife and livestock should not be an across the board policy.
- The RMP should indicate more than general requirements to monitor. All monitoring should be clearly tied to objectives, management trigger points should be identified, and additional information needs should be identified.

Integrated Weed Management

The BLM has put into place several measures to reduce the spread of noxious weeds and exotics. In June 2007, Vegetation Treatments using Herbicides on Bureau of Land Management Lands in 17 Western States Programmatic Environmental Impact Statement was completed. This document contains direction as to how herbicides will be applied to BLM-administered lands, and includes mitigation measures, standard operating procedures, and analysis of active ingredient/inactive ingredients by herbicide.

The UFO created an Integrated Weed Management (IWM) Program for control of noxious weeds on the Colorado Noxious Weed List and BLM Species of Concern within the Uncompahgre Field Office in 2007. BLM cooperates with the counties and other entities in implementing IWM. This cooperation supports the IWM program and promotes the success of Early Detection Rapid Response, and the treatment and re-treatment of small and larger patches of noxious weeds. With a coordinated strategy, there are more people looking for and treating noxious weeds in a strategic manner on public lands. Integrated Weed Management is supported by the following executive orders, legislation, and strategy documents:

- Colorado Noxious Weed Act 8 CCR 1203-15 (2003)
- Presidents Executive Order 13112 (1999)
- Federal Noxious Weed Act of 1974 P.L. 93-692
- BLM Partners Against Weed Plan (BLM's strategic plan)
- Colorado Governor's Executive Order D 00699
- UFO Weed Management Strategy (2007)
- Record of Decision on Vegetation Treatments Using Herbicides on BLM Lands in 17 Western States (September 2007)

The UFO has implemented fire management policies to keep fire on the landscape where feasible. The foundation for this is in the UFO Fire Management Plan. This plan includes vegetation mosaic objectives, which describe desired future conditions of vegetation in terms of proportions of successional stages within a given area. These objectives are important to help coordinate fire management together with other vegetation projects to achieve desired vegetation conditions at a landscape level. Two activity plans for vegetation treatments have been developed based on this approach.

The UFO has managed vegetation in some areas with the intent of holding big game away from private lands. The Habitat Partnership Program, which is associated with the Colorado Division of Wildlife and has the mission of reducing game damage on private lands, has been the primary mechanism for accomplishing this. The program has also been an important source of funding for BLM projects.

In order to implement the Colorado Public Land Health Standards, BLM policy has required ten-year grazing permits to include stipulations mandating range BMPs. Stipulations include:

- requiring short duration grazing during the growing season
- no spring and fall use in the same year
- no more than 30% use on native woody species in riparian areas
- no more than 50% use on palatable species in the dormant season
- striving to have occasional year-long rest for grazing areas
- striving to vary timing of grazing in different use areas
- resting treatments or seeded areas for two growing seasons.

The BLM has helped fund natural area inventory work by the Colorado Natural Heritage Program and by The Nature Conservancy. These efforts have resulted in identification of important areas for biodiversity conservation. The BLM acknowledges these areas as valuable and strives for a higher level of protection in some of its activities. The Dry Creek Travel Management Plan is one such protective measure.

B. POTENTIAL NEW DECISIONS FOR THE RMP REVISION

- Additional special area designations in order to protect pristine or biodiverse woodlands, rangelands, riparian sites, corridors, and cores.
- Change how standards are incorporated into RMP—list meeting standards as part of general management for all units. Should management units specify the degree of meeting, meeting with problems, or exceeding standards?—or is there a better way to establish targets for conditions.
- Add mosaic objectives or somehow articulate desired future vegetation conditions that describe Historic Range of Variability (HRV), disturbance/recovery/successional processes, and provide some idea of proportions.

- Describe the extent to which natural processes should be managed in each management unit—e.g. fire, insect, disease processes. Add direction that management-related disturbances include design criteria to restore/simulate natural processes. Perhaps this could be handled as part of the desired future condition for subunits.
- Add upland vegetation section/direction so that vegetation is viewed as a value, not simply as something that supports uses. Vegetation desired future conditions should be stated. Restoration of damaged communities should be a management action. Priorities for restoration should be discussed. Fire rehab and vegetation treatments should be addressed.
- Include definition of reclamation success, other reclamation requirements.
- Address use of seed for revegetation (including native non-local source, native local-source, and nonnative seed) and incorporate seed law requirements.
- Add a weed section providing guidance to the weed program. Cite the need to comply with Colorado Weed Law and noxious weed categories A, B, and C.
- Add carbon sequestration as a woodland/rangeland value. Desired future conditions should include a reference to carbon sequestration values.
- Add direction that vegetation monitoring be designed to: 1) capture information useful for tracking long term as well as regional ecological trends, and/or 2) detect changes relative to project/program objectives which will trigger management responses, and/or 3) collect data to determine project effectiveness, and/or 4) answer questions about basic ecological/ biological processes.
- Add disturbance thresholds for each management unit e.g. no more than 10% of this unit may be disturbed at any one time by the combination of all activities.
- Add success criteria for control of weeds during reclamation or other activity that generates weeds. Incorporate weed control responsibilities into each program that generates weeds so that projects include funding for long-term associated weed control.

C. AREAS OF RELATIVE ECOLOGICAL IMPORTANCE TO GUIDE LAND USES AND MANAGEMENT

Some of the areas of relative ecological importance include:

- Mancos shale communities
- Sagebrush communities
- Aspen/oak interface, savanna oak

RIPARIAN AND WETLANDS

A. ABILITY OF CURRENT MANAGEMENT DIRECTION TO ACHIEVE DESIRED FUTURE CONDITIONS AND ADDRESS RESOURCE DEMANDS

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? (REMARKS/RATIONALE)	OPTIONS FOR CHANGE
UNCOMPAHGRE BASIN RMP		
Management Unit 7: Riparian/aquatic zones up to one-quarter mile wide will be protected. Activities that disturb these areas could be approved on a site-specific basis after consultation with affected entities and development of mitigating measures.	**Yes:** Riparian protections are customarily applied in nearly all decisions, and projects, across the plan area, this decision should be broadened to reflect this.	Expand this decision to apply to all riparian areas throughout plan area.
Management Unit 7: Vehicle use in the riparian zones associated with Bear and Roatcap creeks will be limited to designated roads and trails yearlong.	**Yes:** Limiting vehicles to designated trails reduces road and travel impacts in riparian areas.	This should be expanded to apply to all roads in riparian areas in the planning area.
Management Unit 9: The management unit will be managed to restore and enhance riparian vegetation along 40 miles of streams.	**Yes and No:** Where riparian areas are damaged, they need to be restored in order to meet Land Health Standard 2.	Expand this decision to apply to all riparian areas throughout plan area, but may not need to delineate them as emphasis areas.
Management Unit 9: Objectives and projects designed to accelerate improvement of species diversity, streambank cover and stability, and instream structure, and to raise the water table will be incorporated into existing activity plans or developed in new riparian/ aquatic system management plans.	**Yes and No:** Riparian objectives are desirable but the activity planning approach has not been customarily used.	Incorporate objectives and projects to improve or restore species diversity, streambank cover and stability, and instream structure as part of mitigation for riparian-impacting projects, and as part of all landscape or watershed plans throughout the plan area.
Management Unit 9: All areas will be intensively monitored for vegetation, aquatic habitat, and erosion conditions.	**Yes and No:** Riparian area monitoring is occurring throughout the planning area. Requirements for monitoring should be tied	• Expand this decision to apply to all riparian areas throughout planning area. Include management objectives (such as meeting Colorado Public Land Health

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? (REMARKS/RATIONALE)	OPTIONS FOR CHANGE
	to management objectives, termed "adequate to detect…" as opposed to intensive, and specify when a change in management should be triggered.	Standard 2).
SAN JUAN/SAN MIGUEL RMP		
General Management Objectives to protect or improve aquatic and riparian habitat will become part of AMPS and habitat management plans.	**Yes and No:** Riparian objectives are desirable but the activity planning approach has not been customarily used.	• Incorporate objectives and projects to improve or restore species diversity, streambank cover and stability, and instream structure as part of mitigation for riparian-impacting projects, and as part of all landscape or watershed plans throughout the plan area.
General Management Management actions within flood plains and wetlands will include measures to preserve, protect, and, if necessary, restore their natural functions (as required by Executive Orders 11988 and 11990). Management techniques will be used to minimize degradation of aquatic and riparian habitats. Bridges and culvert installations will be designed to maintain adequate passages for fish.	**Yes:** Riparian protections are customarily applied in nearly all decisions, and projects, across the plan area.	• Carry this decision forward.
General Management and Emphasis Area B (Wildlife) Improve aquatic and riparian habitat on these areas listed in priority order: the upper San Miguel River and its tributaries (44 miles), the upper Dolores River and its tributaries (30 miles), and the lower San Miguel River and its tributaries (20 miles). Develop needed habitat management plans and improvements for implementation (including monitoring plans).	**Yes and No:** Riparian habitat improvements are desirable where natural conditions are degraded. Priorities may have changed for areas needing restoration.	• Make this decision more general to allow for changes in priority areas based on partnerships, critical resource damage, presence of watershed/landscape plans, or opportunities.
Emphasis Area A (Livestock	**Yes and No:**	• Broaden decision to become

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? (REMARKS/RATIONALE)	OPTIONS FOR CHANGE
Management) All perennial streams within the planning area that have the potential of providing quality fisheries and/or riparian habitat (approx. 400 mi have been identified) should receive special management consideration through the activity planning process and monitoring systems to maintain, improve, or enhance resource conditions associated with aquatic/riparian habitat.	This equates to Uncompahgre Basin RMP Management Unit 9, also seems redundant to general management direction. Riparian objectives are desirable but the activity planning approach has not been customarily used.	part of general management direction. Incorporate objectives and projects to improve or restore species diversity, streambank cover and stability, and instream structure as part of mitigation for riparian-impacting projects, and as part of all landscape or watershed plans throughout the plan area.
Emphasis Area B (Wildlife) Invest wildlife funds for structural improvements & vegetation restoration projects to improve high priority riparian habitat at the following drainages: Roc, North & South Mesa, and La Sal Creeks.	**Yes and No:** Riparian habitat improvements are desirable where natural conditions are degraded. Priorities may have changed for areas needing restoration.	• Make this decision more general to allow for changes in priority areas based on partnerships, critical resource damage, presence of watershed/landscape plans, or opportunities.
Emphasis Area D (Wilderness) Allow non-impairing aquatic/riparian improvements … into the Dolores River Canyon WSA.	**Yes:** Riparian habitat improvements are desirable where natural conditions are degraded.	• Carry this decision forward.
Emphasis Area F (Cultural Resources) Apply for water rights & protect riparian zones on springs associated with cultural sites.	**Yes:** These would protect the cultural values from spring developments associated with non-BLM claims to the water rights.	• Carry this decision forward if any of these springs are located in the planning area.
Emphasis Area J (Forestry and Wood Products) • Coordinate efforts on a case-by-case basis to ensure aquatic/riparian resources are protected & in some cases, improved.	**Yes and No:** Combine with general management direction when riparian avoidance, mitigation, or rehab is required for other activities.	• See SJSMRMP Area A for recommendation.
SAN MIGUEL RIVER ACEC AND SRMA AMENDMENT		
• Within the ACEC: Restoration of disturbed sites will be accomplished with species native to the sites. The use of trees and	**Yes:** This should include guidance that natural processes should be	• Carry this decision forward, along with guidance to work with natural processes (like flooding) in accomplishing

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? (REMARKS/RATIONALE)	OPTIONS FOR CHANGE
shrubs will be required, if appropriate to the site.	allowed to restore areas if possible.	restoration
• Damaged riparian areas in the ACEC will receive top priority for restoration and management compared to other areas within the SRMA.	**Yes and No:** Priorities may have changed for areas needing restoration.	• Make this decision more general to allow for changes in priority areas based on partnerships, critical resource damage, and the presence of watershed/landscape plans or opportunities.
• To protect riparian and aquatic systems within the SRMA, instream flow needs will be determined and filed with the State Water Conservation Board.	**Yes:** Include flows to maintain riparian values as well as fish.	• Make decision more specific to add flows needed to maintain riparian values.
• Within the SRMA: The riparian systems of the San Miguel River, Leopard Creek, and Fall Creek will be maintained in good condition. Restoration efforts would also be undertaken on Fall Creek, if feasible.	**Yes:** This is covered with Land Health Standard 2.	• This decision should be folded into general management direction, which should include directives that all riparian areas meet standard 2.
• Work with the highway department to prevent further damage to these systems from road maintenance and construction.	**Yes:** This could be broadened into a general directive on how to improve management of ROWs where they impinge on riparian areas. Decision should include counties as well as the highway department.	• This decision should be folded into general management direction, which should include directives that ROWs be managed to minimize damage to resources through education, collaboration, permit and construction terms, or permit renewals.
• To protect the riparian and aquatic systems within the SRMA, instream flow needs will be determined and filed with the State Water Conservation Board.	**Yes:** Include flows to maintain riparian values as well as fish.	• Make decision more specific to add flows needed to maintain riparian values.

B. POTENTIAL NEW DECISIONS FOR THE RMP REVISION

- Consider expanding San Miguel ACEC to encompass more of the river.
- Designate additional special riparian areas and corridors (such as Colorado Natural Heritage Program Potential Conservation Areas).

- Give rivers special emphasis for restoration and management-San Miguel, Dolores, Lower Gunnison.
- Change how standards are incorporated into RMP -- see 4.5.1.B, above.
- Add riparian/wetland section/direction. Vegetation desired future conditions should be stated. Restoration of damaged communities should be a management action. Priorities for restoration should be discussed. Flow regimes and instream flow protections should be addressed. Include direction to restore/simulate natural processes.
- Add direction or a section addressing how weeds should be managed in riparian areas.

C. AREAS OF RELATIVE ECOLOGICAL IMPORTANCE TO GUIDE LAND USES AND MANAGEMENT

- Areas with intact hydrologic regimes
- Canyon bottoms with "wall to wall" riparian zones
- Areas with rare riparian plant communities
- Major river systems

4.1.6 Fish and Wildlife

A. ABILITY OF CURRENT MANAGEMENT DIRECTION TO ACHIEVE DESIRED FUTURE CONDITIONS AND ADDRESS RESOURCE DEMANDS

Population and habitat objectives, or desired future conditions, are poorly defined for wildlife, fish, and habitats. Perhaps the best model we have to describe desired future conditions are the broad criteria provided by the Colorado Standards for Public Land Health. Standard 3 (Plants and Animals) requires the following: "Healthy, productive plant and animal communities of native and other desirable species are maintained at viable population levels commensurate with the species and habitat's potential. Plants and animals at both the community and population level are productive, resilient, diverse, vigorous, and able to reproduce and sustain natural fluctuations, and ecological processes." Indicators such as species diversity and resiliency are used to gauge our success at achieving these standards. In many cases, the desired future conditions still elude us and, thus, it is difficult to measure our success at achieving those goals. Where we have identified specific objectives (e.g., a population target of so many animals or plants), long-term monitoring is often lacking, and it is difficult to determine whether these standards are being achieved or, if they are not, whether we are trending toward those goals.

The majority of land health problems in the planning area are thought to be caused by an array of land use activities, both past and present (see the Trends subsection, Section 2.1.6). FLPMA's multiple use mandate places considerable pressure on fish, wildlife, and habitats. Many values are conflicting, such as oil and gas development and wildlife habitat enhancement. Mitigation and restrictions applied for projects on public lands are often seen as a panacea but are, in reality, short-term measures that fail to remedy larger, landscape level problems such as habitat fragmentation and loss. Although necessary and beneficial, such measures are not as effective as proactive, enhancing, conservation efforts and planning. Nevertheless, human activities and resource demand are expected continue into the future and will likely increase. Viability and persistence of animal and fish populations will depend largely on species' ability to adapt and the landscapes' ability to recover in the face of these pressures.

Staffing, funding, and time limitations inhibit management's ability to achieve objectives aimed at benefiting fish and wildlife. BLM biologists are tasked with evaluating and clearing nearly every project or action proposed on public lands. Over 80 species of concern or interest and/or their habitats occur across the UFO. Evaluating the impacts of multiple, concurrent projects, and effectively mitigating those impacts on resources, is a time-consuming and

complex undertaking. Additionally, such actions are subject to legislative provisions and rigorous procedure. These workloads are currently handled by one full time biologist and partial assistance from two other specialists. Funding does not appear to be as problematic as staffing. Base funds are typically adequate and flex dollars are often awarded for select projects. Still, wildlife staffing is not proportionate to our annual budget, or we do not have adequate funds to hire additional, full-time biological help—which is crucial to improving our ability to achieve our resource and program objectives. Current trends suggest these challenges will continue into the future.

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
MULTIPLE SPECIES AND HABITATS		
UNCOMPAHGRE BASIN RMP		
All Management Units • The planning area will be open to land treatments (for wildlife) and project facility development. Existing wildlife facilities and land treatments will be maintained.	**No** The decision is too broad-brushed and generic. Not all areas are appropriate for land treatment or facility development, and not all land treatments or facilities should be maintained (some should be restored and/or discontinued). Add verbiage to read "Where appropriate, …"	• Delineate areas where treatments and facilities/ improvements will be restricted and minimal (wilderness cores, wilderness buffers, movement corridors) and areas where treatments will be liberal or extensive. Determine which specific types of treatments will be allowed in WSAs and wilderness areas. • Identify or acknowledge treatment areas in need of repair or ecological restoration (ponds, guzzlers, crested wheatgrass plantings). Prescribe an approach for remediation of these sites. • Treatment objectives will be based on quality effectiveness and benefit for multiple species, or focal species, as opposed to mere quantity or acreage of habitat treated.
Management Units 3, 5, 8, 9, 13, 14, 15	**Yes, in part** Other areas should be	

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
• Supplemental releases and reintroduction of native or naturalized fish and wildlife species may be authorized by the District Manager following environmental analysis.	considered for reintroduction if the need arises.	
STANDARDS FOR PUBLIC LAND HEALTH AND GUIDELINES FOR LIVESTOCK GRAZING MANAGEMENT IN COLORADO		
• Establish standards and criteria for healthy plant and animal communities, healthy riparian communities, and healthy aquatic resources • Adopted the standards (2-5) for terrestrial and aquatic resources • As of 2008, the entire UFO has been evaluated according to these standards, appropriate management changes were implemented as necessary, and future evaluations will continue to monitor land health	**Yes:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands.	• For areas not meeting standards, or meeting with problems, prescribe measurable goals for change: e.g., every year, 1000 acres of pinyon-juniper habitat will be treated for recovery so that by 2020, approximately 15000 acres of unhealthy PJ will be meeting or trending toward desired conditions; AND success will be monitored and systematically reported
LAND DISPOSAL AMENDMENT		
All Management Units • Acquire lands to improve and benefit public lands and resources. • "In [land] exchanges, sensitive or critical habitats…would be acquired [where possible]. This would have a positive impact on public lands and resources as a whole." (The document contained no other references or decisions that might affect fish or wildlife resources.)	**Yes:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands.	• New management direction should stress greater importance and consideration for unique and rare habitats (such as sagebrush, pinyon-juniper, and salt-desert).
GUNNISON TRAVEL ANALYSIS AREA TRAVEL RESTRICTION EA		
Portions of the Uncompahgre Basin Resource Area • Reduce OHV-related impacts on	**Yes:** The decision meets the overall objective to maintain and	• Implement methods for encouraging compliance and monitor management

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
terrestrial and aquatic wildlife and habitats. • Restricted OHV (ATVs, motorcycles, and 4-WD vehicles) and mountain bike travel to existing, established routes within the planning area (and eliminate authorized cross-country, off-route travel by motorized and mechanized vehicles to minimize impacts on biological resources)	enhance fish and wildlife habitats on public lands.	effectiveness.
STANDARDS FOR PUBLIC LAND HEALTH AND GUIDELINES FOR LIVESTOCK GRAZING MANAGEMENT IN COLORADO		
Portions of the Uncompahgre Basin Resource Area • Standardize oil and gas leasing, exploration, and development and mitigate impacts on wildlife and biological resources. • Lease stipulations will be attached to mitigate impacts on wildlife and habitats • On-sites will be conducted and biological surveys conducted by qualified individuals • Conditions of Approval will be attached to Applications for Permit to Drill to mitigate impacts on wildlife and habitats	**Yes:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands.	• At the field office level, formulate and update BMPs and lease notices or stipulations and acquire approval/ signature from state office level, if necessary.
Management Unit 1 • Non-conflicting wildlife habitat management objectives, projects, and mitigating measures will be incorporated into new and existing range allotment management plans.	**No:** This decision suggests that grazing decisions and needs will take precedence over wildlife habitat values. This is not consistent with the intent of FLPMA or our public land health standards.	• Revise to state that wildlife habitat management objectives, projects, and mitigating measures will be incorporated into range allotment management plans and permits such that both uses/values are achieved to the extent possible.
Management Unit 1 • Existing wildlife habitat projects will be maintained.	**No:** Projects should be evaluated on a case-by-case basis to determine whether they should	• Delineate areas where treatments and facilities/ improvements will be restricted and minimal

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
	be maintained, improved, or discontinued and restored. The decision is too broad and generic. Not all areas are appropriate for land treatment or facility development, and not all land treatments or facilities should be maintained (some should be restored and/or discontinued). Add verbiage to read, "Where appropriate…"	(such as wilderness cores, wilderness buffers, movement corridors) and areas where treatments will be liberal and extensive. • Identify specific types of treatments allowed in WSAs and wilderness areas. • Identify or acknowledge treatment areas in need of repair or ecological restoration (ponds, guzzlers, crested wheatgrass plantings). Prescribe an approach for remediation of these sites. • Treatment objectives will be based on quality effectiveness and benefit for multiple species, or focal species, as opposed to mere quantity or acreage of habitat treated.
Management Unit 3, 5, 8, 9, 13, 14, 15 • Non-conflicting wildlife habitat management objectives, projects, and mitigating measures will be incorporated into new and existing forest management plans (units were identified as productive woodland important to both wildlife and livestock). Existing wildlife habitat projects will be maintained and new projects developed if they will not decrease the woodland base.	**Yes, in part:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands.	• Note that under some circumstances, woodland base may be of secondary importance in order to protect or sustain wildlife populations.
Management Unit 15 • To protect scenic values, no new habitat improvement projects or maintenance of existing projects will be permitted.	**Yes, in part:** Need to assess whether this decision is still appropriate under future management direction.	

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
Management Unit 16 • Habitat, vegetation and other resource studies will be minimal.	**No:** Need to assess whether this decision is still appropriate under future management direction.	• Is the unit predominantly private land? What was the reasoning behind this decision?

All Management Units
Priorities for Implementation
• Establish and maintain monitoring studies on crucial deer and elk winter range to determine habitat condition and trend.
• Cooperate with CDOW on reintroduction of desert bighorn sheep into the Camelback area.
• Prepare habitat management plans for the following areas.
  ○ Baldy Peak
  ○ Jumbo Mountain-McDonald Mesa
  ○ Grand mesa
  ○ Uncompahgre Plateau
  ○ Billy Creek
  ○ Management Unit 10
• Incorporate the Gunnison Forks Habitat Management Plan into the Gunnison Gorge Range Allotment Management Plan.
	Yes:
	The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands and complies with applicable laws and policies.
		• Since many of these priorities have been completed, identify new priorities or priorities for continuation.

All San Juan/San Miguel Emphasis Areas • Compliance with FLPMA to maintain and enhance fish and wildlife habitats on public lands. • Protection, maintenance, and enhancement of crucial habitats for nongame species of special interest or concern to state and other federal agencies.	**Yes:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands. **Yes:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands.	• Improve recognition and management consideration for non-status species—i.e., state species of management concern or others not federally listed or listed as BLM sensitive species. These could be identified as "species of local concern."
• Continue to evaluate fish and wildlife habitat on a case-by-case basis as a part of project level	**Yes:** The decision meets the overall objective to maintain and	

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
planning.	enhance fish and wildlife habitats on public lands.	
• Attach stipulations as appropriate to assure that projects are compatible with management objectives established in the RMP for fish and wildlife habitat. Seasonal restrictions will continue to be applied where they are needed to mitigate impacts of human activities on important seasonal wildlife habitat.	**Yes:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands.	• Develop standard, species-specific survey protocols and mitigation measures or restrictions to protect and maintain wildlife, fish, and habitats.
• Implement habitat improvement projects where necessary to stabilize and/or improve unsatisfactory or declining habitat conditions. Such projects will be identified through habitat management plans or coordinated RMPs. Key habitats include big game winter range; winter raptor concentration areas; aquatic/ riparian habitats; bighorn sheep habitat; pronghorn antelope habitat. Development of habitat management plans for terrestrial and aquatic species will be closely coordinated with CDOW, the USFS, and where appropriate FWS. Project development will require input from all resource programs to assess impacts through the environmental process.	**Yes:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands.	• Revise the description of key habitats to include general types (such as sagebrush, pinyon-juniper, and salt-desert shrub) and other at-risk communities.
• All monitoring will be conducted according to BLM manuals and policies. A detailed wildlife monitoring plan for the planning area will be used. Monitoring for all wildlife species will be closely coordinated with the CDOW.	**Yes:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands.	• A detailed plan with specific objectives is critical to ensuring that appropriate monitoring occurs. However, we should consider applying a timeframe commitment for completing the monitoring plan.
• Sufficient forage and cover will be provided for wildlife on their	**Yes:** The decision meets the overall	

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
seasonal habitat. Forage and cover requirements will be incorporated into AMPS and will be specific to primary wildlife use areas. Generally, range improvements will be designed to achieve both wildlife and range objectives.	objective to maintain and enhance fish and wildlife habitats on public lands.	
• Wildlife reintroductions will be evaluated, and recommendations will be made to CDOW.	**Yes:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands.	
STANDARDS FOR PUBLIC LAND HEALTH AND GUIDELINES FOR LIVESTOCK GRAZING MANAGEMENT IN COLORADO		
All Emphasis Areas • Establish standards and criteria for healthy plant and animal communities, healthy riparian communities, and healthy aquatic resources	**Yes:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands. Adopted the standards for terrestrial and aquatic resources (Standards 2-5 relate to wildlife and fish resources). As of 2008, all of the UFO has been evaluated according to these standards, appropriate management changes were implemented as necessary, and future evaluations will continue to monitor land health.	• For areas not meeting standards, or meeting with problems, prescribe measurable goals for change (such as every year, 1,000 acres of pinyon-juniper habitat will be treated for recovery so that by 2020, approximately 15,000 acres of unhealthy pinyon-juniper will be meeting or trending toward desired conditions) AND success will be monitored and systematically reported.
• Complete necessary improvements and habitat management plans necessary for implementation.	**Yes:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands.	
OIL AND GAS LEASING AMENDMENT		
Portions of the San Juan-San Miguel Resource Area • Standardize oil and gas leasing, exploration, and development and mitigate impacts on wildlife and biological resources.	**Yes:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands.	• At the field office level, formulate and update BMPs and lease notices or stipulations and acquire approval/ signature from state office level, if

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
• Lease stipulations will be attached to mitigate impacts on wildlife and habitats • On-sites will be conducted and biological surveys conducted by qualified individuals • Conditions of Approval will be attached to Applications for Permit Drill to mitigate impacts on wildlife and habitats.		necessary.
Emphasis Area A • Allow CDOW to introduce other game species if site-specific analysis indicates that significant conflicts with livestock will not occur.	**No:** This decision suggests that grazing decisions and needs will take precedence over wildlife habitat values. This is not consistent with the intent of FLPMA or our public land health standards.	• Both uses and values should be achieved to the extent possible.
• In all vegetation types, 5% to 15% of the existing vegetation should be maintained as leave strips or islands interspersed throughout the project areas to maintain dispersed, ecologic communities for wildlife.	**Yes and No:** 5-15% strips would fail to meet the habitat requirements and survival factors of some species.	• Apply greater latitude and range to produce standards that are more flexible and allow for multiple species enhancement across an area.
Emphasis Area D • Permit fish and wildlife research or inventories.	**Yes:** The decision meets the overall objective to increase our base knowledge in order to maintain and enhance fish and wildlife habitats on public lands.	
SAN JUAN/SAN MIGUEL RMP		
Emphasis Areas E and I • Provide for minimal investments to enhance key wildlife species.	**Yes:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands.	• Manage so that both extractive and biological values are attained to the greatest extent possible.
Emphasis Area F • Protect and maintain wildlife habitat. Where feasible, complete wildlife habitat improvements to enhance wildlife viewing associated with cultural values.	**Yes:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands.	

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
Emphasis Area J • Provide investments to enhance wildlife species that benefit from uneven-aged timber management.	**Yes and No:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands. Consider needs of species that select for even-aged timber stands. The decision implies that timber needs and values will take precedence over wildlife habitat values. Both values should be attained across the area to the extent possible.	
Emphasis Area K • Maintain or improve wildlife habitat through interdisciplinary design of water or vegetation improvements and maintenance of diversity of vegetation. Allow wildlife habitat improvements compatible with the goals of the soil and water program for specific areas.	**Yes:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands.	
Emphasis Area L • Maintain species of special importance to maintain viable population levels.	**Yes:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands.	• Improve recognition and management consideration for non-status species. Identify species of management concern and others not federally listed or listed as BLM sensitive species as *species of local concern.*
All Emphasis Areas ***Priorities for implementation*** • Monitor, maintain, or improve crucial winter ranges for pronghorn antelope, elk, and mule deer focusing initially on the "I" and "M" category grazing allotments. • Monitor, maintain, or improve known, active fisheries habitat. This effort will focus initially on the San Miguel and Dolores rivers and their major tributaries.	**Yes:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands and complies with applicable laws and policies.	• As many of these objectives have been completed, identify new priorities for implementation and identify those for continuation.

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
• Monitor, maintain, or improve winter raptor concentration areas. • Maintain all existing wildlife habitat improvement facilities. This effort will focus on guzzlers, exclosures, and vegetation treatments. • Maintain or improve riparian habitat to good or excellent ecological condition, utilizing acceptable grazing systems and fencing where needed. • Initiate development of new wildlife habitat management plans and related enhancement projects.		
BIG GAME		
UNCOMPAHGRE BASIN RMP		
Management Units 3, 5, 8, 9, 13, 14, 15 • Wildlife forage allocations will remain at current levels until studies determine adjustments are needed to achieve management directives. Additional forage allocations will be divided equally between wildlife and livestock grazing.	**No:** The decision does not prescribe when or where these studies would take place. Dividing additional forage allocations equally between wildlife and livestock ignores site context—i.e., is the area particularly important for big game, such as crucial winter range? In addition, current range conditions and trends suggest that many areas are exceeding carrying capacity (although it is unclear whether this is due to wildlife or livestock).	• Establish or reestablish a coordination plan and team with CDOW to prescribe management changes that would enhance range conditions and bring use levels back to carrying capacity.
Management Unit 15 • Wildlife forage allocations will remain at current levels. No additional forage allocations will be made.	**No:** Need to assess whether this decision currently meets objectives for maintaining and enhancing wildlife habitats on public lands.	
Management Units 3, 5, 8, 9, 13, 14, 15 • Wildlife habitat monitoring studies will be established and/or maintained on all crucial winter	**Yes:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands. The	• Establish or reestablish a coordination plan and team with CDOW to prescribe management changes that would

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
ranges.	verbiage should be modified to read "…on all crucial winter range types."	enhance range conditions and bring use levels back to carrying capacity. Work with CDOW on habitat monitoring and data sharing.
All Management Units • Disturbances will be minimized from December 1 through April 30 on crucial deer and elk winter range.	**No:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands, but leaves the following questions unanswered: • What is our threshold—surface disturbance? • Does this stipulation apply to permitted area routine maintenance activities (such as ROWs)? • Under what circumstances would we permit a variance, exception, or modification to these timing restrictions? The need to consult with CDOW on big game timing exceptions is not specified. • Which habitat types are we referring to—all winter range types except "general winter range" which is ubiquitous in the planning area? These terms should be made consistent with CDOW's since we base our decisions largely on their species/habitat Geographic Information System models and maps. • How will we treat winter concentration areas, severe winter range, and roosts for bald eagles? The seasonal restriction period for deer and elk differs from that of the San Juan/San Miguel Resource Area (Dec.1	• Improve consistency and certainty in the application of these stipulations. Identify those projects where these stipulations are not necessary. Define the threshold(s) for application of these stipulations. Define "routine" maintenance and determine whether the restriction periods apply under these circumstances. Consider application of a decision tree/screen to determine how projects will be stipulated (if at all) for big game, raptors, and other species. • Address all the other deficiencies and questions listed in the preceding column. • Develop protective measures for bighorn sheep and pronghorn.

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
	through April 15). The restriction period for bald eagle differs from that of the CDOW's recommended buffer zones and seasonal restrictions. • Temporal buffers are provided—what about spatial buffers (such as no surface occupancy around bald eagle or raptor nests).	
All Management Units (Unit 10 was specifically identified for this value) • Disturbances will be minimized in elk calving areas from May 1 through June 15.	**No:** See comments above.	See comments above.
Management Unit 1, 2 • Bighorn sheep may be transplanted into the Winter Mesa area (Unit 1) if they will not conflict with livestock. The objective would be to reestablish this species in historically occupied habitat, increase total population numbers, and ensure species viability in the region. Habitat in the Camel Back-Roubideau Creek area (Unit 2) will be available for possible introduction of desert bighorn sheep to increase population numbers and genetic diversity.	**Yes:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands.	• Management actions will continue to maintain and enhance current desert bighorn populations and consider future reintroductions. Include coordination with CDOW.
• Land treatment projects designed to improve livestock forage and winter range will be developed. As additional forage becomes available, livestock will have priority for allocation; additional forage will be available for wildlife only if not needed by livestock.	**No:** This decision implies that grazing decisions and needs will take precedence over wildlife habitat values. This is not consistent with the intent of FLPMA or our public land health standards. (see comments)	• If so determined, livestock improvements will be developed and the area will be managed primarily for livestock *provided public land health standards are achieved for plant and animal communities.*
• Wildlife will have first priority for all additional forage made available as a result of rangeland	**No:** Again, this decision suggests that grazing decisions and needs	• Regardless of funding source or otherwise, both uses and values are to be

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
improvement projects designed to improve wildlife habitat funded by non-BLM sources.	will take precedence over wildlife habitat values. This is not consistent with the intent of FLPMA or our public land health standards.	achieved to the extent possible *provided public land health standards are achieved for plant and animal communities.*
Management Unit 2 • The management unit will be managed to improve the areas' capabilities to support wintering deer, elk, and bighorn sheep populations. All other land uses will be permitted if they do not degrade the areas' winter range capabilities.	**Yes:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands.	• Management for big game values should not result in detrimental or deleterious conditions for non-game species.
Management Unit 7 • Wildlife will have priority for forage allocations on crucial deer and elk winter range	**Yes:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands.	• Management for big game values should not result in detrimental or deleterious conditions for non-game species.
Management Unit 10 • The management unit will be managed to enhance its use as an elk calving area. • Habitat in elk calving areas will be improved, and wildlife will have first priority for allocation of new forage. • A habitat management plan will be prepared to improve elk calving habitat.	**Yes:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands.	• Management for big game values should not result in detrimental or deleterious conditions for non-game species.
SAN JUAN/SAN MIGUEL RMP		
All Emphasis Areas • Protection, maintenance, and enhancement of critical habitats for big game. Seasonal restrictions will continue to be applied where they are needed to mitigate the impacts of human activities on important seasonal wildlife habitat. The major types of seasonal wildlife habitat and the time periods when restrictions may be needed include elk and mule deer	**No:** While the decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands, the following questions remain unanswered: • What is our threshold—surface disturbance? • Does this stipulation apply to permitted area routine maintenance activities (such	• Management for big game values should not result in detrimental or deleterious conditions for non-game species. • Improve consistency and certainty in the application of these stipulations. Identify those projects where these stipulations are not necessary. Define the threshold(s) for

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
winter range (December 1-April 15) and elk calving grounds (May 1-July 15).	as ROWs)? • Under what circumstances would we permit a variance, exception, or modification to these timing restrictions? Consultation with CDOW on big game timing exceptions should be specified. • Which habitat types are we referring to—all winter range types except "general winter range" which is ubiquitous in the planning area? These terms should be made consistent with CDOW's since we base our decisions largely on their species/ habitat Geographic Information System models and maps. • How will we treat winter concentration areas, severe winter range, and roosts for bald eagles? The seasonal restriction period for deer and elk differs from that of the Uncompahgre Basin RMP area (December 1-April 30). The restriction period for bald eagle differs from that of the CDOW's recommended buffer zones and seasonal restrictions.	application of these stipulations. Define *routine maintenance* and determine whether the restriction periods apply under these circumstances. Consider application of a decision tree/screen to determine how projects will be stipulated (if at all) for big game, raptors, and other species. • Address all the other deficiencies and questions listed in the preceding column.
• A goal of this land use plan (subject to the availability of funds and workforce needed to complete wildlife habitat improvements) will be to manage the habitat for current levels of deer and elk (20,000 and 1,600, respectively). Vegetative resource monitoring may indicate that wildlife reductions are needed in localized areas to maintain use within the carrying capacity. The	**Yes:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands.	• Coordinate with CDOW to set feasible population objectives within natural carrying capacity.

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
reductions may be shared with domestic livestock depending on monitoring results.		
Multiple Emphasis Areas • Manage for 300 head of pronghorn antelope and allow for reintroducing (not to exceed a total of 300) bighorn sheep in the Dolores River Canyon.	**Yes and No:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands.	• Communicate with CDOW to determine whether the herd size goal is still within reason and whether reductions or augmentations are necessary.
Emphasis Area A • Allow CDOW to expand pronghorn herds.	**Yes:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands. Uncertain whether this decision was implemented and CDOW still intends to augment/expand this herd.	
Emphasis Area B • Manage big game for the following numbers of animals, subject to monitoring results and availability of funds and personnel to implement needed improvements: ○ 20,000 mule deer ○ 1,600 elk ○ 300 antelope ○ 300 big horn sheep	**Yes and No:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands.	• Communicate with CDOW to determine whether the herd size objectives are still within reason and whether reductions or augmentations are necessary.
Emphasis Areas C, D • Allow for introduction of bighorn sheep along Dolores River.	**Yes and No:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands.	• Communicate with CDOW to determine whether the herd size goal is still within reason and whether reductions or augmentations are necessary.
UNCOMPAHGRE BASIN FIRE MANAGEMENT AMENDMENT		
All Management Units • Improve the UFO's ability to use fire as a management tool to enhance deer and elk habitat, especially winter range and other crucial habitats.	**Yes:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands.	

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
• A central aspect of this action was to improve the UFO's ability to use fire as a management tool to enhance deer and elk habitat, especially winter range and other crucial habitats. The EA amended the RMP to allow the use of fire through prescribed and planned ignitions on all 483,037 acres within the planning area. Prior to the amendment, only about 25% of the planning area had fire identified as an acceptable and usable management tool.		
FISH AND RIPARIAN		
UNCOMPAHGRE BASIN RMP		
Management Units 1, 2, 3, 5, 7, 8, 9, 10, 13, 14, 15, 16 • Riparian zones and aquatic habitats will be inventoried and monitored where necessary to provide information to determine proper management.	**Yes:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands.	• Include example protocols for these assessments (such as proper functioning condition), perhaps in Appendix format. Acknowledge that protocols may change based on new information.
Management Units 1, 2, 3, 5, 7, 8, 9, 10, 13, 14, 15, 16 • Riparian vegetation conditions and streambank cover will be maintained and improved.	**Yes** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands.	• The decision falls short of providing a firm, quantifiable objective. What percentage of the planning area should meet these standards/criteria and by what time? In addition, some sites require maintenance and not improvement.
Management Units 1, 2, 3, 5, 7, 8, 9, 10, 13, 14, 15, 16 • Measures designed to minimize site-specific riparian and aquatic deterioration will be required in site-specific plans for surface-disturbing land use activities.	**Yes** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands.	• Include a reference to the Colorado Public Land Health Standards. • Include minimization measures or a list of recommended measures for management consistency and efficacy. Include standard

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
		minimization measures, perhaps in Appendix format. Acknowledge that measures may change in the future based on new information.
Management Unit 7 • Riparian/aquatic zones up to one-quarter mile wide will be protected. Activities that disturb these areas could be approved on a site-specific basis after consultation with affected entities and development of mitigating measures.	**Yes, in part:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands. However, the language "up to one-quarter mile wide" is misleading. Do they mean a minimum of a one-quarter mile buffer?	
Management Unit 9 • The management unit will be managed to restore and enhance riparian vegetation along 40 miles of streams. • Objectives and projects designed to accelerate improvement of species diversity, streambank cover and stability, and instream structure, and to raise the water table will be incorporated into existing activity plans or developed in new riparian/ aquatic system management plans. • Riparian Improvement Plans will be prepared and designed to accelerate the improvement of riparian vegetation. • All areas will be intensively monitored for vegetation, aquatic habitat, and erosion conditions.	**Yes:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands.	
SAN JUAN/SAN MIGUEL RMP		
All Emphasis Areas Protection, maintenance, and enhancement of the following: • Wetland and riparian habitats • Existing or potential fish habitat	**Yes:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands.	

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
• Objectives to protect or improve aquatic and riparian habitat will become part of allotment management plan and habitat management plans. Develop needed habitat management plans and improvements for implementation (including monitoring plans).	**Yes:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands.	
• Management actions within flood plains and wetlands will include measures to preserve, protect, and, if necessary, restore their natural functions (as required by Executive Orders 11988 and 11990).	**Yes:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands.	
• Management techniques will be used to minimize degradation of aquatic and riparian habitats. Bridges and culvert installations will be designed to maintain adequate passages for fish.	**Yes:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands.	
• Fish stocking proposals will be evaluated, and recommendations will be made to the CDOW.	**Yes** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands.	
Multiple Emphasis Areas • The following riparian areas should be managed to improve aquatic and(or) riparian habitat; Roc, North Mesa, South Mesa, La Sal and Dry creeks; the East and West forks of Dry Creek Canyon; and Cross, Cow, Cahone, Hovenweep, and Bridge canyons.	**Yes:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands.	
• Improve aquatic and riparian habitat on these areas listed in priority order: the upper San Miguel River and its tributaries (44 miles), the upper Dolores River and its tributaries (30 miles), and the lower San Miguel River and its tributaries (20 miles).	**Yes:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands.	

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
Emphasis Area A • All perennial streams within the planning area that have the potential of providing quality fisheries or riparian habitat should receive special management consideration through the activity planning process to maintain, improve, or enhance resource conditions associated with aquatic and riparian habitat.	**Yes:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands.	
Emphasis Area B • Complete habitat improvements. Invest wildlife funds for structural improvements and vegetation restoration projects to improve high priority riparian habitat at the following drainages: Rock, North and South Mesa, La Sal, Dry Creeks (East and West Forks, Dry Creek Canyon); and Cross, Cow, Cahone, Hovenweep, and Bridge Canyons	**Yes:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands.	
• Improve or enhance aquatic/riparian habitat on the following priority areas: -Upper San Miguel River and its tributaries (44 miles) -Lower San Miguel and its tributaries (20 miles) -Upper Dolores River (30 miles) • Develop aquatic/riparian habitat management plans for these above three priority areas (including intensive monitoring plans).	**Yes:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands.	• A detailed plan with specific objectives is critical to ensuring that appropriate monitoring occurs. However, we should consider applying a timeframe commitment for completing the monitoring plan.
Emphasis Area C • Improve fishery values on Dolores and San Miguel (including Beaver and Fall Creeks) rivers to improve recreation values. Also, improve recreation access to Beaver Creek and San Miguel River.	**Yes:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands.	• Coordinate and communicate with CDOW on these efforts.
Emphasis Area D • Allow non-impairing aquatic/riparian improvements	**Yes:** The decision meets the overall objective to maintain and	

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
(Dolores River WSA).	enhance fish and wildlife habitats on public lands.	
Emphasis Area J • Coordinate efforts on a case-by case basis to ensure aquatic/riparian resources are protected and, in some cases, improved.	**Yes:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands.	
Emphasis Area L • Invest wildlife funds for structural improvements and vegetation restoration projects to improve the following high priority riparian habitats: Cross, Cow, Cahone, Hovenweep, and Bridge canyons.	**Yes:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands.	
BIRDS		
SAN JUAN-SAN MIGUEL RMP		
All Emphasis Areas • Protection, maintenance, and enhancement of critical habitats for waterfowl and upland game birds.	**Yes:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands.	
Emphasis Area A • Allow CDOW to introduce Chukar.	**Yes:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands.	Uncertain whether this decision was implemented and CDOW still intends to introduce this species.
Emphasis Area B • Maintain or improve habitat for migratory bird species of high federal interest.	**Yes:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands.	• In accordance with the Migratory Bird Treaty Act and BLM Interim Guidance (IM No. 2008-050) for Executive Order 13186, the UFO evaluates and discloses proposed activity impacts on migratory bird populations and applies mitigation measures as necessary.

MANAGEMENT ISSUES NOT ADEQUATELY ADDRESSED

- Current management applies a number of restrictions to protect wildlife. However, as with the Uncompahgre Basin Resource Area, not all of these are specifically provided for in the RMP. Instead, we base these decisions on laws (such as the Migratory Bird Treaty Act and ESA), policies (such as BLM Manual 6840), or the precept that we are applying measures which are consistent with the overall intent and objectives of the RMP. For the San Juan/San Miguel RMP, stipulations are provided in the Oil and Gas Leasing Amendment. These restriction periods are reiterated in the Seasonal Wildlife Restrictions table (see General Decisions above).

  The RMP language is vague in defining the types of activities (such as surface disturbance and human presence) to which the restrictions would apply. These standards should be codified in detail for all restrictions, stipulations, and mitigation pertaining to wildlife and fisheries. It is also important that these stipulation prescriptions be qualified by stating that they are based on our best and current knowledge of the resources and issues, are subject to change, and that a list of the most current stipulations can be obtained at the UFO administrative headquarters in Montrose, Colorado.
- Wildlife and fisheries restrictions (stipulations) are inconsistent or unidentified in the document. First, restrictions are inconsistent between the Uncompahgre Basin and San Juan/San Miguel resource areas. Second, prescribed seasonal restrictions are inconsistent with some of CDOW's recommended timeframes and terminology. For instance, for deer and elk habitats, the BLM applies the term "crucial" winter range. CDOW uses other categories such as "winter range," "severe winter range," and "winter concentration." Because the UFO bases its assessments and management prescriptions primarily on CDOW and other partner data, habitat nomenclature needs to be defined in relation to partner data and/or partner terminology needs to be applied. (Important: general "winter range" is ubiquitous in the resource area, and it does not make sense to restrict human activities at that extent or level)
- Restrictions are provided for bald eagles, peregrine falcons, and their habitats. However, no restrictions are provided or recommended for other raptors.
- In accordance with the Migratory Bird Treaty Act and BLM Interim Guidance (IM No. 2008-050) for Executive Order 13186, the UFO evaluates and discloses proposed activity impacts on migratory bird populations and applies mitigation measures as necessary. The RMP does not include this provision.
- The RMP does not prescribe conditions under which wildlife and fisheries restrictions/ stipulations may be waived, excepted, or modified.
- There are no references to landscape context for species conservation. A landscape approach should include a treatment/analysis of habitat cores (protected areas), core peripheries (restricted areas), and movement corridors to sustain biodiversity.

- Document appears to confuse resource objectives and decisions. The revised RMP should contain clear goals (indicating what we want to achieve overall), objectives (defining our measure of success), and decisions (identifying the specific actions we will take to accomplish our objectives).

B. POTENTIAL NEW DECISIONS FOR THE RMP REVISION

- Codify specific mitigation measures, conditions of approval, and BMPs by species and/or taxa based on the best and most current scientific information. Identify specific publications, research, and other guidance upon which measures are based, and use terminology that is consistent with our sources. Consider direct, indirect, and residual impacts, and temporal and spatial factors. Identify which types of activities—based on timing, intensity, frequency, duration, and site context—will likely be subject to stipulations. This may be based on a decision tree or screen such that projects that have negligible or immeasurable impacts (such as patching a barbwire fence) are not subject to unnecessary restrictions and may proceed provided all other procedural requirements (including NEPA and Section 7 consultation) are addressed. Identify the specific circumstances under which exceptions or variances to seasonal and other restrictions would be granted, if at all. Include a prescription or protocol for handling exception and variance requests and include a stated commitment to coordinate and consult with CDOW on big game and, if necessary, on other species (including species of concern).
- The BLM will work with CDOW and other partners to improve our base knowledge of special status raptor nests and concentration areas across the planning area.
- Require development proponents to perform raptor nest inventories in potential nest habitat. When possible, inventories will allow for a full nesting sequence for investigation prior to project implementation.
- Prohibit disruptive land use activities within a one-quarter mile radius of active raptor nest sites during the period from nest territory establishment to dispersal of young. If nest status is undetermined (meaning that there is no established history of nest use), the buffer and restriction period would apply during the regular breeding season for the species of interest (as determined by a BLM biologist). Exception and modification provisions will provide flexibility in implementing the stipulations, and allow site-specific tailoring of prescriptions to ensure protection of identified values without unnecessarily hindering other land use activities. If the nest is inactive based on at least two consecutive years of surveys, the above seasonal restriction would not apply.
- Prohibit disruptive surface occupation or adverse habitat modification within one-eighth mile of functional nest sites of non-special status raptor species. Exception and modification provisions will provide flexibility in implementing the stipulations

and allow site-specific tailoring of prescriptions to ensure protection of identified values without unnecessarily hindering other land use activities.

- Develop and maintain a list of local species of concern based on the best and most current information. This list would likely include species not federally listed or identified by BLM as sensitive (such as burrowing owls, bighorn sheep, and white-tailed prairie dogs) that may require special management attention. Where applicable, these species will be analyzed and documented through NEPA.
- Identify and define specific overarching objectives for fish and wildlife and their habitats. The current plans appear to confuse resource objectives and decisions. These should be clearly defined as our overarching goals (what we want to achieve overall), objectives (how we plan to get there), and decisions (the specific actions we will take to accomplish our objectives).
- Coordinate with CDOW to consider options for big game herd reductions where carrying capacities have been exceeded.
- In accordance with the Migratory Bird Treaty Act and BLM Interim Guidance (IM No. 2008-050) for Executive Order 13186, evaluate and disclose proposed project impacts on migratory bird populations and apply mitigation measures as necessary such that species and population viability are not negatively affected. Mitigation measures will rely heavily on protecting nesting raptors such that surrogate protection is afforded to bird communities across the landscape.
- To the extent possible, apply conservation measures provided in the 2009 UFO Migratory Bird Analysis Report.
- Base management on an ecological, landscape-level approach and include an analysis and prescription for habitat cores (protected areas), graduated peripheries (variegated levels of restricted areas), and movement corridors to sustain biodiversity. Previous management approaches by management unit or emphasis area, are predominantly commodity-driven and not compatible, over the long-term, with maintaining viable plant and animal communities.
- Define *routine maintenance* and identify triggers for analysis and biological clearance. Standard stipulations for feature maintenance should be considered. Routine maintenance for human developments (such as fences, communication sites, and roads) is generally allowed for in the various permit types. Given the extent and number of human developments across public lands and, consequently, the continuous maintenance of these features, there are untold impacts on wildlife, fish, and their habitats. Many of these activities may be in violation of ESA, FLPMA, BLM policy, and other guidance.
- Identify policies for imposing stipulations on projects that occur on split-estate or private lands that may occur as part of a connected action.
- For areas not meeting LHA standards, or meeting with problems, prescribe measurable goals for remediation. For example, each year, 1,000 acres of pinyon-

juniper habitat will be treated for recovery so that by 2020, approximately 15,000 acres of unhealthy pinyon-juniper will meet or trend toward desired conditions. Success will be systematically monitored and reported. Focus efforts on areas of relative ecological importance (see below).

- Vegetation treatments will be developed such that habitat quality takes precedence over quantity or total area treated. If we are confident high quality habitats will be achieved, that desired conditions will be achieved with minimal impact on species, treatments may be extended to cover more area. Whenever possible, multiple species will be considered in the design of habitat treatments.
- Road density objectives will be prescribed through travel management planning in areas of high ecological value (see below) or other sensitive areas.
- Apply no surface occupancy and timing limitation stipulations, where appropriate, to all permitted surface use activities through various use authorizations or leasing processes. These protective stipulations will be applied to surface use activities associated with existing land use authorizations, as mitigation measures, or conditions of approval during the NEPA process.
- Acquisition of water rights to meet minimum instream flow requirements of public land cold-water fisheries will be pursued in cooperation with the Colorado Division of Wildlife and the Colorado Division of Water Resources. The needs of other native fisheries will be considered as well.
- Include stipulations for Rocky Mountain bighorn sheep and pronghorn antelope crucial habitats, including parturition and winter types.

C. AREAS OF RELATIVE ECOLOGICAL IMPORTANCE TO GUIDE LAND USES AND MANAGEMENT

Areas of high ecological value—areas where management should focus most of its enhancement, maintenance, and/or protection efforts—include the following vegetation and habitat types: riparian and wetlands, pinyon-juniper communities, sagebrush communities, raptor breeding habitats, and big game crucial winter range and production types.

4.1.7 ☀Special Status Species

A. ABILITY OF CURRENT MANAGEMENT DIRECTION TO ACHIEVE DESIRED FUTURE CONDITIONS AND ADDRESS RESOURCE DEMANDS

Population and habitat objectives, or desired future conditions, are poorly defined for wildlife, fish, and habitats. Perhaps the best model we have to describe desired future conditions are the broad criteria provided by the Colorado Standards for Public Land Health. Standard 4 on Special Status Species requires the following: Special status, threatened and endangered species (federal and state), and other plants and animals officially designated by the BLM, and their habitats are maintained or enhanced by sustaining healthy, native plant and animal communities. Indicators such as species diversity and resiliency are used to gauge our success at achieving these standards. When we have identified specific objectives (such as those based on recovery plans), long-term monitoring is often lacking, making it difficult to determine whether these standards are being achieved or we are making progress toward those goals.

The majority of land health problems in the planning area are thought to be caused by an array of past and present land use activities. (See the Trends subsection of Section 2.1.6.) FLPMA's multiple use mandate places considerable pressure on fish, wildlife, and habitats. Many values are conflicting, such as oil and gas development and wildlife habitat enhancement. Mitigation and restrictions for projects on public lands are, in reality, short-term measures that fail to remedy larger, landscape level problems such as habitat fragmentation and loss. Although necessary and beneficial, such measures are not as effective as proactive, enhancing, conservation efforts and planning. Nevertheless, current human activities and resource demands are expected to continue and likely increase. Viability and persistence of animal and fish populations will depend largely on the ability of a species to adapt and the ability of a landscape to recover in the face of these pressures.

Staffing, funding, and time limitations inhibit the ability to achieve objectives aimed at benefitting fish and wildlife. BLM biologists are tasked with evaluating and clearing nearly every project or action proposed on public lands. Over 80 species of concern or interest and their habitats occur across the planning area. Evaluating the impacts of multiple, concurrent projects, and effectively mitigating those impacts on resources, is a time-consuming and complex undertaking. In addition, such actions are subject to legislative provisions and rigorous procedure. These workloads are currently handled by one fulltime biologist and partial assistance from two other specialists.

Funding does not appear to be as problematic as staffing. While base funding is typically adequate and flex dollars are often awarded for select projects, staffing is not available in proportion. Additional, full-time biological help is crucial to improving our ability to achieve

our resource and program objectives. Current trends suggest these challenges will continue into the future.

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
MULTIPLE SPECIES AND HABITATS		
UNCOMPAHGRE BASIN RMP		
All Management Units • Threatened and endangered species and unique plant associations will be inventoried and monitored where necessary to provide information to determine proper management.	**Yes:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands.	
• Clearances will be conducted on all proposed surface-disturbing activities, and the FWS will be consulted as required.	**Yes:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands and is consistent with applicable laws and policies.	• Develop standard, species-specific survey protocols and mitigation measures or restrictions to protect and maintain wildlife, fish, and habitats. • The San Juan-San Miguel RMP states that "no activities will be permitted in threatened, endangered, or sensitive species habitat that would jeopardize their continued existence." The revised RMP should include a similar statement of policy for T&E species. • Policies on Section 7 consultation requirements, T&E management, and terminology should be made consistent with BLM Manual 6840.
• Measures designed to protect threatened and endangered species and their habitat will be required in all land use activity	**Yes**	

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
plans.		
(**Management Units 3, 5, 8, 9, 13, 14, 15 were specifically identified for this value**.) • Supplemental releases and reintroduction of federal and state listed endangered, threatened, and candidate species may be authorized following environmental analysis and consultation with the FWS, CDOW, and other affected parties.	**Yes**	
STANDARDS FOR PUBLIC LAND HEALTH AND GUIDELINES FOR LIVESTOCK GRAZING MANAGEMENT IN COLORADO - AMENDS BOTH RMPS		
• Establish standards and criteria for healthy plant and animal communities, healthy riparian communities, and healthy aquatic resources • Adopted standards 2-5 for terrestrial and aquatic resources • As of 2008, all of the UFO has been evaluated according to these standards, appropriate management changes were implemented as necessary, and future evaluations will continue to monitor land health	**Yes**	
LAND DISPOSAL AMENDMENT FOR THE UNCOMPAHGRE BASIN RMP		
• Acquire lands to improve and benefit public lands and resources. • "In [land] exchanges, sensitive or critical habitats…would be acquired [where possible]. This would have a positive impact on public lands and resources as a whole." (The document contained no other references or decisions that might affect fish or wildlife resources.)	**Yes:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands and is consistent with applicable laws and policies.	• Stress greater importance and consideration for unique and rare habitats (such as sagebrush, pinyon-juniper, and salt-desert)

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
GUNNISON TRAVEL ANALYSIS AREA TRAVEL RESTRICTION EA FOR PORTIONS OF THE UNCOMPAHGRE BASIN RESOURCE AREA		
• Reduce OHV-related impacts on terrestrial and aquatic wildlife and habitats. • Restrict OHV (ATVs, motorcycles, and 4-WD vehicles) and mountain bike travel to existing, established routes within the planning area; i.e., eliminated authorized cross-country, off-route travel by motorized and mechanized vehicles to minimize impacts on biological resources	**Yes:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands.	• Implement methods for encouraging compliance and monitor management effectiveness.
COLORADO OIL AND GAS LEASING AMENDMENT		
• Standardize oil and gas leasing, exploration, and development and mitigate impacts on wildlife and biological resources. • Lease stipulations will be attached to mitigate impacts on wildlife and habitats • On-sites will be conducted and biological surveys conducted by qualified individuals • Conditions of Approval will be attached to Applications for Permit to Drill to mitigate impacts on wildlife and habitats	**Yes:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands.	• At the field office level, formulate and update BMPs and lease notices or stipulations and acquire approval/ signature from state office level, if necessary.
UNCOMPAHGRE BASIN RMP		
Management Unit 8 • Prior to management of the area for ORV use, an inventory will be conducted to identify threatened and endangered plant populations. • The OHV management unit's proposed boundary will be adjusted to exclude threatened and endangered plants. If plants or plant communities cannot be	**Yes:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands and complies with applicable laws and policies.	

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
excluded from the management unit, protective fencing or other measures will be implemented to protect the plants. • The FWS will be consulted. • Measures designed to protect threatened and endangered species and their habitat will be incorporated into all activity plans.		
Management Unit 13 • The entire management unit is designated as the Fairview Research Natural Area/ACEC. • Plant monitoring studies will be developed in cooperation with the Colorado Natural Areas. • A management plan will be developed for this unit and intensive studies established to increase our basic knowledge about these threatened and endangered species. • Program actions designed to improve habitat conditions will be initiated. • Surface-disturbing activities will be restricted to protect threatened and endangered species and their potential habitat.		
Management Unit 14 • Needle Rock Outstanding Natural Area/ACEC (although not specified in the RMP, the area harbors several rare and sensitive species, plants and animals) • Measures designed to protect threatened and endangered species and their habitat will be incorporated into all activity plans.	**Yes:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands and complies with applicable laws and policies.	
Management Unit 15	**Yes:**	

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
• The management unit contains populations of the threatened Uinta Basin hookless cactus and is potential habitat for the endangered clay-loving wild buckwheat and the candidate Montrose penstemon • The Adobe Badlands Outstanding Natural Area/ ACEC will be managed to protect its unique scenic qualities and threatened and endangered species' habitats, and to reduce active erosion. • A management plan will be developed for this unit and intensive studies established to increase our basic knowledge about these threatened and endangered species. • A complete inventory for threatened and endangered species will be conducted. Research and monitoring studies will be established.	The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands and complies with applicable laws and policies. The Montrose (or Adobe) penstemon is no longer a candidate or special status species.	
Implementation Priorities: 1. Conduct a threatened and endangered species inventory of Management Unit 8 (completed). 2. Prepare a management plan for Management Unit 13 (completed). 3. Establish studies in Management Unit 13 (several studies ongoing). 4. Conduct a threatened and endangered species inventory in Management Unit 15 (several inventories conducted to date). 5. Conduct threatened and endangered species clearances on potential disposal tracts (Ongoing). 6. Continue general monitoring of threatened and endangered species.	**Yes:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands and complies with applicable laws and policies.	• Identify priorities for continuation, as well as new priorities for implementation (since many have been completed).

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
SAN JUAN/SAN MIGUEL RMP		
All Emphasis Areas • All monitoring will be conducted according to BLM manuals and policies. A detailed wildlife monitoring plan for the planning area will be used. Monitoring for all wildlife species will be closely coordinated with the CDOW and the FWS.	**Yes**	
• No activities will be permitted in threatened, endangered, or sensitive species habitat that would jeopardize their continued existence.	**Yes:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands and complies with applicable laws and policies.	• The San Juan-San Miguel RMP states that "no activities will be permitted in threatened, endangered, or sensitive species habitat that would jeopardize their continued existence." A similar statement of policy should be carried forward in the revised RMP. • Policies on Section 7 consultation requirements, T&E management, and terminology should be made consistent with BLM Manual 6840.
• CDOW and the FWS will be consulted prior to implementing projects that may affect threatened and endangered species' habitat. If such a situation is determined through the BLM biologic assessment process, then consultation with the FWS will be initiated as per Section 7 of the Endangered Species Act of 1973, as amended.	**Yes and No:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands and complies with applicable laws and policies. Consultation with CDOW is not required by law.	• Due to time and budget constraints, consultation with CDOW for T&E species should not be stipulated. Effects and mitigation on these species are adequately addressed through the Section 7 process and a projects' effects on species are tracked through other means,

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
		according to ESA (specifically, annual data requests for projects which underwent consultation for "may affect" situations)
• No activities will be permitted in threatened, endangered, or sensitive species habitat that would jeopardize their continued existence.	**Yes:** This specific language ensures that the purpose and intent of ESA is fulfilled, that BLM has complied with the law's purpose. It also avoids difficult decisions—i.e., we have sidebars.	• A similar statement of policy should be carried forward in the revised RMP.
• T&E species will be protected and the habitat generally enhanced through the implementation of habitat management plans. Key habitats identified in the RMP include raptor winter concentration areas; aquatic/ riparian; and threatened and endangered species habitat. Priority will generally be given to the development of a habitat management plan for T&E species. Development of habitat management plans for terrestrial and aquatic species will be closely coordinated with CDOW, the USFS, and where appropriate, the FWS. Project development will require input from all resource programs to assess impacts through the environmental process.	**Yes:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands and complies with applicable laws and policies.	• Develop standard, species-specific survey protocols and mitigation measures or restrictions to protect and maintain wildlife, fish, and habitats. • A detailed plan with specific objectives is critical to ensuring that appropriate monitoring occurs. However, we should consider applying a timeframe commitment for completing the monitoring plan.
• The BLM wildlife habitat management program will place special emphasis on, but is not limited to, the protection, maintenance, and enhancement of habitat for state or federally listed threatened and/or endangered species.	**Yes**	

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
• Seasonal restrictions will continue to be applied where needed to mitigate the impacts of human activities on important seasonal wildlife habitat. The major types of seasonal special status wildlife habitat and the time periods when restrictions may be needed include the following: ○ Eagle winter concentration areas (12/1 - 4/15) ○ Sage grouse strutting grounds (3/15 - 5/15) ○ Peregrine falcon habitat (3/1 - 9/1)	**Yes and No:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands and complies with applicable laws and policies. The seasonal restriction for peregrine falcon may not be appropriate under current management direction as this species was delisted in 1999. Other restrictions will be necessary, but may be less stringent. The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands. What is our threshold—surface disturbance? Does this stipulation apply to permitted area routine maintenance activities (such as ROWs)? Need to define under what circumstances the BLM would permit a variance, exception, or modification to these timing restrictions. For the bald eagle, which habitat types are we referring to—all winter range types except "general winter range" which is ubiquitous in the planning area? Winter concentration areas, severe winter range, and roosts for bald eagles should be addressed. The restriction period for bald eagles differs from CDOW's recommended buffer zones and seasonal restrictions. Temporal buffers are provided—but not spatial buffers (such as no surface occupancy around bald eagle or raptor nests).	• Develop standard, species-specific survey protocols and mitigation measures or restrictions to protect and maintain special status wildlife, fish, and habitats. Include other restrictions such as protection buffers, or "no surface occupancy." • Improve consistency and certainty in the application of these stipulations. Identify those projects where these stipulations are not necessary. Define the threshold(s) for application of these stipulations. Define "routine" maintenance and determine whether the restriction periods apply under these circumstances. Consider application of a decision tree/screen to determine whether and how projects will be stipulated for big game, raptors, and other species. • As we base BLM decisions largely on CDOW's species and habitat Geographic Information System models and maps, use terminology consistent with CDOW's. • Address all other deficiencies and questions listed in the preceding column.

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
		• Need to bolster measures to protect sage grouse—buffer zones, site-specific relocation of developments (in order to protect sagebrush stands).
Emphasis Area A • Maintain or improve historically occupied or potentially suitable threatened and endangered species habitat. • Maintain or improve habitat for sensitive plants, wildlife, and migratory bird species of high federal interest. • Continue management of Paradox peregrine falcon eyries • Continue management of bald eagle nests and winter eagle concentration areas.	**Yes:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands and complies with applicable laws and policies. **Yes** **Yes** **Yes**	
Emphasis Areas B, C, D • Reestablish river otters in the Dolores River.	**Yes**	
Emphasis Area B • Continue to monitor and provide protection for endangered, candidate, and sensitive plant species in Paradox Valley and Spring Creek.	**Yes**	
Emphasis Area C • Continue to provide necessary management for T&E species.	**Yes and No:** Language is vague.	
Emphasis Area D • Provide protection for sensitive plant species in the Coyote Wash area of Dolores Canyon.	**Yes:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands and complies with applicable laws and policies.	

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
• Permit fish and wildlife research or inventories. • Allow natural distribution and population of vegetation and wildlife species indigenous to area to maintain natural balance with each other, their habitats, and man.	**Yes** **Yes**	
Emphasis Areas E, I • Protect T&E species and maintain or improve their habitats. Provide for minimal investments to enhance key wildlife species.	**Yes**	
Emphasis Area F Continue to manage T&E species habitat to protect species.	**Yes**	
Emphasis Area G • Protect T&E species and maintain or improve their habitats.	**Yes**	
Emphasis Area H • Provide for T&E species inventories and clearance prior to disposal.	**Yes**	
Emphasis Area J • Protect T&E species and maintain or improve their habitats. Provide investments to enhance wildlife species which will benefit from uneven-aged timber management.	**Yes and No:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands. The decision implies that timber needs and values will take precedence over wildlife habitat values. Both values should be attained across the area to the extent possible.	• Consider needs of species that select for even-aged timber stands.
Emphasis Area K • Protect T&E and sensitive species habitat.	**Yes:** The decision meets the overall objective to maintain and enhance fish and wildlife habitats on public lands and complies with applicable laws and policies.	
Emphasis Area L • Manage important or critical	**Yes**	

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
habitat for T&E and sensitive species to maintain viable population levels.		
All Emphasis Areas ***Priorities for implementation*** 1. Monitor, maintain, or improve sensitive habitats for threatened or endangered species. 2. Upon identification of an occupied habitat area or introduction of any T&E species into an area, a Habitat Management Plan would be initiated as funding is available. 3. Monitor, maintain or improve winter raptor concentration areas.	**Yes**	

MANAGEMENT ISSUES NOT ADEQUATELY ADDRESSED

Both RMPs

- Current management applies a number of restrictions to protect wildlife, not all of which are specifically provided for in the RMPs. Instead, many of these decisions are based on laws (including the Migratory Bird Treaty Act and ESA), policies (such as BLM Manual 6840 - Special Status Species Management), or the precept that we are applying measures which are consistent with the overall intent and objectives of the RMP. Detailed codified standards should be developed for all restrictions, stipulations, and mitigation related to special status species. This would be best presented in an appendix or similar format. It is also important that these stipulation "prescriptions" be qualified by stating that they are based on our best and most current knowledge of the resources and issues, that they are subject to change, and that a list of the most current stipulations can be obtained at the UFO headquarters in Montrose, Colorado.
- Special status species restrictions (stipulations) are inconsistent or unidentified in the RMPs. Restrictions are inconsistent between the Uncompahgre Basin and San Juan/San Miguel resource areas. In addition, prescribed seasonal restrictions for some species (such as peregrine falcons) are inconsistent with some of CDOW's recommended timeframes and terminology. For instance, the BLM uses the term "crucial" winter range in reference to deer and elk habitats, while CDOW uses other categories (such as "winter range," "severe winter range," and "winter concentration"). Because the UFO bases its assessments and management

prescriptions primarily on CDOW and other partner data, define habitat nomenclature in relation to partner data and terminology.

- Restrictions are provided for bald eagles, peregrine falcons, and their habitats. Provide restrictions or recommended measures for other sensitive species such as ferruginous hawks, Gunnison prairie dogs, and sensitive reptiles.
- Neither RMP prescribes conditions under which wildlife and fisheries restrictions and stipulations may be waived, excepted, or modified.
- Prescribing wildlife and habitat stipulations (and other management approaches) by management unit or geographic area is short-sighted and inflexible. The approach is based on commodity production and fails to consider biological and ecological constraints. As the distribution and legal status of species changes constantly, apply stipulations to protect species resource-wide, as necessary and wherever conditions warrant.
- There are no references to landscape context for species conservation. A landscape approach should include a treatment and analysis of habitat cores (protected areas), core peripheries (restricted areas), and movement corridors to sustain biodiversity.
- Provide discussion related to ESA, the Migratory Bird Treaty Act, and other applicable laws and policies that provide the framework for special status species on UFO lands in the planning area.
- Policies on ESA Section 7 consultation requirements, T&E management, and terminology should be made consistent with BLM Manual 6840 (Special Status Species Management).
- Provide a more detailed description of resource divisions and management emphasis areas.
- Clearly define resource objectives and decisions with overarching goals (what we want to achieve overall), objectives (how we plan to get there), and decisions (the specific actions we will take to accomplish our objectives). Both RMPs appear to confuse these.

Uncompahgre Basin RMP and Amendments

- The San Juan/San Miguel RMP states that "No activities will be permitted in threatened, endangered, or sensitive species habitat that would jeopardize their continued existence." The Uncompahgre Basin RMP does not include a similar statement of policy for T&E species.
- The RMP is not user and manager-friendly. Information must be searched out in multiple sections, and sometimes in obscure paragraphs. A quick reference should be created so that management prescriptions are actually implemented.

San Juan/San Miguel RMP and Amendments

- Although more usable than the Uncompahgre Basin RMP, the San Juan/San Miguel RMP is not user or manager-friendly. Information must be searched out in multiple

sections, and sometimes in obscure paragraphs. A quick reference should be created so that management prescriptions are actually implemented.

B. POTENTIAL NEW DECISIONS FOR THE RMP REVISION

- Codify specific mitigation measures, conditions of approval, and BMPs for individual species and/or taxa based on the best and most current scientific information. Identify specific publications, research, and other guidance upon which measures are based and make terminology with sources as consistent as possible. Consider direct, indirect, and residual impacts, and temporal and spatial factors. Identify types of activities—based on timing, intensity, frequency, duration, and site context—that will likely be subject to stipulations. This may be based on a decision tree or screen such that projects that have negligible or immeasurable impacts (such as patching a barb-wire fence) are not subject to unnecessary restrictions and may proceed provided all other procedural requirements (such as NEPA and ESA Section 7 consultation) are addressed. Identify the specific circumstances under which exceptions or variances to seasonal and other restrictions would be granted, if at all. Include a prescription or protocol for handling exception and variance requests and include a stated commitment to coordinate and consult with CDOW for big game and, if necessary, other species (such as Colorado species of concern).
- The BLM will work with CDOW and other partners to improve our base knowledge of special status raptor nests and concentration areas across the UFO.
- Development proponents will be required to perform raptor nest inventories in potential nest habitat. When possible, inventories will allow for a full nesting sequence for investigation prior to project implementation.
- Disruptive land use activities will not be allowed within one-half mile radius of active raptor nest sites during the period from nest territory establishment to dispersal of young from nest. This measure applies to special status raptor species. Exception and modification provisions will provide flexibility in implementing the stipulations. They will also allow site-specific tailoring of prescriptions to ensure protection of identified values without unnecessarily hindering other land use activities.
- Disruptive surface occupation or adverse habitat modification will be prohibited within one-quarter mile of functional nest sites for non-special status raptor species. Exception and modification provisions will provide flexibility in implementing the stipulations. They will also allow site-specific tailoring of prescriptions to ensure protection of identified values without unnecessarily hindering other land use activities.
- Identify and define specific overarching objectives for special status species and their habitats. The current plans appear to confuse resource objectives and decisions. These should be clearly defined as to overarching goals (what we want to

accomplish overall), objectives (how we get there), decisions (specific actions we will take to accomplish our objectives).

- Base management on an ecological, landscape-level approach and include an analysis and prescription for habitat cores (protected areas), graduated peripheries (variegated levels of restricted areas), and movement corridors to sustain biodiversity. The previous approaches by management unit and emphasis area are predominantly commodity-driven and not compatible with maintaining viable plant and animal communities.
- "Routine maintenance" for human developments (fences, communication sites, roads, etc.) is generally allowed for in the various permit types. Given the extent and number of human developments across public lands and, consequently, the continuous maintenance of these features, there are untold impacts on wildlife, fish, and their habitats. Many of these activities may be in violation of ESA, FLPMA, BLM policy, and other guidance. "Routine" needs to be defined and triggers for analysis and biological clearance should be considered. Standard stipulations for feature maintenance should be considered.
- Identify policies for imposing stipulations on projects which occur on split-estate or private lands that may occur as part of a connected action.
- For areas not meeting LHA standards, or meeting with problems, prescribe measurable goals for remediation: e.g., each year, 1000 acres of pinyon-juniper habitat will be treated for recovery so that by 2020, approximately 15000 acres of unhealthy PJ will be meeting or trending toward desired conditions. Success will be systematically monitored and reported. Focus efforts on areas of relative ecological importance (see below).
- Develop vegetation treatments such that habitat quality takes precedence over quantity or total area treated. If we are confident that high quality habitats will be achieved, and desired conditions will be achieved with minimal impact to a species, treatments may be extended to cover more area. Whenever possible, multiple species will be considered in the design of habitat treatments.
- Prescribe road density objectives through travel management planning in areas of high ecological value (see below) or other sensitive areas.
- Apply No Surface Occupancy and Timing Limitation stipulations, where appropriate, to all permitted surface use activities through various use authorizations or leasing processes. These protective stipulations will be applied to surface use activities associated with existing land use authorizations, as mitigation measures, or conditions of approval during the NEPA process.
- Pursue acquisition of water rights to meet minimum instream flow requirements of public land cold water fisheries in cooperation with CDOW and the Colorado Division of Water Resources. Special status fish needs will be considered.

- Depending on the proposed action and location, the seasonal restriction (December 1 through April 30) for wintering bald eagles may also be applied to CDOW-mapped or known "winter roosts," "winter forage," and "severe winter range" areas.
- Manage special status species in compliance with BLM Manual 6840 (Revised 2008).
- New information and species status changes (such as federal listing) may warrant future designation of protected or special management areas (such as critical habitat and ACECs). Such decisions are acknowledged as a possibility and should be provided for in this RMP revision.
- Surface disturbing activities will not occur within 200 meters of known federally protected or recognized plant populations, and 100 meters of known BLM sensitive plant populations. For smaller or less intensive construction (such as trail building and hand tool work) as determined by a BLM biologist, ground disturbing activities will not occur within 100 feet of known federally protected or recognized plant species, and 50 feet of known BLM sensitive species. These buffer standards may be modified (either contracted or expanded) according to site characteristics and concerns.
- Plant survey results and clearances are generally valid for a period of three years. Conduct new surveys after a three-year period to determine whether any sensitive plants have become established in the interim within the affected area(s). Any expansion of facilities and roads outside of existing disturbances would require additional surveys and clearances.
- Formulate other mitigation measures and design features for species to be incorporated into the revised RMP.
- In coordination with CDOW, the Colorado Natural Heritage Program, Colorado Natural Areas Program, and other partners, the BLM UFO will identify potential ACEC or other special management areas to enhance protection and recognition of desert shrub and shrub steppe communities. Focus species would include prairie dogs, burrowing owl, ferruginous and Swainson's hawks, kit fox, and special status and rare plants endemic to these areas (such as Lomatium concinnum, Eriogonum pelinophilum, Sclerocactus glaucus, and Penstemon retrorsus). One area under consideration is northwest of Delta, east of Highway 50, and adjacent to the recently designated Dominguez-Escalante NCA.
- The BLM UFO will consider expansion of the South Fairview ACEC to include core occurrences of Eriogonum pelinophilum.
- The BLM UFO will consider designation of a Coyote Gulch ACEC within the Dolores River WSA to protect and enhance Erigeron kachinensis, other endemic plants, peregrine falcons, and desert bighorn herds (a BLM sensitive species).

- The BLM UFO will consider designation of a Paradox Valley ACEC to protect Lupinus crassus, Pediomelum aromaticum, other endemic plants, and peregrine falcon and raptor habitats.
- The BLM will adjust the boundaries of existing ACECs and designate new ACECs to encompass Colorado Natural Heritage Program's Potential Conservation Area units.
- Consider ACECs to protect the greenback cutthroat trout and Canada lynx. (No specific areas have been identified yet.)
- The BLM UFO will consider special winter restrictions for recreation activities in known Canada lynx habitat.
- The BLM UFO will develop a contingency plan and policy statement for how the field office intends to manage for gray wolves in the area. Although the permanent establishment of wolves is unlikely, most experts agree that it is only a matter of time before we begin seeing more wolves in the Uncompahgre Plateau-San Juan Mountain region. This may or may not entail a NEPA-level document. It is possible that the plan will be fulfilled by other means such as a Memorandum of Understanding with the FWS, CDOW, and other partners. If appropriate, the memorandum would formally adopt State of Colorado wolf management strategies.
- Agree on and implement a feasible alternative for managing conflicts involving desert bighorn sheep and domestic sheep conflicts.
- Implement appropriate mitigation measures (seasonal and spatial) for desert bighorn sheep crucial habitats. Restrict surface disturbing activities in lambing areas from May 1 through July 15. Identify other crucial habitats and mitigation measures.
- Incorporate (Gunnison and White-tailed) Prairie Dog Conservation Strategy recommendations and/or specific measures as follows: Surface disturbing activities occurring over more than one acre would not be permitted in active prairie dog towns less than 10 acres in size. These activities would be relocated outside of active prairie dog towns. To protect prairie dog pups, surface disturbing activities within prairie dog colonies would not be permitted between April 1 and June 30.

C. AREAS OF RELATIVE ECOLOGICAL IMPORTANCE TO GUIDE LAND USES AND MANAGEMENT

Areas of high ecological value—where management should focus most of its enhancement, maintenance, and/or protection efforts—include the following vegetation and habitat types:

- spruce-fir mixes
- canyon and river systems
- desert shrubland and Mancos Shale (Adobe) badlands
- riparian and wetlands including seeps and springs
- sagebrush communities.

4.1.8 ☀ Wild Horse and Burro

A. ABILITY OF CURRENT MANAGEMENT DIRECTION TO ACHIEVE DESIRED FUTURE CONDITIONS AND ADDRESS RESOURCE DEMANDS

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
SAN JUAN/SAN MIGUEL RMP		
Emphasis Area I • Remove all wild horses from the Naturita Ridge area.	**Yes:** The Naturita Ridge HA is unsuitable for a healthy and viable wild horse herd. The conflicts that were a challenge for the horse herd in 1985 continue to exist and have increased since that time. Additional fencing has further dissected the area, and the elk and mule deer herds, as well as livestock grazing, are still in place. The herd numbers of elk have increased substantially since 1985. The volume of public use on the area also continues to grow.	None

B. POTENTIAL NEW DECISIONS FOR THE RMP REVISION

Recommend that an alternative(s) in the Uncompahgre RMP re-affirm the 1985 San Juan/San Miguel RMP decision to close the Naturita Ridge HA.

C. AREAS OF RELATIVE ECOLOGICAL IMPORTANCE TO GUIDE LAND USES AND MANAGEMENT

None identified.

4.1.9 Wildland Fire Ecology and Management

A. ABILITY OF CURRENT MANAGEMENT DIRECTION TO ACHIEVE DESIRED FUTURE CONDITIONS AND ADDRESS RESOURCE DEMANDS

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
UNCOMPAHGRE BASIN RMP FIRE AMENDMENT		
All Management Units • Prescribed and planned ignitions throughout the unit will be allowed as a management tool. Prior to any ignitions, an environmental analysis, burn plan, and burning permit would be prepared or obtained.	**Yes:** This statement holds true; we still require EAs, Burn Plans, and smoke permits prior to any ignition.	
SAN JUAN/SAN MIGUEL RMP		
Emphasis Area A (Livestock Management) • Continue and expand (where appropriate) the limited fire suppression plan to enhance vegetation conditions for livestock grazing.	**No:** Revise to reflect current terminology as well as expanded to include prescribed fire and mechanical treatments.	• Utilize prescribed fire and mechanical treatments, as well as wildfires under appropriate conditions, to achieve resource objectives, including enhanced vegetation conditions for livestock management.
Emphasis Area B (Wildlife) • Provide the level of protection from wildfire that will result in least total cost and will generally enhance wildlife management values. Use prescribed fire when possible to enhance wildlife habitat.	**No:** 'Least total cost' fire management is not an appropriate goal when wildlife is involved. (It is more applicable to Fire Management Officers and line managers.)	• Utilize prescribed fire and mechanical treatments, as well as wildfires under appropriate conditions, to restore and enhance degraded wildlife habitat and maintain properly functioning habitat. • Protect important wildlife habitats from unusually severe and/or unusually large wildfires that may threaten long-term productivity and functionality.
Emphasis Area C (Recreation)	**No:**	• Utilize fire management

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
• Utilize fire management techniques that maintain long-term recreation quality objectives. Suppression of wildfires will generally occur but prescribed fire will be allowed if it will meet or exceed recreation objectives.	We have a better understanding of the role of fire in the ecosystem and should be utilizing fire as a natural process on much of the landscape. Interpretation of fire activity on the landscape can create understanding by recreationists and gain support for the use of natural processes in maintaining and enhancing functional ecosystems.	strategies (wildfire management, prescribed fire, mechanical fuels management) that maintain and enhance long-term recreation objectives. • Protect recreation infrastructure from wildfires through suppression of unwanted wildfires and through on-site fuels management. • Interpret fire management activities to educate public land users, enhance visitor experiences, and gain support for land management activities.
Emphasis Area D (Wilderness) • Perpetuate and maintain ecosystems within wilderness by natural occurrence of fire, insects, and disease. Suppression may be taken on man-caused fires, fires threatening human life and property, or fires that threaten to escape from wilderness to adjacent areas with more restrictive fire prescriptions.	**No:** Consider permitting prescribed fires to be ignited within WSAs to help restore degraded areas and natural processes.	• Perpetuate, maintain, and restore ecosystems and ecosystem processes within wilderness, utilizing both wildfire and limited prescribed fire when appropriate. • Suppression may be taken on human-caused fires, fires that threaten human life and property, fires that threaten to escape from wilderness to adjacent areas with sensitive resources, or fires that are unusually severe and large relative to the historic range of variability. (BLM policy currently states that suppression has to be taken on all human-caused fires even though the new guidance has some wiggle room here.)
Emphasis Area E (Mineral Development) • Provide a level of protection from wildfire resulting in the least	**No:** 'Least total cost' statement may not be appropriate here.	• Provide a level of protection from wildfire resulting in the protection of mineral developments on public

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
total cost and protection of mineral developments on the public lands.		lands.
Emphasis Area F (Cultural Resources) • Provide a level of protection on all fires that will protect the cultural resource values.	**Yes:** Statement is adequate.	
Emphasis Area G (Natural Resource Management) • Provide a level of protection from wildfire that will result in least total cost and will generally enhance resource conditions of the vegetation. Use prescribed fire when possible to enhance resource conditions.	**No:** Natural resource management includes wildlife, range, forestry, soils, and watershed. Perhaps the category would better describe mosaic and natural processes if renamed "Landscape Level Ecological Function." The statement should be reworded. The phrase "least total cost" does not belong here.	• Utilize prescribed fire and mechanical treatments, as well as appropriate management of wildfires, to maintain, enhance, and restore landscape scale vegetation and fuels mosaics within their historic range of variability. • Utilize fire management strategies and tools to restore fire as a natural process across the greater interagency landscape. • Protect high value vegetation mosaics (often associated with special status species) from unusually severe and/or unusually large wildfires that may threaten long-term productivity and functionality.
Emphasis Area H (Public Land Disposal) • Provide for a limited level of fire management. Suppress wildfires which may be threatening adjacent private, state or Federal property.	**Yes:** Adequate statement	Slight rewording: Provide for a limited level of fire management. Suppress wildfires that threaten adjacent private, state, or federal property.
Emphasis Area J (Forestry) • Provide a level of protection from wildfire that will result in least total cost and will enhance forest resources. Use prescribed fire when possible to enhance forest management objectives.	**No:** 'Least total cost' statement may not be appropriate here.	• Within pinyon-juniper woodlands and oak stands, utilize prescribed fire and mechanical treatments, as well as wildfires under appropriate conditions, to maintain and/or restore appropriate, and productive,

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
		vegetation mosaics and processes. • In commercial timber types utilize prescribed fire and mechanical treatments, as well as wildfires under appropriate conditions, to manage and enhance stand health, resiliency, and long-term productivity. • Protect important forest resources from unusually severe and/or unusually large wildfires that may threaten long-term productivity and functionality.
Emphasis Area K (Soils and Water) Provide a level of protection from wildfire that will result in least total cost and will generally enhance soil and water values. Use prescribed fire when possible to enhance soil and water conditions.	**No:** 'Least total cost' statement may not be appropriate here.	• Utilize prescribed fire and mechanical treatments, as well as appropriate management of wildfires, to maintain, enhance, and restore soil and water values. • Protect sensitive soils and watersheds from unusually severe and/or unusually large wildfires that may threaten soil and watershed condition.
Emphasis Area L (ACECs) Use fire management techniques that maintain the ACEC values. Wildfire suppression would generally not occur unless needed to protect ACEC values.	**No:** Needs to be reworded to consider a greater variety of fire management strategies aimed at enhancing and protecting ACEC values.	• Utilize fire management strategies and/or tools that protect, maintain, and enhance ACEC values. • Implement fuels management projects on adjacent lands to help protect ACEC values where applicable and necessary. • Use fire suppression tactics that do not degrade the ACEC values.

MANAGEMENT ISSUES NOT ADEQUATELY ADDRESSED

The Uncompahgre Basin RMP and the San Juan/San Miguel Basin RMP provide general fire program direction. They state that conditional suppression, full suppression, and/or prescribed fires for resource enhancement or for fuel hazard reduction could occur throughout the UFO. They also allow for the use of Emergency Stabilization and Rehabilitation for resource enhancement.

Management objectives not specifically or fully addressed in either RMP include:

- **Human Life -** Protect the lives of both the public and firefighters. This is the single overriding priority in fire management.
- **Property and Resources -** Protect human communities, their infrastructure, and the natural resources on which they depend.
- **Communities -** Set priorities among human communities, other property, and natural resources based upon the values to be protected, human health and safety, and the costs of protection. Use the full range of options available to fire managers, including prescribed fire, multiple objective wildland fire management, mechanical fuels reduction, and public education to reduce the risk of wildfire to communities and property. Priority will be given to working with collaborators, communities, and homeowners to initiate efforts to protect private property and investments.
- **Ecosystem Sustainability** - Wherever possible, allow wildland fire to function as an essential ecological process and natural change agent in fire-dependent ecosystems.
- **Wildlife Component** - Protect, maintain, preserve, and/or restore habitats necessary for the conservation of species (including Special Status Species such as federally Threatened, Endangered, Proposed, and Candidate Species, BLM Sensitive Species and State Species of Concern), and the ecosystems upon which they depend, to maintain viable and diverse populations of native terrestrial and aquatic species.
- **Vegetation Component** - Improve ecosystem health and maintain or restore the range of ecological conditions in which native floral and herbaceous components thrived and evolved.
- **Cultural, Historical, and Paleontological** - Protect high value cultural, historical, and paleontological resources.
- **Designated Special Areas** - Protect the characteristics that warranted designation of ACECs, SRMAs, Wilderness Areas, WSAs, national monuments, and national conservation areas.
- Within the past decade, the use of naturally ignited fires to achieve resource benefits (previously known as *prescribed natural fire* or *wildland fire use for resource benefits*) has been added as a tool available to the planning area. The Uncompahgre Fire Management Plan contains specific direction on where wildfires can be used to

achieve resource benefits, what objectives should be achieved through its use, and provides decision criteria to assist managers in choosing the appropriate management strategy for each wildfire ignition.

- Management is currently utilizing Fire Management Units (FMUs) and vegetation mosaics (polygons) to guide fire management activities. Neither FMUs nor vegetation mosaic polygons were addressed in previous RMPs.
- Wildland Urban Interface (WUI) has become a major issue in fire management over the past two decades, with many activities being designed and implemented to enhance protection of private lands, structures, and infrastructure. WUI was not addressed as a resource management issue in previous RMPs.
- Mechanical treatments with specific fuels management objectives were not addressed in previous RMPS and are currently being used in conjunction with prescribed fire to manage fuels and enhance vegetation mosaics throughout the UFO, with emphasis in WUI areas.
- A small, unstaffed single engine air tanker base has been established at the Montrose Airport over the past few years. This base is used only when fires are local, and a quick turnaround time is required to fill and return to a fire. As part of the safety plan for base operation of this tanker, a non-emergency load jettison area needs to be established. The purpose of this load jettison area is to allow an air tanker to off-load the retardant prior to landing if it needs to return to the airport. Most aircraft are not capable of landing with a full load of retardant. The RMP should analyze the establishment of a non-emergency load jettison area, probably within 3-5 miles east or southeast of the airport.

B. POTENTIAL NEW DECISIONS FOR THE RMP REVISION

Managing all or parts of a wildfire to achieve desired resource objectives (formerly known as Wildland Fire Use for Resource Benefits) is not specifically addressed in previous RMPs and needs to be included in the new RMP. The Uncompahgre FMP contains specific direction on where the use of wildfires to achieve benefits to the resources can be used, under what conditions, and what objectives should be achieved through its use. The revised RMP should include greater analysis of fire management strategy in support of national fire policy and the current UFO FMP.

FMU mosaics and polygon mosaics are not identified as a goal (or desired future condition) for vegetation and fuels management in either current RMP. Mosaics should be described as a goal or desired future condition for vegetation and fuels management. The RMP should not include specific mosaics, but should support the concept of existing mosaics and their modification through adaptive management processes.

WUI was not emphasized in the existing RMPs. National Fire Policy emphasizes the protection of life, property, and infrastructure within the WUI through collaboration that increases both fuels management and suppression capability. Some emphasis should be placed on collaborative efforts between the BLM and local communities and other federal agencies aimed at decreasing risk in the WUI from wildfire through fuels management, cooperative fire suppression, and education of landowners and homeowners.

Neither RMP adequately addresses mechanical fuels treatment. Aspects of mechanical fuels treatment that should be considered in the new RMP include:

- reasons for utilizing mechanical fuels treatment relative to prescribed fire or wildfires to achieve resource benefits (such as WUI protection, vegetation mosaic restoration, and fuels modification in preparation for prescribed burning)
- types of mechanical tools to consider to achieve desired resource objectives (such as roller chopper, hydroaxe, fecon, brushmower, brushbeater, lawson aerator, chainsaws, or similar tools)
- desired ten-year-average acres for mechanical fuels treatment.

A small, unstaffed single engine air tanker (SEAT) base has been established at the Montrose Airport over the past few years. This base is used only when there are local fires and SEATs require a quick turnaround time to fill and return to a fire. As part of the safety plan for base operations, a non-emergency load jettison area needs to be established. The purpose of this load jettison area is to allow an air tanker to off-load retardant prior to landing if it needs to return to the airport. Most aircraft are not capable of landing with a full load of retardant. The RMP should analyze the establishment of a non-emergency load jettison area, probably within 3-5 miles east or southeast of the airport.

Fire management terminology continues to evolve. Previous nomenclatures should be modified. Terminology should be updated to current national standards and may need to include less nomenclature and more flexible descriptive elements.

New information and management direction pertaining to Emergency Stabilization and Rehabilitation and Burned Area Emergency Response should be developed.

4.1.10 Cultural and Heritage Resources

A. ABILITY OF CURRENT MANAGEMENT DIRECTION TO ACHIEVE DESIRED FUTURE CONDITIONS AND ADDRESS RESOURCE DEMANDS

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
UNCOMPAHGRE BASIN RMP		
Cultural Resources • Cultural and historical sites will be inventoried. Clearances and mitigation for cultural resources will be required for all surface-disturbing activities throughout the planning area.	**Yes:** The existing management decision is mandated by law, and the proposed response is sufficient to meet the requirements of Section 106 of the National Historic Preservation act.	None needed
• Measures will be designed to protect cultural sites, and will be incorporated into all activity plans.	**No:** The decision is not adequate to meet current conditions. While meeting the requirements of Section 106 of the National Historic Preservation Act, it does not address Section 110 of that act, nor does it consider the increasingly intensive public use of the lands.	Expand the decision to include actions meeting the requirements of both section 106 and section 110. Specific actions should include: • Development of a Cultural Resource Management Plan emphasizing interpretation and education, public involvement, and a research agenda geared toward an understanding of the peoples and places important in our past. • Current management practice focusing on individual site-specific responses should be replaced with a broader understanding of the past recognizing that cultural resource sites

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
		are components of a larger, more landscape-based system. • Creation of archaeological districts composed of resources in specific themes.
Management Unit 1 • Conduct a Class III cultural inventory on 5,800 acres between Highway 90 and Sandy Wash to identify the presence of cultural resources and determine the areas' cultural significance.	**No:** The current decision has not been fully implemented. Some inventory in the unit has been conducted, and the results have been used as indicated, however, the requirement has never been fully funded, and has little utility in influencing management decision.	• Require more specific landscape inventories under section 110, consistent with research, education, and interpretation priorities as outlined in Chapter 3 and in the Issues and Opportunities sections below.
SAN JUAN/SAN MIGUEL RMP		
• Cultural resources will continue to be inventoried and evaluated as part of project level planning. Recommendations will be generated from the evaluations and will consider all impacts to the proposed projects and the important cultural resources in the affected areas. Stipulations will be attached to assure that projects are compatible with management objectives for cultural resources. Avoidance will continue to be the primary measure used.	**No:** The current decision is in conformance to existing law, but is not responsive to existing state protocol agreements or current management objectives. In addition, the response generated by this decision is a reactive one in which cultural resources are managed on a site by site and project by project basis without regard to the needs of the resource or the requirements of the Cultural Resource program.	• Update planning decision to conform to state protocol, laws, and objectives. Cultural resource planning should be implemented as a management objective rather than only as a response to the management needs of other resources.
Areas A (Livestock Management), B (Wildlife), E (Mineral Development), F (Cultural Resources), J (Forestry), K (Soils and Water), and L (ACECs) • Protect and manage important cultural resource properties.	**No:** The current decision is too limited to provide adequate guidance. New laws and regulations in all areas require updated management guidance.	• Expand and update guidance to conform to existing laws, regulations, and objectives.
Area C (Recreation) • Develop and protect suitable	**No:** The decision is too limited in	• Develop and implement decisions as to use

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
cultural resource properties for public enjoyment through such practices as interpretive signing, stabilization, etc.	scope to provide adequate direction.	categories and types of properties suitable for public use and interpretation. Identify sites and areas for interpretation, stabilization, research, protection, or other appropriate uses.
Area D (Wilderness) • Allow no development of cultural resources (other than stabilization) for recreation purposes. Allow use of cultural resource properties for religious or research purposes only when such use will not degrade wilderness values.	**Yes**	
Area G (Natural Resource Management) • Manage cultural resource properties in accordance with applicable laws, regulations, and public interest.	**No:** The current decision is too limited to provide adequate guidance. New laws and regulations in all areas require updated management guidance.	• Expand and update guidance to conform to existing laws, regulations, and objectives.
Area H (Public Land Disposal) • Provide cultural resource inventories and clearances so disposal of tracts can occur. Pending disposal, manage the cultural resources under present laws and regulations.	**Yes**	

MANAGEMENT ISSUES NOT ADEQUATELY ADDRESSED

Objectives

- Protect the cultural and historical resources in the area from accidental or intentional destruction and give special protection to high value cultural resource sites.
- Preserve and protect significant cultural resources and ensure they are available for appropriate uses by present and future generations through inventory and evaluation, and the classification of these resources into use categories: scientific, conservation, traditional, public, experimental, or discharged from management.

- When surface disturbing activities (such as mineral development, range improvements, recreation site development, and ROWs) threaten cultural resources, the cultural resources program provides support by evaluating cultural resource sites through Section 106 consultation. Relying on the reactive nature of Section 106 preserves resources from direct effects, but also results in the decline of cultural sites due to natural deterioration, decay, incidental damage, and vandalism.
- Policy changes have also been made in the BLM cultural resource management program since the earlier MFP/RMP efforts. Management guidance in BLM Manual 8130 Section 13 is not in the existing MFPs/RMP.
- Additionally, cultural resource sites are not allocated to use categories as required in BLM Manual 8110, Section 4.
- The existing land use plans address a portion of the required components, but are silent on several other key policy requirements such as the Native American Graves Protection and Repatriation Act, the 1992 amendments to the National Historic Preservation Act, and Executive Order 13007, and do not have specific resource management goals and actions that address these directives.

Decisions

- All federal undertakings, as defined by 36 CFR 800, are subject to review of cultural resources and require adequate cultural inventories within the area of potential effect. The purpose of the inventory is to identify and evaluate cultural resources (using 36 CFR 60 criteria of properties) that may be affected by the proposed undertaking. The level of inventory is determined by the National Programmatic Agreement between the BLM, Advisory Council on Historic Preservation and the National Council of State Historic Preservation Officers (1997), Colorado BLM/State Historic Preservation Officer/BLM protocol (1998), policy, and federal laws.
- Additionally, all new cultural resources are allocated according to their nature and relative preservation value (BLM Manual 8110.4). These include scientific use, conservation for future use, traditional use, public use, experimental use, and discharged from management.

B. POTENTIAL NEW DECISIONS FOR THE RMP REVISION

The cultural resources program provides support by evaluating cultural resource sites through Section 106 consultation. Relying on the reactive nature of Section 106 preserves resources from direct effects but also results in the decline of cultural sites due to natural deterioration, incidental damage, and vandalism. Additionally, there have been policy changes in the BLM cultural resource management program since completion of the 1989 RMP. Management guidance contained in BLM Manual 8130.13 is not present in the existing

RMP. Additionally, allocation of cultural resource sites to use categories, as required in BLM Manual 8110.4, is ongoing, but most of the previously recorded sites have not been assigned to use categories. The existing RMPs address a portion of the required components, but are silent on several other key policy requirements.

The RMPs were developed before the Native American Graves Protection and Repatriation Act, the 1992 amendments to the National Historic Preservation Act of 1969, and Executive Order 13007, and do not have specific resource management goals and actions that address these and other directives. Additionally, the National Programmatic Agreement between the BLM, Advisory Council on Historic Preservation and the National Council of State Historic Preservation Officers (1997), Colorado BLM/State Historic Preservation Officer Protocol (1998), and BLM Colorado Handbook Guidelines (currently being revised) all have helped streamline cultural resource procedures not covered in the RMPs.

Increasing public use of the land for recreation and resource casual use has put cultural resources in jeopardy. Increased access to an area has been proven to increase the potential for vandalism and illicit collection. Inadvertent or secondary impacts to sites have increased with the increased demand for dispersed recreation opportunities, especially in the more accessible Urban Interface areas.

Increasing use and misuse of open travel management areas have also put cultural resources in jeopardy. Damage to historic properties along and between established trails has become a regular occurrence.

The RMP revision process could provide for the development of a proactive cultural resources management framework that incorporates changes in BLM policy and law. This planning effort can provide guidance for the cultural resources program and a framework for the inventories by allocating cultural resources to use categories and establishing criteria for management of sites yet to be identified. Use allocations could also provide a framework for priority cultural resource areas or site types. This could allow managers to "know in advance how to respond to conflicts that arise between specific cultural resources and other land uses" (BLM-M-8110).

POTENTIAL NEW DECISIONS

- Conduct comprehensive study of known archaeological districts and landscapes.
- Promote Interpretation, Education and Public Involvement in the cultural resource protection program as a historic preservation option.
- Expand the inventory of BLM-administered lands as required under section 110 of the National Historic Preservation Act. Use the RMP revision process to develop a proactive cultural resource management framework that incorporates changes in BLM policy and law and archaeological theory;
- Protect sites by developing and implementing additional stipulations on all new ground-disturbing activities based on assigned use categories to enhance cultural resource management decisions to protect cultural resources;

- Inventory proposed project areas before permitting project. Take measures to protect and preserve any eligible and significant cultural resource found.
- Maintain or improve the cultural resource Geographic Information System database;
- Use the Class I effort to guide the cultural resources program and provide a framework for a Cultural Resources Management Plan. Develop high, medium, and low sensitivity areas for locating cultural resources, allocating cultural resources to use categories, and establishing criteria for management of sites yet to be identified. This Class I could also provide a framework for priority cultural resource areas or site types. This could allow managers to "know in advance how to respond to conflicts that arise between specific cultural resources and other land uses";
- Development of a Cultural Resource Management Plan (CRMP) emphasizing interpretation and education, public involvement, and a research agenda focusing on an understanding of the peoples and places important in our past. Current management practice focusing on individual site-specific responses should be replaced with a broader understanding of the past recognizing that cultural resource sites are components of a larger, more landscape-based system;
- Salvage or mitigate additional cultural properties and features, such as subsistence or habitation structures, to provide needed data to fill in gaps in the cultural context within the FO. This data could increase the confidence level for management decisions involving cultural resources, as to whether the resource should be conserved or placed in the discard use category;
- Emphasize the importance of Geographic Area Plans and large block inventories early in the planning stages for project development, especially for energy development projects. These large inventories have greatly improved the ability of the developer/operator and the BLM to cooperate as to the best placement of facilities while protecting cultural resources;
- Continuing work with partners on research projects.
- Continuing consultation with Native American tribes to help redevelop traditional ties to the landscape and identify and protect sacred and traditional use areas.
- Creation of archaeological districts composed of resources in specific themes, including but not limited to;
    - San Miguel River Historic mining district
    - Uravan Uranium Mining district
    - Uncompahgre Rock Art District
    - Escalante Canyons Rock Art District
    - Gunnison River Corridor Heritage District
    - Old Spanish Trail
    - Dominguez/Escalante Historic Trail
    - Ute Historic Trail
    - Mailbox Park Wickiup Villages
    - Brushy Ridge Wickiup Villages

- Paradox Valley Rock Art District

A Class I overview is being developed to comply with Manual H-1601-1, Manual Section 8110, and WO IM 202-101 and to update the current cultural resource Geographic Information System database. The overview will accomplish the following:

- Synthesize all of the previous archaeological and historical work;
- Outline the prehistory and history as currently understood;
- Identify data gaps in our knowledge;
- Develop management recommendations for site types; and
- Develop sensitivity maps (high, medium, low) based on the potential to find cultural resources by geographical area.

The information will be used to define and evaluate the nature and distribution of property types, the historic and prehistoric contexts of properties of special significance, the uses to which property types may be assigned, the threats to site integrity, and the strategies for resource management and protection.

C. AREAS OF RELATIVE ECOLOGICAL IMPORTANCE TO GUIDE LAND USES AND MANAGEMENT

Sites and areas of Principal Interest:

- Escalante Bridge Rock art Complex
- Gunnison River Corridor (including Escalante Bridge
- Palmer Gulch and Leonard's Basin)
- Dry Creek Basin (ACEC potential)
- Paradox Valley and the Dolores River Canyon
- Uravan Mining District
- Escalante and Dominguez Canyons
- Brushy Ridge Wickiup Villages
- Mailbox Park Wickiup Villages
- San Miguel River Historic Mining District
- Roubidoux Canyon
- Metate Gulch
- Old Spanish Trail
- Ute Trail
- Dominguez/Escalante Trail

4.1.11 ☀ Paleontological Resources

A. ABILITY OF CURRENT MANAGEMENT DIRECTION TO ACHIEVE DESIRED FUTURE CONDITIONS AND ADDRESS RESOURCE DEMANDS

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
Uncompahgre Basin RMP • Paleontological resources will be inventoried and appropriate protective measures will be developed if necessary; protective measures will be developed as this resource is discovered. As information is obtained, specific management will be identified.	**No:** The existing management decision is incomplete and does not reflect either current knowledge or current laws and regulations.	• Require specific landscape inventories under provisions of the H-8270-1 Handbook, consistent with research, education, and interpretation priorities as outlined in Chapter 3 and in the Potential New Decisions section below. • Expand the decision to include actions meeting the requirements of BLM IM 2008-009 and Handbook H-8270-1. Specific actions should include: Development of a Paleontological Resource Management Plan emphasizing interpretation, education, and public involvement

MANAGEMENT ISSUES NOT ADEQUATELY ADDRESSED

- Develop and maintain a Paleontological Resource database similar in scope to the Cultural Resource database. Develop a Potential Fossil Yield Classification coverage map for the UFO based on known geological surface indicators.
- Inventory projects for paleontological resources in areas of high paleontological values, using the Potential Fossil Yield Classification of lands as a planning tool, before project approval. Take measures to protect any significant paleontological resources found.
- Promote a program of research based inventory on the UFO, beginning with lands in the Potential Fossil Yield Classification Class 5 category.
- Implement protection and preservation measures when deteriorating conditions are found.

B. POTENTIAL NEW DECISIONS FOR THE RMP REVISION

Existing management inadequately addresses the study, use, and protection of paleontological resources. This planning effort will need to address the management of paleontological resources, including their scientific, educational, recreational and consumptive use values. This could be accomplished through programmatic decisions providing direction to the paleontology program, as well as land use stipulations or restrictions to protect these values.

Past and current management practices have had little appreciable effect on paleontological resources. There have been no reported instances of damage to paleontological resources resulting from implementation of RMP management decisions. The paleontological resources management section of the RMPs are directed entirely at gathering data for the purpose of creating management plans, which has not been systematically attempted. In addition, BLM policy for managing paleontological resources has been updated since completion of the RMP. Changes in paleontological resources management policy and increases in paleontological resource data should be incorporated into the revised RMP.

Decisions for inventory and management of paleontological resources should be determined based on fossil diversity, distribution, and reasons for their importance to science. Priority areas for inventory could be identified, along with future research needs.

Develop and maintain a Paleontological Resource database similar in scope to the Cultural Resource database. Develop a Potential Fossil Yield Classification coverage map for the UFO based on known geological surface indicators.

Inventory projects for paleontological resources in areas of high paleontological values, using the Potential Fossil Yield Classification of lands as a planning tool, before project approval. Take measures to protect any significant paleontological resources found.

Promote a program of research-based inventory in the planning area, beginning with lands in the Potential Fossil Yield Classification class five category.

Implement protection and preservation measures when deteriorating conditions are found.

C. AREAS OF RELATIVE ECOLOGICAL IMPORTANCE TO GUIDE LAND USES AND MANAGEMENT

Sites and Localities of Principal Interest:

- Young Egg Locality
- San Miguel Mesozoic Flowering Plant site
- Placerville Permian Vertebrate Locality
- Dry Creek Basin
- Dry Mesa Quarry and environs
- Camel Back area
- Dolores Canyon Triassic Fish Locality
- Uravan Area

- Cottonwood Canyon and Roubideau Narrows

4.1.12 Visual Resources

A. ABILITY OF CURRENT MANAGEMENT DIRECTION TO ACHIEVE DESIRED FUTURE CONDITIONS AND ADDRESS RESOURCE DEMANDS

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES?	REMARKS (RATIONALE)	OPTIONS FOR CHANGE
UNCOMPAHGRE BASIN RMP			
• Public lands will be managed under current visual resource management classifications and guidelines.	**No**	Guidelines are out of date; there have been changes in the landscape, scenic byway designations, and public perception and expectations since the RMPs were completed. Also, newer guidelines are in place since the last RMPs. The landscape inventoried for visual resources in the 1989 RMP planning area has undergone many changes on both public and private lands due to increased urbanization pressures and energy-related actions. As the state sees expected increases in both resident populations and in tourism, scenic values and visual open space will become more important. Current VRM objectives have been maintained in some areas, while other areas are experiencing land use modifications that are becoming moderate to evident. Sensitive viewshed preservation will continue to compete with other land use allocation decisions and management activities for urban development infrastructure needs, energy development, recreation uses, and other surface use activities. An updated VRM inventory for UFO RMP planning area has been conducted in coordination with adjacent	• Reevaluate and assign VRM classes for all lands within the RMP planning area.
Management Unit 1 • Manage under VRM Class III.	**No**		• Reevaluate and assign VRM classes that are compatible with those areas
Management Unit 2 • Manage under VRM Class III to protect its-scenic qualities while permitting some intrusion.	**No**		• Part of Unit 2 includes the Adobe Badlands WSA which needs to be managed under a Class I. The rest of the unit reevaluate and assign compatible VRM classes
Management Units 3,5,7,9,10,13, and 16 • Manage under the existing VRM classifications as no changes were deemed necessary.	**No**		• Reevaluate and assign compatible VRM classes
Management Units 14, and 15 • Manage under VRM Class I to protect the area's scenic qualities.	**Yes and No**		• Continue to manage the Adobe Badlands as Class I but need to reevaluate unit 14 and assign VRM class

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)		OPTIONS FOR CHANGE
		communities and other local, state, and federal agencies. This assessment will look at viewsheds that have been deemed important throughout the RMP planning area to ensure that the plan looks at what communities and other local, state, and federal agencies deem as being visually and aesthetically important through a data-gathering exercise. In addition, current VRM Classes from the 1989 RMP has data defects and will be updated within those sensitive viewsheds to ensure that VRM class boundaries reflect real world conditions. The inventory and assessment is available and will be used as part of this planning process.	(Class II at minimum)
Management Unit 8 • Manage under VRM Class IV to allow substantial change.	**Yes:** This VRM class is appropriate for an Open OHV area with utility lines going through the heart of it.		• Continue to manage the North Delta OHV area as a Class IV
SAN JUAN/SAN MIGUEL RMP			
• Establish site-specific visual quality objectives and design guidelines for landscape development projects during activity planning.	**Yes:** The current decision is appropriate to meet visual resources goals and objectives.		Need to assign compatible VRM classes
Area C (Recreation) • Preserve scenic values, enhance viewing opportunities and increase variety, where appropriate.	**Yes:** The current decision is appropriate to meet visual resource goals and objectives within the Dolores River Canyon WSA.		• Need to assign compatible VRM classes
Area D (Wilderness) • Establish visual Class I low contrast design standards for Dolores River Canyon WSA.	**Yes:** The current decision is appropriate to meet visual resource goals and objectives within the WSA		• Need to establish the VRM Class I in RMP Revision

B. POTENTIAL NEW DECISIONS FOR THE RMP REVISION

- Manage all Wilderness areas, Wilderness Study Areas and other congressionally designated areas (i.e. Tabeguache Area) as Class I.
- Manage and design all BLM resource uses, management activities, and other implementation decisions to meet VRM objectives established in the land use plan.
- Utilize visual resource design techniques and best management practices to mitigate the potential for short and long term impacts.
- Oil and gas development and mining should conform to BLMs Visual Resource Management BMPs and visual resource design techniques.
- Contrast ratings are required for all major projects proposed on public lands that fall within VRM Class I, II, III areas which have high sensitivity levels (see Handbook H-8341-1 for contrast-rating procedures).
- In accordance with the BLM Manual H-1601-1 Land Use Planning Handbook, VRM
- classes will need to correlate with recreation management objectives and prescriptions that have been set for recreation management zones in every SRMA.
- Reevaluate and assign VRM classes for all lands within the RMP planning area.
- Final VRM objectives and boundaries will result from and reflect all resource allocation decisions made in the RMP planning area. For example some areas currently are experiencing impacts where the activities are not discretionary, such as valid existing rights. These impacts must be allowed, after due effort to minimize effects on visual values, to be consistent with those valid existing rights.
- Weigh all resource allocation decisions so as not to create conflicts managing the very values that the management plan seeks to foster.
- Have VRM Opportunities revolve around the integration of this program with the others resources and resource uses to be addressed in the management alternatives. Opportunities for management integration between VRM and other resources and uses could include the following:
  - Vegetation Manipulation (Fire, mechanical treatment, chemical treatment, etc.)
  - Recreation (especially OHV use)
  - Oil and gas development
  - Mineral extraction (establishment of new gravel pits will likely be considered as development increases and with limitation of extraction on adjacent lands, as well as coal and other mineral extraction)
  - Utility corridors
  - Transportation networks

Other opportunities that exist are special designations such as ACECs (Visual ACECs to preserve the scenic viewshed could be considered in the EIS alternatives) or managing the viewsheds of existing or potential scenic byways and backways.

4.1.13 ☀ Wilderness Characteristics

A. ABILITY OF CURRENT MANAGEMENT DIRECTION TO ACHIEVE DESIRED FUTURE CONDITIONS AND ADDRESS RESOURCE DEMANDS

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
UNCOMPAHGRE BASIN RMP		
• The Camel Back WSA and Adobe Badlands WSA (a total of 20,827 acres) would, be recommended as non-suitable for designation as wilderness.	**Yes:** These decisions are part of the Wilderness EIS.	
• Manage the Camelback area with emphasis on riparian aquatic system management, wildlife habitat, and livestock grazing.	**No:** Need to identify objectives for the area and consider additional public proposals.	• Protect wilderness characteristics in Camel Back WSA until the final Congressional decision on wilderness or non-wilderness designation is made. • Evaluate areas possessing wilderness characteristics • and consider limiting or withdrawing oil and gas/mining activities in areas • demonstrating wilderness character. Identify • allowable uses and surface restrictions to avoid potential adverse effects.
• Manage 8,783 acres of the Adobe Badlands WSA as an ONA/ACEC to protect the scenic qualities, and T&E plants; and to reduce active erosion. Manage the remainder of the Adobe Badlands, WSA (3,842 acres) as wildlife habitat.	**No:** The Adobe Badlands WSA was not addressed as a whole unit within the management decisions.	• Need to consider the WSA as a whole and evaluate wilderness characteristics in relation to management direction.
• All Wilderness Study Areas (WSAs) will be managed to be consistent with the Wilderness	**Yes**	

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
Interim Management Policy until the final Congressional decision on wilderness designation or non-designation is made.		
SAN JUAN/SAN MIGUEL RMP		
• Pending Congressional action, all WSAs will be managed under BLM's Interim Management Policy.	**Yes**	
Area D (Wilderness) General Guidelines		
• Manage any recommended WSAs per the Wilderness Act of 1964.	**Yes**	
Specific Management Direction		
• Protect & interpret unique & significant values in the Dolores River Canyon WSA.	**Yes**	
• Recommend the Dolores River Canyon WSA for wilderness designation.	**Yes:** This decision is part of the Wilderness EIS.	
Objectives		
• Provide predominantly untrammeled, natural environments for the physical, biologic and social components of wilderness. The physical and social components are managed so that natural process and unimpeded by human activities or use. Natural process, including naturally occurring fire, soil erosion, and insect and disease cycles, proceed unrestricted by man. Emphasize high levels of solitude, few party encounters, and high opportunities for challenge, risk and self-reliance.	**No:** Review public proposals for additional areas that may contain wilderness characteristics and need to reevaluate the objectives wanted for those areas.	• Evaluate areas possessing wilderness characteristics and consider limiting or withdrawing oil and gas/mining activities in areas demonstrating wilderness character • Identify allowable uses and surface restrictions to avoid potential adverse effects. Reevaluate the objectives for the area.
• In the Dolores River Canyon, the objective will be to manage the area to preserve the wilderness	**Yes**	

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
values while allowing other resource uses only where such use will not cause damage to or loss of wilderness values.		
WILDERNESS AMENDMENT TO THE SAN JUAN/SAN MIGUEL RMP		
The Tabeguache Area was congressionally designated in 1993 (7,748 acres within the Uncompahgre planning area)	**Yes:** This is a congressionally designated area	There will not be any changes proposed.

MANAGEMENT ISSUES NOT ADEQUATELY ADDRESSED

- No wilderness objectives were identified in the 1989 Uncompahgre Basin RMP.
- All WSAs that fall within the planning area except for the Camelback WSA are open for mechanized use.
- The Adobe Badlands WSA falls within three management units (Management Unit 15, 2, and 5) and the Camel Back WSA falls within four management units (Management Unit 1, 2, 3, 9), and some of these management units have decisions which do not conform with the Wilderness Interim Management Policy. These decisions consist of travel management, visual resource management, and overall management decisions.

The Sewemup WSA partially falls within the planning area. Although addressed in the Grand Junction RMP, there is no mention of it in the San Juan/San Miguel RMP.

B. POTENTIAL NEW DECISIONS FOR THE RMP REVISION

The current management of the Tabeguache Area and 4 WSAs in the UFO has been minimally adequate to protect the wilderness characteristics of those areas. However, some problem areas have recently developed. Increased OHV use throughout the field office has begun to threaten the wilderness characteristics of WSAs. The revised RMP will need to address this issue through route designations and travel management decisions for these areas in order to continue to protect the wilderness characteristics of the WSAs and Tabeguache Area. Additional public proposals will need to be considered for wilderness characteristics and the Sewemup Mesa WSA portion in our field office will need to be addressed and coordinated with Grand Junction Field Office . Additionally, the revised RMP will need to address BLM guidance, which requires that all WSAs be managed as VRM Class I areas.

C. AREAS OF RELATIVE ECOLOGICAL IMPORTANCE TO GUIDE LAND USES AND MANAGEMENT

The Colorado's Canyon County Wilderness Proposal provides a write-up for ecological values of their proposals which can be found on-line at http://canyoncountrywilderness.org/values.htm.

4.2.1 ☀Livestock Grazing Management

A. ABILITY OF CURRENT MANAGEMENT DIRECTION TO ACHIEVE DESIRED FUTURE CONDITIONS AND ADDRESS RESOURCE DEMANDS

Livestock management in the Uncompahgre Field Office for the most part has been working well under the 1989 Uncompahgre Basin RMP and the 1985 San Juan/Miguel RMP, **amended** in 1997 to include the Standards for Public Land Health and Guidelines for Public Land Grazing.

Livestock management under the 1989 Uncompahgre Basin RMP was based on information, direction, and decisions provided in the Uncompahgre Basin Area Grazing Management Final Environmental Statement with modifications through the allotment categorization process. This process categorized the allotments into varying management intensities: "I" the most intensive management, with the objective of improving existing resource conditions, "M" less intensive management, with the objective of maintaining existing resource conditions, and "C" the least intensive or custodial management. These classifications were directed for livestock grazing management and need to be updated and possibly expanded to other disciplines in the revised RMP. The updated classifications need to be dynamic in nature to address changes in management of public lands; for example, an allotment may be classified as a "C" allotment but if it has critical habitat for a species recently listed on the threatened and endangered list this would reclassify this allotment into an "I" allotment regardless of size, grazing management or other public land uses. Therefore the classification process would support a way to prioritize segments of land in terms of management complexity.

In addition, Land Health Assessments have been completed for the entire field office. These assessments coupled with long term vegetation data, and the Guidelines for livestock grazing have supported changes in grazing management during the permit renewal process. Grazing permits have been renewed over the past 10 years and have incorporated changes in management during that process and included additions to the permit stipulations. Continuing use of adaptive management techniques and using livestock in a constructive manner would allow for livestock to be an asset in rangeland management and meeting land health standards. For example livestock may be used to keep lek areas open, reduce fuel loading, and could be used for reseeding projects through hoof action.

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
UNCOMPAHGRE BASIN RMP		
Management Unit 1 • Public Lands within the management unit will be managed as "I" category, "M" category, and "C" category grazing allotments.	**Yes:** Allotment categories I, M and C are working and give guidance to on the ground and to management decisions.	• Allotments I, M, and C should be dynamic in nature and reflect the concerns for an allotment (such as recently listed species and oil and gas exploration). May require a change in allotment management intensity.
Management Unit 1 • Also, 2,109 acres that are presently unallotted for livestock use will be available for grazing application. Relinquished, cancelled, or acquired livestock grazing permits will be reissued according to regulations.	**Yes:** Acres unallotted (vacant of a permittee) will be dynamic across years as permittees come and go.	• Make vacant allotments available for grazing applications (and not mention acres, as this will be dynamic across years). • Maintain allotment information in a case file and do not delete from the system due to vacant status.
Management Unit 1 • This unit will be managed to improve vegetation conditions and forage availability for livestock grazing. Land treatment projects and other facilities designed to improve livestock forage and distribution will be developed.	**Yes:** These are larger landscape areas that support the rural local ranching community. Without these landscapes, there could be economic impacts that have a social impact to rural life styles. If the BLM were to reduce their role in supporting grazing systems, the permittee would need to find other private or public lands to hold their cattle while forage is being grown, or they would need to reduce their total livestock numbers. Buying and shipping forage from outside sources (a feedlot scenario) is not considered economical because of the costs. In many cases, reductions in total livestock numbers would also make some family-owned businesses uneconomical which could be a causal factor in the sale of the family ranch/farm.	• Continue to support the rural ranching community through sound resource decisions including improving areas for livestock grazing. For example retreatment of chained areas to increase forage production while leaving differing age structure of vegetation and seeding with native species to support the native system. May need to tweak management unit. • Suggest limiting vegetation treatments for livestock to cases where we can meet multiple management objectives, because of the cost of treatment and maintenance, and because of the ecological costs (such as increased weeds

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
	Permittees within the planning area are dependent on BLM-administered rangelands.	and soil compaction). Allow many formerly treated areas to revert to original vegetation.
Management Unit 1 Intensive monitoring studies will be developed. Intensive monitoring studies will be established and maintained on all "I" and "M" category allotments.	**Yes:** These studies support grazing management and strategy changes when needed. Utilization studies promote proper grazing techniques and are one tool permittees can incorporate easily within their grazing strategy.	• Work with permittees to perform utilization studies or at least photo plots/apparent trends which will promote them in taking an active role in vegetation management.
Management Unit 1 • Existing allotment management plans will be updated as needed and new plans will be developed for allotments without plans.	**Partially:** Some allotment management plans have been implemented, some require updating, and some allotments that don't have plans could use at least an activity plan to meet objectives.	• Throughout the BLM, most allotment management plans require updating, but a total overhaul may not be necessary if small activity plans were used as amendments to existing plans and created for allotments without plans. This would have to occur as time allows. They do promote a systematic approach to allotment management.
Management Unit 1 • As additional forage becomes available, livestock will have priority for allocation.	**Yes and No:** While the BLM has been doing some treatments in the field office, the range staff is not aware of any additional forage allocations.	• Retain so that areas where large wildland fires change the landscape dramatically and have the potential to increase forage availability for many years. • Additional forage must be allocated cautiously. Total forage available within an allotment must be considered prior to allocating additional forage and only when consistent with maintaining land health and compatible with other resource objectives, including maintaining high levels of ecological health. For instance, over the

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
		years, has forage been lost because of additional shrubs or trees? Is there really forage in excess of the amount originally allocated?
Management Unit 2 • Livestock grazing will continue at current forage allocation levels and seasons of use unless studies determine adjustments are needed. • Livestock will have first priority for all additional forage made available as a result of livestock operator-funded rangeland improvement projects. • Non-conflicting livestock management objectives, projects, and mitigation measures will be incorporated into new wildlife habitat management plans. • Facility development and land treatment projects will be permitted if they would be compatible with wildlife habitat management objectives.	**No:** In part of this management unit there is an increase in oil and gas activity. The grazing program needs to be able to be flexible to better manage around these changes. In another part of this unit, big game management (deer for the most part) is essential and the moving of grazing dates and grazing allocations need to be reviewed for best management for livestock and wildlife.	• Tweak or break out portions of this unit, depending upon objectives and use demands. • In portions of the unit, wildlife should have the highest priority for additional forage, while in other areas livestock or a straight split should be considered. • Allow livestock facilities for better livestock management, which could reduce wildlife/livestock conflicts. • Land treatments should follow recommendations in the 2003 Dry Creek/Spring Creek Vegetation Management Strategy unless other direction comes forward.
Management Unit 3 • Non-conflicting livestock grazing management objectives, projects, and mitigating measures will be incorporated into new FMPs. • Existing livestock projects will be maintained and new projects developed if they will not decrease the woodland base.	**No:** Decision was designed to intensively manage for forest and woodland production. Given market direction, this is no longer a valid decision. Allotments associated with this management unit are integral parts of the rural ranching community and should be managed for multiple use, with the direction on maintaining the livestock forage base.	• Support these as multiple use areas with an emphasis on maintaining the grazing base through sound resource decisions. Re-treat old chainings with the objectives of maintaining the forage base while promoting a diverse age class of vegetation, and re-seeding with native species.
Management Unit 5 • Livestock grazing will be allowed except from March 20	**Yes:** Unit 5 is located North of Delta where the lower portion of this	• The basal ground cover suggestion made in the 1989 RMP was never

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
to range readiness to protect plant species during the spring growth period, and to prevent soil disturbance when saturated soils are most vulnerable to damage. • If the basal ground cover is less that the objectives identified in Table 3, which is 10 % for the area livestock forage utilization will be managed at 35 percent of key forage species to increase basal ground cover	management unit contains soils that are saline and highly erodible. Restricting grazing to no later than March 20 will reduce the amount of use by livestock during a critical growing season if a grazing strategy is not in place, but more importantly during a time the soils are saturated from spring snowmelt which has the potential to increase compaction of soil and increase soil erosion.	implemented. An LHA was completed for the area and recommendations for livestock grazing management were made. • Livestock grazing in the area should be dynamic to meet the needs of producers, while providing protection when soils have the potential to be wet. Practices might include rotational grazing and moving to higher areas where soils are drier and less erosive.
Management Unit 8 • Grazing use will continue in the management unit but construction of facilities, such as livestock control fences, that create safety hazards or impede free vehicle use will not be permitted.	**Yes**	• This is an open OHV area. An LHA has been completed for the area and management recommendations made.
Management Unit 9 • Livestock grazing use will be permitted in riparian zones except from March 1 through range readiness, during which time it would be eliminated to accelerate improvement of riparian vegetation. • To improve the condition of riparian zones, management practices and principles will be established in activity plans. Utilization of 35 percent by weight of key forage species will be used as a general guidance for improvement; this may vary depending on the individual riparian system. Trailing use will be limited as much as possible and confined to established roads.	**No:** This does not take into account the complexity of riparian systems. Livestock management may differ for each system depending upon capability of the system, and objectives set.	• Livestock grazing should be consistent with maintaining a high level of riparian health, and in most cases, allotments should be managed to discourage significant grazing in riparian areas. Grazing strategies for riparian zones should consider livestock distribution and grazing intensity within an allotment. • Range readiness should not be set by dates and should include a period in the fall when willows receive protected from livestock herbivory. • Establish riparian pastures where possible.

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
• Trailing livestock will not be permitted to bed in riparian zones unless absolutely necessary.		• Set periodic rest dates for spring and fall use. • Develop upland water to keep livestock up and away from riparian areas, as well as using supplements away from riparian areas. • When necessary, trailing (not drifting) should be allowed through riparian pastures.
Management Unit 10 • Does not address livestock management.	**No:** There are livestock grazing allotments in this management unit.	• Grazing occurs on four allotments in the unit. An LHA was completed, and the condition of the area has improved. Address livestock grazing, and current management that is effective.
Management Units 12 and 13 • Livestock grazing will continue at current levels unless studies determine "threatened and endangered" plant species and unique plant associations or their potential habitats are being degraded.	**Yes:** Both of these units contain T and E and sensitive plant species. Current and restrictive management seems to be working. Unit 13 is designated as the Fairview Research Natural Area/ACEC. A portion of the Shinn Park allotment south of the canal contains the endangered *Eriogonum pelinophilum* (clay-loving buckwheat). The BLM is coordinating with Colorado Natural Heritage Program on a monitoring program to evaluate grazing use. At some level, grazing may be beneficial to the establishment and persistence of the plant population. Unit 12 is designated as the Escalante Canyon ACEC.	• Add the monitoring program to a portion of the Shinn Park allotment.
Management Unit 14 • The management unit will remain unallotted for livestock grazing use.	**Yes**	Carry forward the decision from the 1989 RMP.

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
Management Unit 15 • Livestock grazing will continue at current levels unless studies determine threatened and endangered plant species or their potential habitat are being degraded. • If basal groundcover is less than 10 percent, livestock forage utilization will be managed at 35 percent utilization of key forage species. • No additional forage allocations will be made. • To protect scenic values, no new livestock improvement projects or maintenance of existing projects will be permitted.	**No:** Basal ground cover of 10% (as recommended in the 1989 RMP) has never been implemented. An LHA has been completed for the area and livestock management recommendations have been made. Livestock distribution is a key component of grazing management. Without additional livestock improvement projects (especially involving water), appropriate grazing distribution will not be promoted.	• New livestock facilities should be sought as needed for the appropriate distribution and management of livestock. • New facilities should be placed so as not to reduce scenic values. (For example, when not visible to the public, a small water catchment may be more appropriate than a pond.)
SAN JUAN/SAN MIGUEL RMP		
Emphasis Area A (Livestock Management) • Management direction will emphasize increasing forage and livestock production on a sustained yield basis. Emphasis is upon increasing forage, red meat and animal fiber production, and improving forage composition and watershed conditions.	**Yes:** On a sustained yield basis using sound grazing management strategies that emphasize land health objectives.	Maintain current AUMs while improving range condition. This will enhance land health values, while maintaining important grazing areas for the agriculture communities.
• Significant investments may be made in livestock improvements which will be multiple use oriented (i.e., wildlife, watershed, etc.). Investments for other resources will be minimal, although resource management activities compatible with livestock production will continue.	**Yes:** All livestock improvements should have multiple use objectives in the design.	

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
• Dispersed recreation opportunities will continue. • Woodland products and timber will be made available.	**Yes:** Although all effort should be made to emphasize range etiquette.	• Would be to go to emphasis areas to reduce impact to land health values and grazing operations. Range etiquette should still apply.
• Maintain or improve wildlife habitat through interdisciplinary design of range improvement projects and diversity of native vegetation types.	**Yes:** Same as above multiple use design.	
• Fire will be utilized to enhance forage production.	**Yes:** Not only forage production, but overall land health and management objectives.	• Fire will be used to promote land health objectives and maintain current AUM levels.
• Manage suitable vegetation types for increased, sustained livestock production. One goal is to improve range condition and productivity on native rangeland. • Use improved management systems such as rest-rotation and deferred-rotation, if appropriate. Invest in range improvements necessary to implement management systems. • Develop 71 allotment management plans (on 810,000 acres).	**Yes:** Livestock production remains an important economic component of communities within the planning area. Sound management of natural resources will continue to be critical to supporting livestock production.	The availability of BLM resources directed primarily at increases in forage, red meat, and animal fiber production has decreased in recent years, and this trend does not appear likely to change. Investments in resource management activities compatible with livestock production should be increased, rather than continue at current levels.
Emphasis Area B (Wildlife) • Manage suitable vegetation types under low to moderate intensity for livestock production, with intent to utilize available forage and maintain forage vigor, while not degrading wildlife habitat. Constrain range treatment projects in size, layout and	**Yes/No:** Although progress has been made, many opportunities continue to exist on UFO grazing lands to "improve range condition and productivity on native rangeland." The decision to develop large numbers of allotment management plans is not responsive to current issues. Recently completed LHAs	• Look for additional opportunities to implement the UFO Fire Use Plan. Pursue more opportunities to piggyback on to other resource management activities (such as wildlife habitat improvement projects) compatible with livestock production.

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
type with intent to enhance wildlife and livestock forage, vegetation and habitat diversity. • Reduce number of livestock and change season-of-use where needed to provide sufficient forage for wildlife and to protect aquatic/riparian resources, especially on big game winter and spring ranges. • Limit total utilization of forage species current year's growth. Livestock use should be limited where necessary to protect highly preferred species of plants. Maintain an overall cover/forage ratio of 40:60. Limit width of vegetation openings to approximately 150 to 200 yards in big game winter ranges. • In pinyon-juniper and shrub vegetation types, retain 35% to 40% of original cover when completing vegetation treatments.	have identified resource related issues caused by livestock grazing practices. These issues have been addressed in terms and conditions contained in new term grazing permits. The need to spend significant amounts of range staff time on traditional allotment management plans has been reduced.	Achieve improvements to livestock grazing management by implementing LHA recommendations through the permit renewal process, as opposed to developing traditional allotment management plans.
Emphasis Area C (Recreation) • Manage livestock under reduced intensity to utilize available forage and maintain plant vigor while not degrading recreation values. • Do not attempt to maintain or improve forage composition and production through range vegetation treatments with the exception of prescribed fire where appropriate. • Use "rustic" range improvements near developed recreation areas. • Manage livestock grazing to make it compatible with	**Yes:** Recreation activities such as mountain biking and rock climbing have increased significantly on UFO lands that have historically been used primarily by grazing permittees and miners. The occurrence of minor conflicts between these types of public land users has increased in recent years.	• Take additional steps to educate recreational users of grazing land about the livestock grazing program. For example, livestock are typically present on public lands for a relatively short period of time and recreation use of a particular area could be planned around that period of time.

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
recreation use.		
Emphasis Area D (Wilderness) • Manage for improved range condition. Do not use vegetation manipulations to improve forage production. Emphasize primitive, natural material for water developments and range structures that are approved in wilderness management plan.	**Yes:** There has been little change in the status of wilderness lands or policy in the planning area since this decision was made.	None
Emphasis Area E (Mineral Development) • Manage suitable vegetation types under moderate intensity for livestock production, with the intent to use available forage and maintain forage vigor.	**Yes**	• Improve communication between energy companies operating on grazing lands and BLM range staff and grazing permittees on impacts (including increased traffic, fence damage, and gates left open).
Emphasis Area F (Cultural Resources) • When necessary, reduce or control livestock grazing to protect cultural resources.	**Yes:** Since the 1985 RMP, the number of cultural resource inventories conducted on UFO lands has increased significantly and many new sites have been identified. The potential for livestock grazing to damage cultural resources is still relevant.	• Important cultural resources are often identified on grazing allotments. The location of those resources should be provided to range staff and grazing permittees whenever possible.
Emphasis Area G (Natural Resource Management) • Manage vegetation so it maintains itself satisfactorily with a generally upward trend.	**No:** This decision is covered by other decisions.	Do not carry this decision forward.
Emphasis Area H (Public Land Disposal) • Allow limited management of the rangeland to occur. Spend no public funds on rangeland improvements. Complete procedural notifications to grazing permittees.	**Yes:** This decision is still relevant as the UFO continues to dispose of land and conduct land trades.	• Stipulate that UFO lands staff keep the range staff and grazing permittees aware of land disposal activities.

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
Emphasis Area I (Wild Horses) • Manage livestock to reduce or eliminate conflicts with wild horses. Maintain forage in fair condition with an upward trend. All livestock waters should be provided year round. Reduce numbers and/or season-of-use to eliminate forage competition. Assure that all range projects are compatible with wild horse use. Restrict licensing of domestic horses in wild horse areas.	**No:** The wild horse and burro management area within the planning area was eliminated with the San Juan/San Miguel RMP.	• Range decisions for wild horse areas are not necessary.
Emphasis Area J (Forestry and Wood Products) • Allow livestock grazing on those areas and at times of the year when it will have no negative effects on timber management operations and objectives for the area.	**Yes:** The UFO sells firewood, Christmas trees, landscape transplants, posts and poles, and may be selling saw logs as a component of the fuels reduction program. The decision remains relevant.	• Range staff and grazing permittees should be informed about forestry activities and timeframes.
Emphasis Area K (Soils and Water) • Manage suitable vegetation types under low to moderate intensity for livestock production with the intent to use available forage and maintain plant vigor. • Reduce the number and/or season-of-use for livestock where needed to achieve soil and water program objectives. • Maintain or improve range condition through soil and water improvements and diversifying the vegetation.	**Yes/No:** LHAs have identified areas where soil and water resource conditions do not meet public land health standards or meet standards with problems. Where grazing is a causative factor, actions to address the problem must be taken.	None
Emphasis Area L (ACECs) • Manage livestock under low to moderate intensity to use available forage and maintain vigor while not degrading any	**Partially:** The planning area contains several ACECs. The decision to avoid degradation of ACEC values caused by livestock grazing is still	• As time allows, complete smaller activity plans for I and M category allotments that direct where additional range improvements are

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
present ACEC values. • Develop and implement AMPS on "I" and "M" category allotments within ACECs. Consider cultural, mineral, wildlife, and recreation values during development.	valid. Allotment management plans for I and M category allotments are not necessary. However, smaller activity plans would help to guide where additional range improvements are needed.	needed to promote grazing strategies and proper grazing distribution.
Standards for Public Land Health and Guidelines for Livestock Grazing Management in Colorado Colorado's rangeland health standards were developed to assess and protect ecological communities and their associated values. Standards are descriptions of the desired condition of biological and physical components and characteristics of rangelands that are applied to management of all public land resources and uses. Guidelines are management approaches, methods, and practices intended to achieve established standards.	**Yes:** LHAs have been conducted on most allotments in the planning area. Grazing management is addressed, and terms and conditions are specified in new grazing permits.	None.

MANAGEMENT ISSUES NOT ADEQUATELY ADDRESSED

- Livestock Management under the guidance of the Uncompahgre Basin and San Juan/San Miguel RMPs has been adequate and working effectively for the most part. However, with more types of use, demands from the public, and emerging resource issues (such as the Gunnison sage grouse and noxious weeds), changes in livestock management are necessary.

B. POTENTIAL NEW DECISIONS FOR THE RMP REVISION

Since the existing RMPs were approved, many changes have occurred inside and outside of the range program. These changes warrant updating the livestock grazing portion of the range program in the revised RMP. The potential updating will direct appropriate livestock grazing management strategies in the future. Possible changes include but are not limited to the following recommendations:

- Range infrastructure should be maintained. This includes ponds, stock tanks, catchments, water pipelines, springs, fences, cattleguards, corrals.
- The value of installing fences, pipelines, troughs, catchments, and other water developments should be considered in relation to improving riparian areas, distribution of livestock, special habitats like sage grouse areas, and providing additional water for wildlife away from drainage areas.
- Due to increased oil and gas in the North Fork area, increased interest in uranium in the west end, increased recreational use, the spread of noxious weeds, presence of sage-grouse habitat, presence of threatened and endangered species, and wildlife concerns, use agreements may be needed to address potential conflicts.
- Review the status of allotments that are currently not allotted (vacant of permittee). Allotments not in use (such as Duckett Draw) should be visited to determine whether they should remain available for grazing, combined into adjacent allotments, put into grass banks, put into an allotment rotation, or considered unsuitable for livestock grazing.
- Big game and livestock should be managed to reduce conflicts with forage resources. This could include use dates, type of livestock, and grazing strategies. For example, sheep and deer are in direct competition with one another in the mid-winter grazing period, so moving pastures or changing grazing dates may be necessary.
- Identify areas where certain grazing periods may not be appropriate based on environmental conditions or conflicts with other resources or uses. For example, spring use of the Adobes may be inappropriate due to wet soil conditions and the primary plant growing season.
- Document minimum rest requirements for land treatments and fire rehabilitation projects.
- Develop direction to address weeds around new and existing range projects, and after maintenance of existing projects.
- Develop allotment management plans, or activity plans designed to serve as the functional equivalent of allotment management plans. For example, permit renewal EAs don't consider additional the water needs of an allotment; such plans would help to focus management decisions.
- Update allotment boundaries and associated grazing information for each allotment including season of use, number and type of livestock, percent public land and active AUMs as well as suspended AUMs. Leave suspended AUMs on the permit to show the history of suspension and why suspended. For example, Roubideau un-allotted area on hog bench area crosses a creek and cuts permittee off from private land and limits riparian pastures, thereby putting additional pressure on the lower riparian area.

- Administrative access for maintaining range improvements should be acknowledged and maintained. Perhaps permittees should assist with mapping range improvements.
- When rangeland manipulation is necessary, BMPs, including biological processes, fire, and intensive grazing, will be considered where appropriate.
- To eliminate, minimize, or limit the spread of noxious weeds, only hay cubes, hay pellets, or certified weed-free hay will be fed on BLM lands.
- Seeding of new and maintained range improvements will occur to reduce or eliminate the opportunity for noxious weed establishment. Seed with native species as much as possible.
- Continue to update the Grazing Advisory Board on conditions and grazing issues.
- Describe how public lands will be managed to become as sustainable and economically viable as possible for livestock production: including grazing strategies, water developments, vegetation treatment, maintenance of old treatments, changes in season of use, or other grazing management practices.
- If additional forage comes available, describe how to allocate between wildlife, livestock, and watershed maintenance (land health improvement), and in what order.
- A disclaimer that all land within an allotment is not necessarily grazable, and carrying capacity and AUMs were not calculated using these areas.
- Discuss with the planning team: combining the Camelback area into the Winter Monitor Mesa allotment as the closure cuts the permittee off from private land and does not allow for maximum management of riparian area, placing greater pressure on the lower Roubideau riparian area. This also gives greater management to upland areas. Reason it was taken out of the grazing base in prior decision (after RMP) was due to the thought Big Horn Sheep would need solitude; that does not seem to be the case as they ignore humans in the area and seem not to be bothered by livestock when they are in the same area. This allotment would not be converted to domestic sheep grazing to deter the spreading of disease from domestic sheep.

C. AREAS OF RELATIVE ECOLOGICAL IMPORTANCE TO GUIDE LAND USES AND MANAGEMENT

T&E plant locations: Fairview Research Natural Area/ACEC and Escalante ACEC.

Table 2.36 in Appendix A summarizes UFO grazing allotments, along with acres, animal units per month(s), a general grazing schedule, and management status code. The grazing schedule provides the time period(s) within which grazing is authorized to occur, but actual use is typically not for the full duration of the period. Many areas are managed for a 14-day use period per grazing area and are grazed only once during the year. Schedules that show two use periods are those managed for a rotation system where the grazing generally occurs 1) in the spring time or fall/winter, and 2) with a scenario where multiple pastures are available for grazing so that pasture used in one season will have no use for the following season(s).

The allotment acres shown may not all be suitable for livestock grazing. These unusable acres were not calculated into grazing/carrying capacity or base, but are included in allotment totals due to the nature of the landscape.

4.2.2 ☀ Forest and Woodland Products

A. ABILITY OF CURRENT MANAGEMENT DIRECTION TO ACHIEVE DESIRED FUTURE CONDITIONS AND ADDRESS RESOURCE DEMANDS

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
UNCOMPAHGRE BASIN RMP		
Management Unit 3 • The forest resource will be intensively managed for woodland product harvest within sustained yield production limits to increase available woodland products. • Forest management plans will be prepared, and if needed, plantations established to increase forest product availability.	**No:** The site is predominately pinyon-juniper, so forest products are mainly posts, poles, and firewood. The demand does not appear to be present in the Crawford area. It would appear that the area is now more valued for recreational and scenic values given the demographic (unless scoping identifies the need for the area).	• Allow for small designated cutting units to meet local demand and achieve other resource objectives such as ecological, wildlife, and fuels.
Management Unit 10 • Design timber and woodland harvests to improve elk calving habitat. Skid trails and other roads will be closed and rehabilitated; main haul roads will remain available for public use.		
Management Units 5 7,8,11,13,15, and 16 • Manage for sustained yield production of forest products to meet current and future demands for woodland products.	**No:** The Uncompahgre Basin RMP addresses the implementation of these basic forestry practices only in portions of the planning area.	

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
Management Unit 1 • The forest resource will be managed to increase livestock forage.	**Yes/No:** While these decisions speak to managing forest and woodland resources to support other resource uses/values, the decisions fall short of defining objectives for what percentage of the resource should be allocated to forage production, given the large acreage of woodlands that were converted to early seral to provide forage production through chaining.	
Management Unit 2 • The forest resource will be managed to improve wildlife habitat with possible restrictions on surface-disturbing activities from December 1 through April 30 on crucial deer and elk winter range to protect crucial deer and elk winter range and its use from disturbance. Woodland harvest will be designed to increase forage production and will be compatible with wildlife habitat management objectives.	**Yes/No:** While these decisions speak to managing forest and woodland resources to support other resource uses/values, the decisions fall short of defining objectives for what percentage of the resource should be allocated to forage production, given the large acreage of woodlands that were converted to early seral to provide forage production through chaining.	• Add mosaic objectives or somehow articulate desired future vegetation conditions that describe HRV, disturbance/recovery/successional processes, and provide some idea of proportions. • Decisions are needed that would manage all activities within forest and woodland communities for health, composition, and diversity (considering density, basal area, canopy cover, age class, stand health, and understory) and to provide late successional vegetation while accommodating multiple uses.

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
Management Unit 6 • will not be available for woodland harvest except for insect or disease control efforts to protect its wilderness-values.	**No:** Since the BLM is mandated to manage WSAs to maintain wilderness character, it is unlikely that any decision could be signed that would allow for the harvest of forest products within these areas and still retain wilderness character. Insects and disease are natural processes that should be allowed to occur within a wilderness setting.	• Allow no harvesting of forest products within WSAs. Withdraw all forest and woodlands from consideration for forest and woodland product sales and do not consider in the forest base until Congress issues a decision on WSAs.
• Management Units 9, 12, and 14 are closed to harvest. • Management Unit 9 is, closed to protect riparian vegetation. • Management Units 12 and 14 are closed to protect their scenic values.	**No:** Standing and downed woody debris as well as actively growing forest cover are beneficial to riparian systems, forest products presence in riparian systems add sinuosity to systems and aid in sediment retention.	• Suggest withdrawing the sale or disposal of forest and woodland products from all riparian systems within the decision area.
SAN JUAN/SAN MIGUEL RMP		
Emphasis Area G • Provide a sustained yield of forest products consistent with land capability, suitability, protection needs, & other resource values. **Emphasis Area A** • Utilize woodland products to the maximum extent practicable through commercial sales under the principle of sustained yield. Manage aspen forest types to perpetuate aspen, using even-aged silviculture. Limit clearcuts in aspen to a maximum of 40 acres or the size of an aspen clone, whichever is smaller.	**Yes:** The plan decision is the basis for modern forestry practices and is somewhat responsive to current issues.	• Carry forward the decision with some modification for all actions involving forest and woodland communities within the planning area, excluding mining and oil & gas activities which are not necessarily compatible with managing for healthy forest and woodland systems. • Add language regarding public land health standards for upland vegetation communities specific to forest and woodland communities that all actions would be subject to.

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
Emphasis Areas A, B, & C: • Manage woodland products & timber to enhance range resources & for insect & disease control. • Manage forest lands to enhance wildlife resource. Plan wood product sales in wildlife areas to improve big game forage & other wildlife needs. • Manage lands suitable for timber & woodland production to enhance recreational opportunities & to maintain healthy stand conditions.	**Yes/No:** While these decisions speak to managing forest and woodland resources to support other resource uses/values, the decisions fall short of defining objectives for what percentage of the resource should be allocated to forage production, given the large acreage of woodlands that were converted to early seral to provide forage production through chaining.	• Add mosaic objectives or somehow articulate desired future vegetation conditions that describe HRV, disturbance/recovery/successional processes, and provide some idea of proportions. • Decisions are needed that would manage all activities within forest and woodland communities for health, composition, and diversity (considering density, basal area, canopy cover, age class, stand health, and understory) and to provide late successional vegetation while accommodating multiple uses.
Emphasis Area D • Allow no harvesting of forest products. Available forest land will remain in the commercial forest lands base until the area has been designated as wilderness.	**No:** Since the BLM is mandated to manage WSAs to maintain wilderness character it is unlikely that any decision could be signed that would allow for the harvest of forest products within these areas and still retain wilderness character. Insects and disease are natural processes that should be allowed to occur within a wilderness setting.	• Allow no harvesting of forest products within WSAs. Withdraw all forest and woodlands from consideration for forest and woodland product sales and do not consider in the forest base until Congress issues a decision on WSAs.

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
Emphasis Area E • Allow for the sale or disposal of forest products or timber that may be lost in mineral development or that is needed for managing the resource. Meet demand without degradation or conflict.	**No:** All forest products that will not be used in the reclamation process must be purchased from the government as a condition on the permit. A decision is necessary for how forest residues will be managed during the construction phase. "Meet demand without degradation or conflict." Is a bit vague.	• Require that all forest products removed in the construction of mining and oil and gas development be purchased from the government as a term and condition of approval. • Such activities should be planned and implemented in such a manner as to maintain stand continuity while also considering other resource values. • Require specific details of how activities will not degrade or conflict with forest and woodland communities i.e. require that reclamation objectives be achieved that would allow for disturbed areas to achieve the climax community through natural successional processes.
Emphasis Area F • Allow removal of forest products only when compatible with cultural, wildlife, or recreation values or when done to improve safety.	**Yes/No**	• Regarding transplants, without appropriate mitigations there can be substantial impacts to cultural resources. Suggest identifying previously cleared areas for such activities or require NEPA compliance before issuing permits for tree digging. • Land Health Standards should be considered as well when deciding on forest management activities.
Emphasis Area K • Manage forest products & woodlands to meet goals & objectives of the soil & water program for specific areas.	**Yes**	• Perhaps limitations should be established on forest management activities in areas where such activities cannot be mitigated such as sensitive soils, landslide areas or overly steep slopes.

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
Emphasis Area L • Manage lands suitable for timber & woodland production to enhance ACEC values & to maintain healthy stands.	**No:** Given the unique or rare resource values for which a given ACEC is designated it is difficult to think that these values would be compatible with the management of forest and woodland product sales, with the exception of the Sage grouse ACEC on the North Rim.	• With the exception of the Gunnison Sage grouse ACEC, all ACECs will be withdrawn from forest and woodland product sales to maintain the values for which the ACEC has been designated. • With exception criteria for those cases when a project may be necessitated.
Emphasis Area A & J • Manage aspen forest types to perpetuate aspen, using even-aged silviculture. Limit clearcuts in aspen to a maximum of 40 acres or the size of an aspen clone, whichever is smaller. • Manage aspen under an even-age system. Limit open patch cuts to 20 acres or less in commercial forest types & 40 acres in woodland types. Regenerate all patch cuts, shelterwood, & selection harvest cuts, naturally or artificially, within 15 years. • Manage timber and woodland species on all available & capable lands with a combination of even & uneven-age systems. Continue management of all operable woodland & commercial sawtimber in other emphasis areas.	**Yes:** Given wildlife management objectives, climate trends, and lifespan of aspen management needs to occur at the stand level as the decision somewhat attempts to address, additional considerations are needed to manage aspen in today's environment.	• Treatments proposed for aspen should be conducted at the stand scale, a full range of management opportunities should be available, and fencing to protect regeneration should be considered post treatment. • Treatments should be conducted to address forest health issues such as Sudden Aspen Decline utilizing the best available science to drive prescription and extent.

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
Emphasis Area A • Timber species should be managed at a stocking level that maintains moderate to high herbage production.	**No:** This practice has been widely utilized throughout the planning area to the detriment to both timber and woodland resources. Chaining and other treatments of intact large stands (as well as other vegetation communities) for the purpose of forage production, often resulting in sites overstocked with introduced herbaceous species that outcompete native herbaceous species and disrupt natural successional processes, resulting in upland vegetation sites not meeting public land health standards.	• Add mosaic objectives or somehow articulate desired future vegetation conditions that describe HRV, disturbance/recovery/successional processes, and provide some idea of proportions. • Manage all activities within forest and woodland communities for health, composition, and diversity (considering density, basal area, canopy cover, age class, stand health, and understory) and provide late successional vegetation while accommodating multiple uses.
Emphasis Areas A & B • Provide reasonable opportunity to salvage forest products prior to & following range habitat improvement treatments. • Provide legal & physical access to vegetation treatments to facilitate salvage of forest products when feasible. • Provide reasonable opportunity to salvage forest products prior to & following habitat improvement treatments.	**Yes/No:** Stewardship authority allows the bureau to sell forest treatment byproducts to offset cost of treatment. Where byproducts from treatment are not economical this practice will always be conducted.	• Decisions that speak to stewardship authority may be necessary to clarify and support project level decisions utilizing stewardship authority. Otherwise decision is fine as written.
Emphasis Area C • Allow no regulated sales of wood products in the Silverton SRMA, except to control disease & insect outbreaks where necessary. Allow no sales of wood products in the Dolores River SRMA.	**No:** The Silverton and Dolores SRMAs are both outside of the planning area.	• Do not carry decision forward.

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
Emphasis Area J • Manage lands suitable for timber production. Invest necessary funds to provide for intensive management of the forest resource. Provide firewood, Christmas trees, & other wood products. • Manage approx. 10,960* acres for intensive forest management. Estimated allowable harvest would be 6.5 MMBF per decade. Manage approx. 42,130* acres to provide woodland products (tirewood, posts, poles, etc.). Estimated allowable harvest would be 6.4 MMBF (12,800 cords) per decade. • *Only 6,993 acres of the suitable commercial timber base occur within the current decision area boundary and will be considered within the Uncompahgre RMP revision.	**No:** Current BLM Colorado funding does not begin to approach the funding needs necessary to approach achievement of this decision. Demand for saw timber in Colorado is virtually nonexistent and any specific cut objectives would be impossible to meet.	• A variety of funding mechanisms should be utilized to manage lands suitable for timber production. Management should be conducted to maintain stands within historic range of natural variability, within accepted fire regimes and condition classes, and to meet public land health standards. If products from such activities can generate revenue to offset these costs, then stewardship opportunities should be pursued. • All harvests commercial or personal use should be conducted in such a manner to achieve forest health objectives and sustainable yield objectives.
SAN MIGUEL ACEC AMENDMENT		
• Approximately 20,166 acres of the San Miguel ACEC and 298 acres of the remainder of the SRMA would be closed to forest product disposal.	**No:** Given the unique or rare resource values for which a given ACEC is designated, it is difficult to think that these values would be compatible with the management of forest and woodland product sales, with the exception of the Sage grouse ACEC on the North Rim.	• With the exception of the Gunnison Sage grouse ACEC, all ACECs will be withdrawn from forest and woodland product sales to maintain the values for which the ACEC has been designated. • With exception criteria for those cases when a project may be necessitated.

MANAGEMENT ISSUES NOT ADEQUATELY ADDRESSED

- Within the Uncompahgre Basin RMP, Management Unit 3 calls for no projects to be implemented that would remove or take away from the existing forestry base. Numerous projects have been implemented since the inception of the National Fire Plan within the management unit that have removed a substantial amount of the

forest base to provide fuel breaks for manmade developments and to restore vegetation mosaics to more closely resemble the historic range of natural variability.

- Current management within these areas more closely resembles a multiple use approach by managing for multiple resource values while also attempting to restore cover type mosaics with varying age class distributions and disturbance regimes.

B. POTENTIAL NEW DECISIONS FOR THE RMP REVISION

- The Healthy Forest Restoration Act required agencies to consider forest management practices that "fully maintain, or contribute toward the restoration of, the structure and composition of old-growth stands according to the pre-fire suppression old-growth conditions characteristic of the forest type, taking into account the contribution of the stand to landscape fire adaptation and watershed health, and retaining the large trees contributing to old-growth structure." As such, decisions are needed that would define what old-growth is and how would it be managed.
- Consider old growth or biodiverse forest and woodland sites as avoidance areas for ROWs.
- Currently the resource area prohibits the sale and removal of Gamble oak and ponderosa pine outside of specific emphasis areas and management units although no decision appears to support this. Recommend a decision supporting this or remove the stipulation.

C. AREAS OF RELATIVE ECOLOGICAL IMPORTANCE TO GUIDE LAND USES AND MANAGEMENT

Areas which are of relative ecological importance would likely have broad reaching benefits to other resources as well. Some areas which are of relative ecological importance include:

- Old growth woodlands
- Pristine woodland communities
- Long term pinyon woodland study sites
- Ecologically intact and/or biodiverse woodland sites for both the pinyon-juniper cover type and the Gamble Oak woodlands.

4.2.3 Energy and Minerals

A. ABILITY OF CURRENT MANAGEMENT DIRECTION TO ACHIEVE DESIRED FUTURE CONDITIONS AND ADDRESS RESOURCE DEMANDS

The following decisions are applicable to all minerals within the San Juan/San Miguel Resource Area.

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
SAN JUAN/SAN MIGUEL RMP		
Emphasis Areas A (Livestock Management), G (Natural Resource Management), J (Forestry), K (Soil and Water) • Allow mineral development in all areas not withdrawn from entry. • Provide protective stipulations to limit impacts to livestock improvements or management practices.	**Yes and No:** Decisions need to be applied to all new units within the planning area.	• All areas not withdrawn from entry will be open for mineral development. • Provide protective stipulations to limit impacts to livestock improvements and manage to limit impacts to wildlife and wildlife habitats, and not impact T&E species. • Limit activities during seasonal closures and in eagle concentration areas. • Limit conflicts with management of high recreation values. • Provide for "no surface occupancy" stipulations for mineral leasing in all SRMAs.
Emphasis Area B (Wildlife) • Allow mineral development in all areas not withdrawn from entry. Provide protective stipulations to limit impacts to wildlife habitat or species. • Limit and/or provide protective stipulations for mineral development on habitat for T&E species. • Continue present leasing stipulations with changes for wildlife winter ranges & eagle concentration areas as shown in the Resource Conservation Alternative.		
Emphasis Area C (Recreation) • Manage mineral development to limit conflict with management of high recreational values. When possible, schedule activities so conflicts are		

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
minimized between recreational and mineral activities. Ensure site rehabilitation activities follow operating plans and address recreation management objectives. • Provide for no surface occupancy stipulations for mineral leasing in the Dolores River SRMA (from the Bradfield Bridge to the confluence with Disappointment Creek and from Big Gypsum Valley to 1 mile above Bedrock).		
Emphasis Area D (Wilderness) • Administer all mineral activity as required by Section 4(d) of the Wilderness Act of 1964. Deny issuance of any future mineral leases within the wilderness area.	**Yes**	
Emphasis Area E (Mineral Development) • Allow mineral development on all areas not specifically excluded from development. Provide protective stipulations to limit impacts to other resource values. • Continue cooperative management to protect surface resources on 19,800 acres of Department of Energy lease tracts. • Provide protective management of the unique fossils in the Placerville area through the use of stipulations on a case by case basis in environmental documents.	**Yes**	
Emphasis Area F (Cultural) • Pursue withdrawal from mineral entry on any important cultural properties. • In the event withdrawal is not made (and on areas not withdrawn), supervise the activities of claimants, lessees, and permittees to ensure minimum impacts on cultural values. • Use no surface occupancy stipulations to protect important cultural values.	**Yes**	• Apply to entire planning area.

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
Emphasis Area H (Public Land Disposal) • Continue to manage the mineral program for development. Retain all mineral rights unless an exception can be documented for transferring the mineral rights. • Transfer all mineral rights with the surface unless 1) mineral values can be documented to justify retaining the mineral rights, or 2) transferring the mineral rights is prevented by law or regulation.	**No**	• Mineral rights within the planning area will be retained by the federal government, unless the mineral interest is determined not to be of value to the government.
Emphasis Area L (ACEC) • Manage mineral development to limit conflict with present ACEC values. When possible, schedule activities so conflicts are minimized and site rehabilitation is addressed within ACEC guidelines. Some mineral development may need to be limited or excluded for proper ACEC management.	**Yes**	• Apply to all ACECs within planning area.
General Guidelines for All Emphasis Areas The following principles will guide the BLM in managing mineral resources on public lands (per BLM instruction Memorandum No. 84-568, dated June 28, 1984): • Except for Congressional withdrawals, public lands shall remain open and available for mineral exploration and development unless withdrawal or other administrative action is clearly justified in the national interest. • The BLM actively encourages and facilitates the development by private industry of public land mineral resources so that national and local needs are satisfied and economically and environmentally sound exploration, extraction, and reclamation practices are provided.	**Yes and No**	• Except for Congressional withdrawals, public lands shall remain open and available for mineral exploration and development unless withdrawal or other administrative action is clearly justified in the national interest. • Mineral resources will be managed in accordance with national policies and BLM guidance. Management will adapt to changes in policy and guidance.

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
• The BLM will process mineral patent applications, permits, operating plans, mineral exchanges, leases, and other use authorizations for public lands in a timely and efficient manner. • BLM land use plans and multiple use management decisions will recognize that mineral exploration and development can occur concurrently or sequentially with other resource uses. BLM further recognizes that land use planning is a dynamic process and decisions will be updated as new data are evaluated. • Land use plans will reflect geologic, energy, and mineral values on public lands through more effective data assessment of those values. • The BLM will monitor salable and leasable mineral operations to ensure proper resource recovery and evaluation, production verification, diligence and inspection, and enforcement of the lease, sale, or permit terms. The BLM will ensure receipt of fair market value for minerals commodities unless otherwise provided for by statute. • The BLM will maintain effective professional, technical, and managerial personnel knowledgeable in mineral exploration and development.		

B. POTENTIAL NEW DECISIONS FOR THE RMP REVISION

C. AREAS OF RELATIVE ECOLOGICAL IMPORTANCE TO GUIDE LAND USES AND MANAGEMENT

None identified.

LEASEABLE MINERALS - COAL

A. ABILITY OF CURRENT MANAGEMENT DIRECTION TO ACHIEVE DESIRED FUTURE CONDITIONS AND ADDRESS RESOURCE DEMANDS

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
UNCOMPAHGRE BASIN RMP		
• Identify those areas within the Paonia/Somerset, Cimarron Ridge, and Bookcliffs coal areas which would be suitable for further leasing consideration. Determine areas as suitable for further coal leasing consideration where coal development could result in conflicts with water needs and/or water rights. Categorize lease areas with consideration for potential development problems and management conflicts. 83,334 acres of Federal coal estate in the Paonia/Somerset Cimarron Ridge and Bookcliffs coal areas are identified	**No:** The Dakota Coal field needs to be included in the RMP amendment. (See 2 below.) Refinement by either addition or omission of known coal reserve acres needs to be accomplished based on modern data concerning the reserves as to mineability or unsuitability for mining.	• The SanJuan/San Miguel RMP of 1984 has Dakota Coal field data and management planning decision. (See 2 below.) Add or reduce available coal resource acres as appropriate.
• Allow mineral development on all areas not specifically excluded from development. • Provide protective stipulations to limit impacts to other resource values.	**No:** The priority of these areas was determined based on 1983 coal data & indications of interest by industry. The remaining coal lands determined to be suitable or identified as priorities for future leasing will be managed for other multiple use considerations. These lands would be made available for future leasing only when the coal priority areas had been depleted or a significant demand was expressed that could not be met by the existing coal priority area.	• Allow coal exploration and leasing in the Nucla Coal Field.

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
Standard Management Direction: • Federal coal estate will be identified as acceptable for further leasing consideration.	**Yes**	
Management Units 1, 3, 7, 8, 16 • Acceptable for further leasing consideration with no special restrictions.	**No**	• Based on the Coal Potential Report, evaluate areas where coal resources should be considered for future leasing, and areas that should be excluded. • Enforce seasonal restrictions for wildlife and other resource considerations as needed.
Management Unit 2 • Federal coal estate will be open to leasing within crucial deer and elk winter range; seasonal stipulations on new road and facility construction may be necessary from December 1 through April 30 to reduce stress on wintering deer and elk.		
Management Unit 5 • Open for further leasing consideration with possible restrictions on surface disturbing Activities: from March 1 through May 31 to prevent excessive erosion on wet saline soils.		
Management Unit 9 • May be acceptable for further leasing consideration on a site-specific basis after consultation with affected entities and formulation of mitigating measures designed to protect riparian vegetation.		
Management Unit 10 • Acceptable for further leasing consideration with possible restriction on any disturbances from May 1 through June 15 to protect elk calving areas.		
Management Unit 11		

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
• Acceptable for further leasing consideration with possible restrictions on any disturbance from March 15 through June 30 to protect nesting waterfowl.		
Management Units 12, 13, 14 • Acceptable for further leasing consideration with possible restrictions on surface disturbing activities to protect threatened, endangered, or unique species and their potential habitat, and to protect scenic values.		
Management Unit 15 • Closed to leasing to protect its scenic quality.		
SAN JUAN/SAN MIGUEL RMP		
• Allow coal leasing on 1,480 acres in the Nucla Known Recoverable Coal Resource Area.	**No:** Change wording.	• Allow coal exploration and leasing in the Nucla coal field.
• 280 acres of Alluvial Valley Floor/Floodplains within the Nucla Known Recoverable Coal Resource Area were eliminated from all methods of mining. • The priority of this Known Recoverable Coal Resource Area is based on 1983 coal data and indications of interest by industry. The remaining coal lands determined to be suitable or identified as priorities for future leasing will be managed for other multiple use considerations. These lands would be made available for future leasing only when the coal priority areas had been depleted or a significant demand was expressed that		

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
could not be met by the existing coal priority area.		

B. POTENTIAL NEW DECISIONS FOR THE RMP REVISION

Evaluating areas where coal resources need to be considered for future leasing and areas where coal resources are currently managed for leasing that should be excluded.

C. AREAS OF RELATIVE ECOLOGICAL IMPORTANCE TO GUIDE LAND USES AND MANAGEMENT

None identified.

LEASEABLE MINERALS - FLUID

A. ABILITY OF CURRENT MANAGEMENT DIRECTION TO ACHIEVE DESIRED FUTURE CONDITIONS AND ADDRESS RESOURCE DEMANDS

CURRENT PLANNING DECISION	ARE DECISIONS RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
UNCOMPAHGRE BASIN RMP		
Management Units 1,2,3,7, and 16 • Open to oil and gas leasing with seasonal stipulations from December 1 through April 30 on crucial deer and elk winter rangeland on bald eagle hunting habitat to protect crucial deer and elk winter range and bald eagle hunting habitat from disturbance. **Management Unit 5** • Open to oil and gas leasing with seasonal stipulations from March 1 through May 31 to protect wet saline soils.	**Yes:** Decisions limit and restrict oil and gas activities to protect other resources.	It would be advantageous to include/address mitigation measures/BMPs supported by specialists which are applied to respective areas of NEPA analysis related to surface disturbance associated with energy development. i.e. reclamation success standards for both interim and final reclamation, adaptation of seed mixes to match surrounding native populations of value,

CURRENT PLANNING DECISION	ARE DECISIONS RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
Management Unit 6 • Closed to oil and gas leasing to protect its wilderness values. **Management Units 8 and 9** • Open to oil and gas leasing with only standard stipulations. **Management Unit 10** • Open to oil and gas leasing with seasonal stipulations from, May 1 through June 15 to protect elk calving areas. **Management Unit 11** • Open to oil and gas, leasing with seasonal stipulations from March 15 through June 30 to protect nesting waterfowl, and from December 1 through April 30 on bald eagle hunting habitat to protect bald eagle hunting habitat from disturbance. **Management Units 12,13,14, 15** • Open to oil and gas leasing with a no surface occupancy stipulation to protect threatened and endangered species habitat and the areas scenic quality.		incorporate performance based standards in respect to reclamation, incorporate a database which tracks disturbances permitted, actual disturbance, then reduction of disturbance through different phases of reclamation. It would also be advantageous to outline how split/estate lands are managed by BLM UFO indifferent to public lands, but also incorporate private landowner in respect to surface use, protection and reclamation success. There are multitude of measures in which similarities exist across all oil and gas activities in the UFO such as; livestock protection, wildlife protection, slope stabilization, pits left open over winter, invasive and noxious weed monitoring and control (both prior to disturbance and during the life of the energy related disturbance). One of the most difficult issues to address when using performance standards is attempting to add the factor of time to the equation. Each of the energy types that the UFO oversees have different time periods in which to permit, perform the activity, produce, and finally reclaim. But, there are certain BMPs which could be incorporated in a timely manner which would increase the opportunity for stabilization, and reclamation success of

CURRENT PLANNING DECISION	ARE DECISIONS RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
		these disturbance activities. Such an undertaking will have to separate, but address surface use, reclamation standards, monitoring, data and reporting standards useful to the UFO, in each of the following: 1) 1872 mining law projects such as uranium exploration, 2) 3160 Oil and Gas related both on federal lands and on Private surface/ Federal mineral estate and potential differences may exist based on geographic location, 3) Sand and Gravel surface use/reclamation, 4) pipeline reclamation, 5) road construction, maintenance and reclamation.
SAN JUAN/SAN MIGUEL RMP		
As a general rule, public land is available for oil and gas leasing. In many areas, oil and gas leases will be issued without special lease stipulations. In highly sensitive areas, where special stipulations or information notices are not sufficient to protect important surface resource values, no surface occupancy stipulations will be implemented. Stipulations and information notices are located in Appendix Two. **Emphasis Area E (Public Land Disposal)** • Continue oil, gas, & CO2 operations throughout planning area (183,000 acres in areas designated as KGSs). **Emphasis Area F (Cultural)** • Withdraw from mineral entry and provide for no surface occupancy stipulations for oil and gas leasing on Dolores Cave and Tabeguache		

CURRENT PLANNING DECISION	ARE DECISIONS RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
Pueblo. Provide for no surface occupancy stipulations for oil & gas leasing on Tabeguache canyons to protect cultural values. See Appendix 2 of the San Juan/San Miguel RMP: Oil and Gas Lease Information Notices and Stipulations.		
OIL AND GAS LEASING AMENDMENT		
• The Dolores River Canyon and Tabeguache Creek will not be leased. This is 37,323 acres of BLM-administered mineral estate within the San Juan/San Miguel Planning Area (see Map 2 and Table 1). • BLM administered mineral estate within the San Juan/San Miguel Planning Area are open to oil and gas leasing and development, subject to the lease terms and (as applicable) lease stipulations noted in Appendix A of the RMP. • No Surface Occupancy stipulations will be used to protect: coal mines where oil and gas development would be incompatible with the planned coal extraction; grouse, raptor, bald eagle, peregrine falcon, Mexican spotted owl, waterfowl and shorebird nests; special status plant species; sites within the Dolores River Canyon. • Timing Limitation stipulations will be used to protect crucial habitat, nesting, fledgling and birthing areas (see Map 3 and Appendix A of the RMP). • Controlled Surface Use stipulations will be used to protect: coal mines where the mining method or location is such that location of subsequent wells can avoid significant conflicts, riparian/wetland vegetation, and steep slopes (see Map 4 and Appendix A of the RMP). • Lease Notices will be used to alert		

CURRENT PLANNING DECISION	ARE DECISIONS RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
lessees to Class I and II Paleontological Areas and Sage Grouse nesting areas (see Appendix A of the RMP). • Conditions of Approval will be applied to operational approvals (Applications for Permit to Drill and Sundry Notices) as determined necessary by the Authorized Officer to protect other resources and values within the terms, conditions and stipulations of the lease contract. A list of the most common conditions of approval is found in Appendices D and F of the Final Plan Amendment EIS. Further details of these decisions are provided in the Final Plan Amendment/EIS. All leasing stipulations referred to above and included in this decision are provided in Appendix A.		

B. POTENTIAL NEW DECISIONS FOR THE RMP REVISION

None identified.

C. AREAS OF RELATIVE ECOLOGICAL IMPORTANCE TO GUIDE LAND USES AND MANAGEMENT

None identified.

OTHER LEASEABLE MINERALS

A. ABILITY OF CURRENT MANAGEMENT DIRECTION TO ACHIEVE DESIRED FUTURE CONDITIONS AND ADDRESS RESOURCE DEMANDS

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
The UB RMP and the SJ-SM RMP does not specifically reference other leasable mineral resources.	**No:** There is no leasable minerals management decision for potash in either RMP.	In coordination with GJFO and the SJPLC, in addition to Moab and Monticello FOs, potash should be included in the Uncompahgre RMP.

B. POTENTIAL NEW DECISIONS FOR THE RMP REVISION

To manage for leasable potash proposals in the Paradox Basin area of the UFO certain management decisions could be included in the RMP based upon location and other resource conflicts.

C. AREAS OF RELATIVE ECOLOGICAL IMPORTANCE TO GUIDE LAND USES AND MANAGEMENT

None identified.

RENEWABLE ENERGY RESOURCES

A. ABILITY OF CURRENT MANAGEMENT DIRECTION TO ACHIEVE DESIRED FUTURE CONDITIONS AND ADDRESS RESOURCE DEMANDS

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
Management decisions for Solar, Geothermal, Wind, and Biomass Renewable Energy Resources were not	**No:** Renewable energy resource projects proposed in the next 15 years are likely to involve lands within the planning area. 43 CFR 3204 allows for direct use non-competitive geothermal leasing	Incorporate management decisions in the Uncompahgre RMP to address which areas will be open for renewable

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
addressed in either RMP.	for non-energy producing applications that could involve BLM or split estate lands.	energy leasing on BLM or split estate lands.

B. POTENTIAL NEW DECISIONS FOR THE RMP REVISION

Geothermal energy resources decisions on BLM and / or split estate lands. Wind and solar energy decisions.

C. AREAS OF RELATIVE ECOLOGICAL IMPORTANCE TO GUIDE LAND USES AND MANAGEMENT

None identified.

LOCATABLE MINERALS

A. ABILITY OF CURRENT MANAGEMENT DIRECTION TO ACHIEVE DESIRED FUTURE CONDITIONS AND ADDRESS RESOURCE DEMANDS

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
UNCOMPAHGRE BASIN RMP		
• All existing withdrawals that segregate federal mineral estate from location and entry under the general mining laws will be recommended for retention. Federal mineral estate in areas not under withdrawal will be open to entry and location. **Management Units 1, 2, 3, 5, 7, 8, 9, 10, 11, 15, 16** • Open to mineral entry and location due to the lack of resource conflicts. Existing BLM and Bureau of Reclamation withdrawals will be recommended for lifting as they are no longer needed. **Management Unit 6** • Closed to protect its wilderness values. **Management Units 12, 13, 14**	**Yes:** The Uncompahgre Basin RMP decisions have served their purpose of allowing minerals activities where they are most likely to be productive while preserving and protecting other resources as defined by their respective management objectives.	No change recommended.

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
• Closed to mineral entry and location. These units will be placed under a BLM protective withdrawal.		
SAN JUAN/SAN MIGUEL RMP		
• Management direction will emphasize mineral development on the public lands. Mineral values indicate significant reserves of valuable minerals are present and development is either currently ongoing or will occur within the near future. Other resource uses will occur to the extent they are compatible with mineral development. Limited expenditures of public resources will be used on developing the present land resources. Livestock grazing will continue, wildlife habitat will be maintained where feasible, and cultural resources will receive the protection currently afforded by law. • All public land is open to mineral entry and development unless previously withdrawn (such as wilderness and administrative withdrawals). Mineral exploration and development on public land will be regulated under 43 CFR 3800 to prevent unnecessary and undue degradation of the land. • Continue cooperative management to protect surface resources on DOE lease tracts. Provide for necessary permits for sand and gravel. Provide protective stipulations to protect the unique fossils in the Placerville area. **Area E (Public Land Disposal)** • Continue approved operations of 4,500 acres of hard rock mining under 43 CFR 3809 regulations.	**Yes:** The management decisions have served their purpose of allowing minerals activities where they are most likely to be productive while preserving and protecting other resources as defined by their respective management objectives.	No change recommended.

B. POTENTIAL NEW DECISIONS FOR THE RMP REVISION

For locatable minerals, revising or modifying the big game, deer / elk winter range timing limitations in certain locations could be considered.

Revegetation seeding requirements could be defined to allow for site specific adjustments.

C. AREAS OF RELATIVE ECOLOGICAL IMPORTANCE TO GUIDE LAND USES AND MANAGEMENT

None identified.

MINERAL MATERIALS

A. ABILITY OF CURRENT MANAGEMENT DIRECTION TO ACHIEVE DESIRED FUTURE CONDITIONS AND ADDRESS RESOURCE DEMANDS

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
UNCOMPAHGRE BASIN RMP		
Management Units 1, 3, 7, 8, 10, 16 • Open to mineral material disposal. **Management Unit 2** • Open to mineral material disposal with possible restrictions on surface disturbing activities from December 1 through April 30 on crucial deer and elk winter range to protect crucial deer and elk winter range from disturbance. **Management Unit 5** • Open to mineral material disposal with possible, restrictions on surface disturbing activities from March 1 through May 31 on wet saline soils to protect wet saline soils from rutting and erosion. **Management Units 9, 12, 13, 14, 15** • Closed to mineral material disposal. **Management Unit 11** • Open to mineral material disposal with possible restrictions on any disturbance from March 15 through June 30 to protect nesting waterfowl.	**Yes:** Salable minerals is a discretionary use program. It is not a mineral right given by law as the locatable minerals program is by account of the 1872 Mining Law. Therefore it is managed by decisions based upon impacts on other resources. The management decisions currently in place by the UB and SJ-SM RMP's present adequate decision making guidance as it pertains to saleable minerals.	No change is recommended.
SAN JUAN/SAN MIGUEL RMP		
• The seven generic guidance principals shown in the "All Minerals" section	**Yes:** Salable minerals are a	No change is

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
apply. • Applications for removing common variety mineral materials, including sand and gravel, will continue to be processed on a case-by-case basis. Stipulations to protect important surface values will be attached based on interdisciplinary review of each proposal. **Area E (Public Land Disposal)** • Continue sand & gravel operations (880 acres).	discretionary use program and not a mineral right provided by the 1872 Mining Law (as are locatable minerals). Therefore, salable minerals are managed by decisions based upon impacts on other resources. Management decisions currently in place through the UB and SJ-SM RMP's present adequate decision making guidance as it pertains to salable minerals.	recommended.
SAN JUAN/SAN MIGUEL ACEC AMENDMENT		
• Close the river bottom areas to the sale of sand and gravel.		

B. POTENTIAL NEW DECISIONS FOR THE RMP REVISION

Cease sales of moss rock to the public for landscaping purposes. Processing of moss rock applications is not cost effective, and the removal of moss rock contributes to a denuding of native rock in areas of the UFO.

C. AREAS OF RELATIVE ECOLOGICAL IMPORTANCE TO GUIDE LAND USES AND MANAGEMENT

Areas where moss rock is sold are becoming stripped of native rock. Continuation of this activity will lead to a loss of wildlife habitat and deter from the natural appearance of the landscape.

4.2.4 Recreation

A. ABILITY OF CURRENT MANAGEMENT DIRECTION TO ACHIEVE DESIRED FUTURE CONDITIONS AND ADDRESS RESOURCE DEMANDS

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES?	REMARKS (RATIONALE)	OPTIONS FOR CHANGE
UNCOMPAHGRE BASIN RMP			
Management Unit 1 • The BLM will manage recreation use in a manner that minimizes recreational impacts on interspersed and adjacent private land.	**No**	General issues facing recreation managers include: • Rapid regional population growth • Changing population demographics (US Census Bureau 2002). • Increasing dispersed recreation use, both summer and winter. • Popularity of public lands as a "backyard" recreation destination for local communities. • Adjacent private lands and in-holdings. • Economic and social value of recreation and tourism. • Citizen desire for a greater role in the management of their public lands. • Budget allocations, which are flat or decreasing despite aging facilities and increasing demands. • Technological advances, such as ATVs and mountain bikes, as well as better outdoor equipment and clothing. • Integrating recreation use with sustainable management of other	• Readdress recreational objectives and develop alternatives with SRMA or Extensive Recreation Management Area options.
Management Units 2, 3, 5, 7, 9, 10, 13, and 16 • Managed for extensive recreational use to meet public demands for dispersed recreation.	**No**		• Readdress recreational objectives and develop alternatives with SRMA or Extensive Recreation Management Area options.
Management Unit 8 • Open for ORV use. Develop for intensive ORV use. • Loading ramps and informational signs will be constructed. • This management will provide ORV users an area with limited hazards. • A minimum of restrictions will be placed on surface-disturbing activities that do not impede or endanger ORV recreationists.	**Yes**		• North Delta OHV Area should remain an Open Area due to manageability, county support, and past management however will require additional facilities and information to warn users of the dangers of the area.
Management Unit 14 • Designated as an Outstanding Natural Area/ACEC to protect the areas scenic qualities. A management plan will be prepared.	**Yes**		• Continue to manage the Needle Rock area as an Outstanding Natural Area/ACEC to protect the area and its scenic and geological

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES?	REMARKS (RATIONALE)	OPTIONS FOR CHANGE
		resources. Based on the issues above, the UFO does not currently have the capacity in terms of staff, law enforcement, annual budget, or existing recreation facilities including trails) to adequately manage future resident recreation demand alone.	features. • Address recreational uses for the area and appropriate time for those uses.
Management Unit 15 • Designated as an Outstanding Natural Area/ACEC to protect the area's threatened and endangered species and scenic qualities. A management plan will be prepared to manage the area for its primitive, non-motorized recreational values.	**No**		Area is within the Adobe Badlands WSA. • Re-evaluate current objectives and determine if Outstanding Natural Area/ACEC designation is still necessary.
SAN JUAN/SAN MIGUEL RMP			
Common to all Emphasis Areas: • A wide range of outdoor recreation opportunities will continue to be provided for all segments of the public, commensurate with demand. • Trails and other means of public access will continue to be maintained and developed where necessary to enhance recreation opportunities and allow public use. • Developed recreation facilities receiving the heaviest use will receive first priority for operational and maintenance funds. • Sites that cannot be maintained to acceptable health and safety standards will be closed until deficiencies are corrected.	**Yes and No**		• Wording in most cases is adequate. Recreational objectives should be reevaluated and a range of alternatives developed with SRMA and Extensive Recreation Management Area options.
Emphasis Areas A (Livestock Management) and K (Soil and Water) • Manage for dispersed recreation as the primary recreation activity. • Permit yearlong, nonmotorized	**No**		• Reevaluate recreational objectives and develop alternatives with SRMA or Extensive Recreation Management Area options

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES?	REMARKS (RATIONALE)	OPTIONS FOR CHANGE
recreation activities throughout the area.			
Emphasis Area B (Wildlife) • Manage for dispersed recreation as the primary recreation activity. • Permit yearlong, nonmotorized recreation activities throughout the area, except restrict recreation use to resolve people and wildlife conflicts, favoring wildlife in such cases.	**No**		• Readdress recreational objectives and develop alternatives with SRMA or Extensive Recreation Management Area options
Emphasis Area C (Recreation) • Manage for a variety of recreation opportunities consistent with classifications determined in Recreational Opportunity Spectrum inventories. • Provide necessary visitor management services and facilities required to meet recreation program goals. • Manage the Dolores River as an SRMA for water-based recreation opportunities.	**Yes and No**		• Wording in most cases is good however recreational objectives need to be re-evaluated and a range of alternatives developed with SRMA and Extensive Recreation Management Area options.
Emphasis Area D (Wilderness) • Allow opportunities for primitive and unconfined recreation activities featuring solitude; the chance to experience unmodified, natural ecosystems; and to travel cross-country in an environment where success or failure is directly dependent on ability, knowledge and initiative; but in a way to prevent deteriorating the wilderness resource. • Manage recreation use to provide users with experiences	**Yes**		• Continue to manage WSAs and the Tabeguache Area for their wilderness characteristics and consistent with the Interim Management Policy and Guidelines for Lands Under Wilderness Review, pending congressional action.

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES?	REMARKS (RATIONALE)	OPTIONS FOR CHANGE
and psychological outcomes expected in wilderness/primitive setting. • Control social & physical carrying capacity to provide such outcome. • Establish site-specific visual quality objectives & design guide lines for landscape development projects during activity planning. • Provide for primitive (nonmotorized) river running activities compatible with wilderness resource in the Dolores River Canyon WSA.			
Emphasis Area E (Mineral Development) • Provide recreation opportunities that do not conflict with mineral development.	**No**		• Readdress recreational objectives and develop alternatives with SRMA or Extensive Recreation Management Area options
Emphasis Area F (Cultural Resources) • Make areas available for day use activities, where feasible. Construct public convenience developments such as restrooms, observation areas, or interpretative trails.	**Yes**		• Areas with high cultural concern should be limited to controlled day use activities
Emphasis Area G (Resource Management) • Provide for dispersed types of recreation opportunities. Utilize sign, maps, etc., to help manage the dispersed use.	**No**		• Readdress recreational objectives and develop alternatives with SRMA or Extensive Recreation Management Area options
Emphasis Area H (Public Land Disposal) • Provide for very limited dispersed recreation activity.	**No**		• Readdress recreational objectives and develop alternatives with SRMA or Extensive Recreation Management Area options
Emphasis Area J (Forestry) • Manage for dispersed	**No**		• Readdress recreational objectives and develop

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES?	REMARKS (RATIONALE)	OPTIONS FOR CHANGE
recreation as the primary recreation activities.			alternatives with SRMA or Extensive Recreation Management Area options
Emphasis Area K (Soil and Water) • Manage for dispersed recreation as the primary recreation activity. • Permit yearlong, nonmotorized recreation activities throughout the area.	**No**		• Readdress recreational objectives and develop alternatives with SRMA or Extensive Recreation Management Area options
SAN MIGUEL RIVER ACEC AND SRMA AMENDMENT			
• Designation of public lands on the San Miguel River, including the tributary streams, from Deep Creek to the old town of Pinon, as an SRMA.	**Yes**		• Area should remain as a SRMA due to the amount of use that the corridor receives from recreationists.

MANAGEMENT ISSUES NOT ADEQUATELY ADDRESSED

Objectives

Management of recreation is guided by BLM regulations and policy, a number of federal and state laws, current and emerging trends in public demand for activities and opportunities, and the physical and natural environment surround any given area. Current management direction is based on activity level plans and other recreation management direction, including 43 CFR 8340, Subchapter H, Recreation, Part 8342 and Part 8364; H-1601-1-Land Use Planning Handbook, Appendix C, II. Resource Uses, Part C - Recreation and Visitor Services; and BLM Recreation Permit Administration Handbook H-2930-1. The intent of the various laws, policy and guidelines is to meet public demand for outdoor land-based recreation opportunities, while preventing or minimizing adverse impacts to the natural and cultural elements of Colorado's public lands.

Decisions

- The BLM works cooperatively with organizations, clubs, agencies, counties and communities to educate on recreation issues.
- For the past six years, Colorado State Parks has provided us with OHV grants through a Good Management Program that assist with employing a seasonal OHV crew during the spring, summer, and a portion of the fall.

- The BLM UFO has completed a Travel Management Amendment and EA document for the Dry Creek Area in which routes are designated for different types of uses.
- The UFO has completed a Travel Management Amendment and EA to limit travel to existing routes in almost all open areas in the field office and until further travel planning can be conducted.
- The UFO has implemented a Special Recreation Permit Policy by which all outfitters are required to abide if they wish to have a permit authorized.

Issues and Challenges

Colorado's population has grown significantly in the past ten years, (Colorado State Demography Office 2007) and an increasing number of people are living near or seeking local public lands for a diversity of recreational opportunities. The region is truly a year-round place to live and work; as a result, public lands administered by the BLM are absorbing increasing recreational demand and use. The towns of Montrose, Delta, Paonia, Olathe, Telluride, Ridgway, Ouray, Cedaredge, Norwood, Naturita, and Nucla all have public lands within close proximity that are used as backyard recreation areas by local residents.

Due to the population growth of Western Colorado counties and the increase in recreational interest on BLM lands, the current RMPs are extremely outdated and have created a reactive management instead of proactive management for recreation. There are also decisions within the RMPs that were never followed up on leaving the RMP under implemented. These decisions are outdated and not compatible with the existing conditions making it next to impossible to implement those decisions at this point in time.

B. POTENTIAL NEW DECISIONS FOR THE RMP REVISION

The Colorado BLM recently recommended recreation guidelines designed to meet public land health standards. The guidelines provide tools, methods, and techniques that can be used by managers to maintain or meet the standards as they implement various programs on the public lands.

SPECIAL RECREATION MANAGEMENT AREAS (SRMAS)

There are currently two SRMAs in the planning area. The UFO needs to review the existing SRMA designations to ensure compliance with BLM H-1601-1 - Land Use Planning Handbook guidance. Per the revised Land Use Planning Handbook, the UFO must identify a distinct, primary recreation-tourism market (destination, community or undeveloped) as well as a corresponding recreation management strategy for SRMAs. If no distinct, primary recreation-tourism market can be identified, then the administrative identification of an SRMA should be removed.

Identification of new SRMAs are required during land use planning. Where recreation demand from a recreation-tourism market requires maintenance of setting character and/or

production of associated activity, experience, and benefit opportunities/outcomes, the area should be identified and managed as an SRMA, rather than being custodially managed as an Extensive Recreation Management Area. Public lands within the planning area should be reviewed to determine if a distinct, primary recreation-tourism market requiring a corresponding and distinguishing recreation management strategy exists. The UFO should consider designating additional SRMAs in areas where the BLM and its partners determine that recreation demand from a recreation-tourism market exists.

NATURAL RESOURCE SETTING PRESCRIPTIONS

Recreation Opportunity Spectrum

The Recreation Opportunity Spectrum is based on the premise that a recreation opportunity is dependent on particular qualities found in nature, and it takes this premise and considers factors such as qualities found in recreational activities and qualities found in managerial direction. By combining these qualities in different ways, a variety of recreation opportunities is achieved. Variations on management and activities on the resource are usually expressed as a range of opportunities, from primitive to developed.

Recreation Opportunity Spectrum classes have not been defined for a majority of the planning area. A spectrum inventory and objective setting should be considered during RMP development to provide a better assessment tool for determining development impacts to recreation resources. Recreation spectrum classes would also provide the opportunity to help define visitor experiences. Recent application of other recreation management philosophies, such as a benefit-based recreation framework, could be considered for application in the EIS alternatives. The Recreation Opportunity Spectrum could also be used in conjunction with other strategies, such as establishing limits of acceptable change, described below, or along with the concept of focus areas, as described above.

RECREATION MANAGEMENT

To alleviate conflict between users, focus areas could be implemented. A focus area would concentrate on a single primary use, while allowing other non-interfering uses. Focus areas would offer an improved opportunity to match recreation expectations and experiences. For example, an area might be designated for dirt biking and ATV use, although mountain biking would still be permitted.

Developed Campgrounds and Day Use Sites

Infrastructure in developed sites could be redesigned to accommodate the recreation demands of growing populations. Hispanic recreation activity demands follow cultural traditions that make nature and family-oriented gatherings popular (National Recreation and Park Association 2007). Multilingual signage and large group sites could help prevent resource damage and conflicts with other users. Fees at developed recreation sites may need to be considered in order to help offset budget shortfalls.

Cooperative Management

Current and predicted budget and staffing levels highlight the need to work more cooperatively with recreation-tourism partners. BLM UFO, partners and communities have the opportunity to move beyond simple trail partnerships to cooperatively share resources, funding, staff and expertise to:

1. Appropriately direct activities such as climbing, boating, and camping/picnicking
2. Manage existing developed recreation sites to enhance the community's use of public land open spaces and facilities
3. Designate, construct and manage public shooting ranges
4. Improve on-the-ground law enforcement capabilities aimed at reducing: illegal dumping, abandoned vehicles, hazmat sites, and other public health and safety related issues
5. Establish safety zones adjacent to town boundaries where the discharge of firearms for all purposes would be prohibited.

RECREATION ADMINISTRATION

Special Recreation Permits

Using a Limits of Acceptable Change process, the BLM could determine the optimum number of permittees and whether or not minimum and maximum commercial visitor days should be established throughout the UFO planning area including the San Miguel River Corridor.

Consistency and Coordination with Other Plans

Outside of the San Miguel River SRMA, most "close to town" public lands are still custodially managed to offer a variety of dispersed recreational activities. Communities seeking to: 1) diversify their economies through recreation tourism or 2) desiring to create social/community recreation benefits will need to support the UFO with: staff time, law enforcement, funding, and facility development to accommodate increases in visitation.

Supplementary Rules

Pursuant to 43 CFR 8365.1-6 (Supplementary Rules), 43 CFR 8364.1 (Closure and restriction orders), and 8341.2 (Special rules) the BLM UFO must work with communities and partners to establish appropriate recreation use regulations that protect natural resources (i.e. operation of motor vehicles, seasonal recreation use restrictions, camping) and provide for the safety of visitors and property (i.e. discharge of firearms, fires) on public lands adjacent to communities.

Mineral Withdrawals

All lands within SRMAs could be considered for withdrawal from mineral development. This would prevent conflicts with recreational use.

RECREATION MARKETING, INFORMATION, AND EDUCATION

The BLM UFO has opportunities to better achieve The BLM's Priorities for Recreation and Visitor Services (BLM 2003b), a service delivery plan for delivering benefits to the American people and their communities, specifically for: 1) connecting the visitor to natural and cultural resources, through enhanced interpretation, education and information; 2) improving the accuracy, appearance and consistency of visitor information; 3) emphasizing and improving outdoor ethics and stewardship through education; 4) education programs to highlight the relationship between natural resources and recreation use, including additional ranger staff, presentations, displays and brochures; 5) additional outreach to educate recreation users on regulations within the UFO; and 6) expanded website to advise on recreation opportunities and applicable restrictions.

Marketing

Recreation and tourism are big business and significant economic drivers, identified as one of the top three industries within all twelve western states. Outdoor recreation, nature, adventure and heritage tourism are the fastest growing segments of the travel and tourism industry, and the BLM open spaces have it all (BLM 2003b).

The marketing, information, and education actions of the BLM UFO and their partners must be sympathetic to sensitive biological resources, susceptible cultural resources, local interests and needs, and political realities. A shotgun marketing approach in which SRMAs are marketed for the simple fact that they are SRMAs is not a responsible or effective approach.

The UFO has opportunities to:

- Work with tourism groups to better prepare visitors with appropriate information, user ethics and user expectations prior to their visit.
- Explain to BLM personnel and partners the difference between match-up marketing (which matches up people and the activities, experiences, and benefits they desire with the areas where those opportunities are provided) and promotional marketing.
- Determine recreation-tourism markets and market strategies for SRMAs, then work with partners to communicate with that audience.
- Help partners direct use to recreation areas where the land, infrastructure (including personnel, facilities, and trails), recreation providers (including outfitters and off-site businesses), and communities are able to and desire to accommodate people.
- Consider and recommend a national recreation area, national conservation area, or combination of the two. (Only Congress is authorized to designate such an area.)

Tourism

Future recreation demand for outdoor recreation opportunities found on public lands presents a possibility for tourism to increase its contribution to the stability of the local and

regional economy. The UFO should identify opportunities to work actively with local communities to promote appropriate local recreation resources.

Visitor Service Information

There is a need for multicultural (Hispanic) interpretation and signing (regarding low impact camping, public land ethics, and solitude) and to provide administration or marketing regarding recreation opportunities for diverse populations.

RECREATION MONITORING

Critical to making recreation decisions is the need for a means for tracking and evaluating visitor use, the condition of resources, and public demand. Apart from financial considerations, the monitoring challenge involves dealing with logistical problems associated with:

- size of the area
- number of access points
- relative ease of accessibility from private lands
- overall amount of visitor use
- wide-ranging types of visitor activities
- lack of recreation objectives in current planning documents
- limited amount of resources available to monitor use.

Realizing these difficulties, the BLM UFO still has opportunities to better achieve the BLM's Priorities for Recreation and Visitor Services (BLM 2003b) specifically in relation to: 1) improving the accuracy and consistency of BLM's visitor use data; 2) developing recreation experience/benefit attainment and visitor service satisfaction measures, and conduct surveys to support DOI/BLM output and outcome measures, evaluate performance and allocate resources; 3) developing social and environmental monitoring indicators and standards geared toward benefits-based management; and 4) monitoring the effectiveness of management and marketing actions implemented to deliver prescribed setting conditions and to produce the targeted experience and quality of life outcomes.

The key to improving the UFO's recreation monitoring is developing a well thought-out monitoring framework during the RMP revision for SRMAs (BLM 2005) and addressing monitoring strategies in-depth in SRMA implementation plans. The UFO will also need to consider recreation monitoring of: visitor health and safety, user conflict and resource protection for ERMAs (BLM 2005).

Limits of Acceptable Change

A widely used management-monitoring technique in recreation is known as ***limits of acceptable change***. Limits of acceptable change utilizes indicators with prescriptive standards based on recreation objectives to define acceptable limits. If the standards (acceptable limits) are exceeded, then the managing partners make predetermined management changes that will bring concerns (such as visitor impacts to natural and cultural

resources, the physical, social, and administrative natural resource recreation setting prescriptions, and the visitor's attainment of recreation outcomes) back within acceptable standards.

4.2.5 ☀ Travel and Transportation Management

A. ABILITY OF CURRENT MANAGEMENT DIRECTION TO ACHIEVE DESIRED FUTURE CONDITIONS AND ADDRESS RESOURCE DEMANDS

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES?	REMARKS (RATIONALE)	OPTIONS FOR CHANGE
UNCOMPAHGRE BASIN RMP			
General • Public lands will be open to off-road vehicle (ORV) use. *Note: see section 3.1.6 (Fish and Wildlife) for additional off-road vehicle decisions.*	**No**	General issues facing travel management include: • Rapid regional population growth • Changing population demographics • Increasing dispersed OHV use for all seasons. • Popularity of public lands as a "backyard" recreation destination for local communities. • Adjacent private lands and in-holdings Access issues • Economic and social value of recreation and tourism. • Citizen desire for a greater role in the management of their public lands. • Budget allocations, which are flat or decreasing despite aging facilities and increasing demands. • Technological advances, such as ATVs and mountain bikes, as well as better outdoor equipment and clothing. • New guidance set forth	• Current OHV designations are out-of-date and need to be readdressed.
Management Unit 1 • Public road access will be acquired into the Olathe Reservoir area for hunting and other recreational purposes.	**No**		• Wording needs to be taken out if easement has already been provided.
Management Unit 2 • Public access will be acquired into the McDonald Mesa, RoatcapJay Creek, Spaulding Peak/Dry Creek, Oak Mesa, and Oak Ridge areas for hunting and other recreational uses, wildlife habitat management, and timber and woodlands management.	**No**		• Reevaluate what access points are adequate and appropriate.
Management Unit 3 • Public access will be acquired into the Beaver Hills and Linscott Canyon areas for woodland harvest and recreation purposes. • Use of ORVs for woodland management and harvest purposes will be authorized year-round.	**Yes and No**		• Incorporate the Dry Creek Travel Management Plan (TMP) and Field Office Wide TMP Amendments • Access is still needed into Beaver Hills and Linscott Canyon. Reevaluate what other access points are adequate and appropriate.
Management Unit 8 • The management unit would be managed as open to ORV use.	**Yes**		• No changes necessary; appropriate area for Open designation

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES?	REMARKS (RATIONALE)	OPTIONS FOR CHANGE
		within the LUP Handbook (H-1601-1) Appendix C.	
Management Unit 9 • Public access will be acquired into the Terror Creek area for project development and recreation purposes. • The Potter Creek road (five miles) and the Dry Fork of Escalante Creek road (two miles) will be closed, rehabilitated and removed from the transportation plan. A total of 680 acres in the Roubideau and Potter creeks will be closed to ORV use. • Vehicle use in the remainder of the management unit will be limited to designated roads and trails yearlong.	**Yes and No**		• Incorporate the Dry Creek Travel Management Plan (TMP) and Field Office Wide TMP Amendments • Reevaluate what access points are adequate and appropriate.
Management Unit 10 • Public access will be acquired into the Storm King and High Park areas for timber harvest and extensive recreation purposes. • Open to ORV use except during the elk calving season when all roads will be closed. • Access for maintenance of the existing communications site will be permitted at all times.	**No**		• Incorporate Field Office Wide TMP Amendments • Reevaluate what other access points are adequate and appropriate. • Current OHV designations are out-of-date and need to be readdressed.
Management Unit 14 • Vehicle use will be limited to designated roads and trails yearlong.	**Yes**		• OHV designation is appropriate for area.
Management Unit 15 • Closed to ORV use to protect the scenic qualities and to prevent accidental destruction of threatened and endangered plant species and their potential habitat.	**Yes**		• OHV designation is appropriate for area and management decision is consistent with the WSA IMP.
Management Unit 16 • Open to ORV use.	**No**		• Current OHV designations are out-of-date and need to be readdressed.

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES?	REMARKS (RATIONALE)	OPTIONS FOR CHANGE
SAN JUAN/SAN MIGUEL RMP			
Common to all Emphasis Areas • Public land within areas identified as open to motorized vehicle use generally will remain available for such use subject to existing laws and regulations. • Public land within areas identified as limited to motorized vehicle use generally will receive priority attention. Major limited categories include: areas limited except for existing (or designated) roads (or ways) and trails, and other limitations as needed by management objectives. • Public land within areas identified as closed to motorized vehicle use will be closed yearlong to all forms of motorized vehicle use. • Exceptions may be allowed in WSAs based on applying BLM's Interim Management Policy (BLM Revised, July 12, 1983).	**No**		• Current OHV designations are out-of-date and need to be readdressed. • Incorporate Field Office-Wide TMP Amendment
Emphasis Area A (Livestock Management) • Allow motorized, off-road vehicle (ORV) use. • Provide administrative access to public land to enhance management of the range resource. • Provide maintenance of roads in the BLM transportation plan to minimum standards for user safety.	**No**		• Reevaluate what access points are adequeate and appropriate. • Current OHV designations are out-of-date and need to be readdressed. • Incorporate Field Office Wide TMP Amendments
Emphasis Area B (Wildlife) • Provide administrative access to public land for managing wildlife habitat. • Provide very little or no maintenance to roads. • Close and reclaim any abandoned or poorly designed roads. • Acquire public access where	**No**		• Reevaluate what access points are adequeate and appropriate. • Current OHV designations are out-of-date and need to be readdressed. • Incorporate Field Office-Wide TMP Amendments

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES?	REMARKS (RATIONALE)	OPTIONS FOR CHANGE
needed to allow wildlife-related recreation (including hunting and fishing in underutilized areas). • Acquire administrative access to Roc Creek.			
Emphasis Area C (Recreation) • Provide public access to the public lands to enhance the recreation values. • Provide a moderate level of maintenance on primary roads to promote user safety. • Minimal levels of maintenance will be provided on secondary roads. • Acquire and/or improve access to Beaver Creek for recreational pursuits.	**Yes and No**		• Reevaluate what access points are adequeate and appropriate. • Current OHV designations are out-of-date and need to be readdressed. • Incorporate Field Office Wide TMP Amendments
Emphasis Area D (Wilderness) • Allow no motorized ORV use.	**Yes**		• OHV designation is appropriate for area and management decision is consistent with the WSA IMP.
Emphasis Area E (Mineral Development) • Provide or maintain public access minimizing impacts to mineral development. • Work with mineral developers to assure roads are maintained for public safety.	**No**		• Reevaluate what access points are adequeate and appropriate. • Current OHV designations are out-of-date and need to be readdressed. • Incorporate Field Office Wide TMP Amendments
Emphasis Area F (Cultural Resources) • Provide administrative access to public land to enhance the management of the cultural resource. • Provide public access to some of the cultural areas where public use will be managed. • Provide maintenance of roads to a level of minimum standards for user safety. • Close roads when necessary to	**Yes and No**		• Reevaluate what access points are adequeate and appropriate. • Current OHV designations are out-of-date and need to be readdressed. • Incorporate Field Office Wide TMP Amendments

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES?	REMARKS (RATIONALE)	OPTIONS FOR CHANGE
limit access to protect cultural values.			
Emphasis Area G (Natural Resource Management) • Provide administrative and public access, where possible. • Maintain roads to a level of minimum standards for public safety.	**No**		• Reevaluate what access points are adequeate and appropriate. • Current OHV designations are out-of-date and need to be readdressed. • Incorporate Field Office Wide TMP Amendments
Emphasis Area H (Public Land Disposal) • Acquire no access to these tracts unless an exception can be documented. • Provide very little or no maintenance of roads. • Reserve access rights across parcels when needed for public or resource management.	**No**		• Reevaluate what access points are adequeate and appropriate. • Current OHV designations are out-of-date and need to be readdressed. • Incorporate Field Office Wide TMP Amendments
Emphasis Area J (Forestry) • Provide administrative and, where needed, public access to public land to enhance forest management. • Provide necessary maintenance of roads to ensure timber management practices can occur as planned.	**No**		• Reevaluate what access points are adequeate and appropriate. • Current OHV designations are out-of-date and need to be readdressed. • Incorporate Field Office Wide TMP Amendments
Emphasis Area K (Soil and Water) • Provide administrative access to public land to enhance management of the soil and water resource. • Provide maintenance of roads or trails to reduce erosion.	**No**		• Reevaluate what access points are adequeate and appropriate. • Current OHV designations are out-of-date and need to be readdressed. • Incorporate Field Office-Wide TMP Amendments
Emphasis Area L (ACECs) • Provide administrative and public access where needed for ACEC management.	**No**		• Reevaluate what access points are adequeate and appropriate. • Current OHV

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)		OPTIONS FOR CHANGE
• Maintenance will be provided on only those roads needed for management purposes.			designations are out-of-date and need to be readdressed. • Incorporate Field Office-Wide TMP Amendments

MANAGEMENT ISSUES NOT ADEQUATELY ADDRESSED

The current Uncompahgre Basin RMP does not address management decisions or objectives related to land use authorizations.

B. POTENTIAL NEW DECISIONS FOR THE RMP REVISION

COMPREHENSIVE TRAVEL MANAGEMENT

Travel management in Colorado (BLM 2007) will be as follows:

- ***Comprehensive*** - Managers need to look at more than just OHVs to include all motorized and nonmotorized travel that occurs on public lands;
- ***Multifunctional*** - Broader participation from all functions from within the BLM is essential;
- ***Collaborative*** - Travel plans should be accomplished in a collaborative industry and community-based process;
- ***Outcome-based*** - Travel systems should be designed for transportation outcomes; and
- ***Implemented*** - Travel management implementation should be accomplished in a holistic approach that provides clear direction for access and recreation opportunities, while protecting sensitive areas. This includes signs, maps, education, maintenance, construction, reconstruction, planning, field presence, law enforcement, and monitoring.

MANAGEMENT OPPORTUNITIES

Four primary opportunities for change exist for travel management, as follows:

1. Update Travel Management Areas by changing designations from open to limited to designated routes with the exception of the North Delta OHV Area;

2. Design a system of appropriate and sustainable routes that help achieve land use planning objectives and protect resources;

3. Design route systems that are fun, that provide challenge for different skill levels, that are multimodal when possible, and that have loops;

4. Comprehensive travel management planning should address all resource use aspects (such as recreational, traditional, casual, agricultural, commercial, and educational) and accompanying modes and conditions of travel on the public lands, not just motorized or OHV activities.

Acceptable modes of access and travel for each Travel Management Area should be identified. In developing these areas, the following will be considered:

- Consistency with all resource program goals and objectives
- Primary travelers
- Objectives for allowing travel in the area
- Setting characteristics that are to be maintained (including recreation opportunity system and VRM settings)
- Primary means of travel allowed to accomplish the objectives and to maintain the setting characteristics
- Choosing and developing individual roads and trails, rather than simply using inherited roads and trails. Most existing roads and trails on public lands were created over time, rather than being planned and constructed for specific activities or needs. Instead of a decision making process to decide which individual roads and trails should be closed or left open, consider a broader range of possibilities for management of individual roads and trails, including reroutes, reconstruction or new construction, and closures
- Determining needs for new public access points and working with communities and landowners to establish and manage those access points

TRANSPORTATION FACILITIES AND ACCESS

Transportation-related linear features on BLM lands comprise one of the most significant issues facing the BLM, and are the focus of a concentrated investment of BLM resources to adequately identify, categorize, designate, operate, and maintain. The Roads and Trails Terminology Team, a joint effort between the National Recreation and Visitor Services Group, WO-250 (Recreation) and Protection and Response Group, WO-360 (Engineering) within the BLM, was chartered to address the BLM's approach to management of transportation-related linear features on public lands.

The Roads and Trails Terminology Report noted nine key recommendations under three objectives that were approved for implementation BLM-wide (BLM 2006).

Objective 1: Establish Terms and Definitions for Transportation Linear Features

1. Recommendation - Standardize the terms used for transportation assets within the BLM as "Road," "Primitive Road," and "Trail."
2. Recommendation - Shift "Maintenance Levels" to "Maintenance Intensity" and simplify the standards for consistency across all linear features.

Objective 2: Determine Appropriate Minimum National Data Standards and Electronic Storage Location for Linear Feature Data

1. Recommendation - Develop and formalize through published guidance the required minimum national data standard for all linear features that comprise the BLM transportation system assets.
2. Recommendation - Utilize the Facility Asset Management System as the BLM's official database for the management of transportation system assets.
3. Recommendation – Develop a Minimum National Data Standard for linear disturbances (asset) that incorporates national data requirements from Recreation and Engineering and provides a consistent set of guidance to the Field.

Objective 3: Develop a Strategy to Align the Inventory and Management of Transportation Linear Features between Resource Management Programs

1. Recommendation - Recognize the Facility Asset Management System initial inventory as the BLM's transportation system.
2. Recommendation - Implement a BLM-wide policy that requires any change in the BLM's network of designated routes to occur through the land-use planning process or through subsequent implementation or activity level plans and EAs.
3. Recommendation - Standardize policy guidance for transportation planning to facilitate a consistent approach and process across the BLM.
4. Recommendation - The BLM should develop policy guidance to identify, track, monitor, prioritize, and fund the removal of unwanted transportation linear disturbances.

The UFO will need to accomplish several tasks during the RMP revision related to meeting the objectives of the "The Roads and Trails Terminology Report. For example:

1. The BLM UFO will need to amend our classification system from "Maintenance Levels" to "Maintenance Intensity." The implementation of primary transportation asset categories provides an opportunity to review and enhance current standards for determining maintenance levels, managed use standards, and other descriptive information utilized to describe and report on the BLM's assets. The new "Maintenance Intensity" levels include four primary "Maintenance Intensity" levels that allow for removal, low, medium, and high maintenance intensities irrespective of the type of route (road, primitive road, or trail) (BLM 2006). Maintenance Intensities provide a range of objectives and standards, from "identification for removal" through frequent and intensive maintenance. Maintenance Intensities provide consistent objectives and standards for the care and maintenance of BLM routes based on identified management objectives. Maintenance Intensities must be consistent with land-use planning management objectives (for example, natural, cultural, recreation setting, and visual). Maintenance Intensities provide operational guidance to field personnel on the appropriate intensity, frequency, and type of maintenance activities that should be undertaken to keep the route in acceptable condition and provide guidance for the minimum standards of care for the annual maintenance of a route. Maintenance Intensities do not describe route geometry, route types, types of use or other physical or managerial characteristics of the route. Those items are addressed as other descriptive attributes to a route.

Level 0

Maintenance Description: Existing routes that will no longer be maintained and no longer be declared a route. Routes identified as Level 0 are identified for removal from the Transportation System entirely.

Maintenance Objectives:

- No planned annual maintenance
- Meet identified environmental needs
- No preventive maintenance or planned annual maintenance activities

Maintenance Funds: No annual maintenance funds

Level 1

Maintenance Description: Routes where minimum (low intensity) maintenance is required to protect adjacent lands and resource values. These roads may be impassable for extended periods of time.

Maintenance Objectives:

- Low (minimal) maintenance intensity
- Emphasis is given to maintaining drainage and runoff patterns as needed to protect adjacent lands. Grading, brushing, or slide removal is not performed unless route bed drainage is being adversely affected, causing erosion.
- Meet identified resource management objectives
- Perform maintenance as necessary to protect adjacent lands and resource values
- No preventive maintenance
- Planned maintenance activities limited to environmental and resource protection
- Route surface and other physical features are not maintained for regular traffic

Maintenance Funds: Maintenance funds provided to address environmental and resource protection requirements. No maintenance funds provided to perform preventive maintenance.

Level 2

Reserved for possible future use.

Level 3

Maintenance Description: Routes requiring moderate maintenance due to low volume use (seasonally or year-round for commercial, recreation, or administrative access). Maintenance intensities may not provide year-round access but are intended to generally provide resources appropriate to keep the route in use for the majority of the year.

Maintenance Objectives:

- Medium (Moderate) maintenance intensity
- Drainage structures will be maintained as needed. Surface maintenance will be conducted to provide a reasonable level of riding comfort at prudent speeds for the route conditions and intended use. Brushing is conducted as needed to improve

sight distance when appropriate for management uses. Landslides adversely affecting drainage receive high priority for removal otherwise, they will be removed on a scheduled basis.

- Meet identified environmental needs
- Generally maintained for year-round traffic
- Perform annual maintenance necessary to protect adjacent lands and resource values
- Perform preventive maintenance as required to generally keep the route in acceptable condition Planned maintenance activities should include environmental and resource protection efforts, annual route surface
- Route surface and other physical features are maintained for regular traffic

Maintenance Funds: Maintenance funds provided to preserve the route in the current condition, perform planned preventive maintenance activities on a scheduled basis, and address environmental and resource protection requirements.

Level 4

Reserved for possible future use.

Level 5

Maintenance Description: Routes for high (Maximum) maintenance due to year-round needs, high volume traffic, or significant use. Also may include routes identified through management objectives as requiring high Intensities of maintenance or to be maintained open on a year-round basis.

Maintenance Objectives:

- High (Maximum) maintenance intensity
- The entire route will be maintained at least annually. Problems will be repaired as discovered. These routes may be closed or have limited access due to weather conditions but are generally intended for year-round use.
- Meet identified environmental needs
- Generally maintained for year-round traffic
- Perform annual maintenance necessary to protect adjacent lands and resource values
- Perform preventive maintenance as required to generally keep the route in acceptable condition
- Planned maintenance activities should include environmental and resource protection efforts, annual route surface
- Route surface and other physical features are maintained for regular traffic

Maintenance Funds: Maintenance funds provided to preserve the route in the current condition, perform planned preventive maintenance activities on a scheduled basis, and address environmental and resource protection requirements.

2. The BLM UFO will need to recognize and update the Facility Asset Management System. The Facility Asset Management System will represent the "baseline" for the UFO's current transportation system and comprises the designated roads and trails within the BLM. Formal recognition of the Facility Asset Management System as the baseline will provide consistency between all BLM Programs.

3. The BLM UFO will need to implement a BLM-wide policy that requires any change in the BLM's inventory of designated roads, primitive roads, and trails to occur through the formal evaluation and designation process through one of four events:
    - ROD for an RMP/EIS or an Amendment or Revision of a RMP/EIS.
    - Decision Record for an Activity Plan, Plan Amendment/ EA.
    - Federal Register Notice Action (under the authority of 43 CFR 8341.2, 8364.1, 8365.1-6, or 9268.3) that has a follow-up land-use planning action and associated NEPA action.
    - Management decision of appropriate routes in an area that has been designated "open" to OHV use.

4.2.6 ☀ Utility Corridors and Communications Sites

A. ABILITY OF CURRENT MANAGEMENT DIRECTION TO ACHIEVE DESIRED FUTURE CONDITIONS AND ADDRESS RESOURCE DEMANDS

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
UNCOMPAHGRE BASIN RMP		
Public lands will be open to development of major utility facilities. Stipulations and mitigating measures will be developed on a case-by-case basis.	Yes All projects would be analyzed on a case-by-case basis; stipulations and mitigation would be developed as needed.	
Management Units 1, 3, 8, 16 • Open to development of major utility corridors with minimal stipulations.	**Yes:** All projects would be analyzed on a case-by-case basis; stipulations and mitigation would be developed as needed.	Management Unit 16 along Highway 133 to the FS boundary should consider including: Corridors one-quarter mile wide and located on each side of Colorado Highway 133 may be open to development of major utility facilities. The remainder of the area would be closed to major utility facilities to protect scenic values. See MU-7 below.
Management Unit 2 • Open to major utility development with possible restrictions, on construction activities: from December 1 through April 30 within crucial deer and elk winter range; to protect crucial deer and elk winter range from disturbance.	**Yes:** Assuming current unit is still determined to be within crucial winter range.	Consider modifying with: "Project activities which create noise disturbance activities above average day-to-day noise levels are subject to big game winter timing limitations."

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
Management Unit 5 • Open to major utility development with possible restrictions on surface disturbing activities from March 1 through May 31 to protect wet saline soils.	**Yes:** All projects would be analyzed on a case-by-case basis; stipulations and mitigation would be developed as needed.	
Management Unit 7 • Corridors one-quarter mile wide and located on each side of Colorado Highway 133 will be open to development of major utility facilities. The remainder of the area would be closed to major utility facilities except for those needed for coal development.	**Yes:** All projects would be analyzed on a case-by-case basis; stipulations and mitigation would be developed as needed.	• Decision should also apply to Highway 133 East and North of Management Unit 7 to the USFS boundary.
Management Unit 9 • Open to major utility development, except no surface disturbing activities which will have long-term adverse effects will be permitted; to protect riparian vegetation.	**Yes:** All projects would be analyzed on a case-by-case basis; stipulations and mitigation would be developed as needed.	
Management Unit 10 • Open to major utility development, except no surface disturbing activities will be permitted from May 1 through June 15 to protect elk calving.	**Yes:** Assuming current unit is still determined to be within elk calving range.	• Consider modifying with: "Project activities which create noise disturbance above average day-to-day noise levels are subject to elk calving timing restrictions."
Management Unit 15 • The management unit will be closed to development of major utilities to prevent accidental destruction of listed species and unique plant associations, and/or to maintain its scenic qualities.	**Yes:** Adobe Badlands WSA	
Management Unit 13 • Open to major utility development, except pipelines	**No:** Fairview ACEC	Consider modifying with: • The management unit will be closed to

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
and any surface disturbance which would affect threatened or endangered plant species or their potential habitat.		development of major utilities to prevent accidental destruction of listed species and unique plant associations, and/or to maintain its scenic qualities.
Management Unit 14 • The management unit will be closed to development of major utility facilities.	**Yes:** Needle Rock ACEC	
SAN JUAN/SAN MIGUEL RMP		
Emphasis Areas A, E, G, H, I, K • Major utility corridors would be allowed with protective stipulations to prevent or limit impacts to mineral development, water and soil, natural resources values or range management.	**Yes:** All projects would be analyzed on a case-by-case basis; stipulations and mitigation would be developed as needed.	
Emphasis Area B • Major utility corridors would generally be excluded except on a case-by-case basis to protect wildlife.	**No:** Area B encompasses a considerable amount of area within the planning unit.	• Rather than excluding the area, consider applying timing restrictions as mitigation to the construction phase of the project.
Emphasis Area C • Major utility corridors would not be allowed. However, to protect recreation resources, allow major corridors to cross the Dolores River between Disappointment Creek and the Big Gypsum Valley Bridge if needed.	**No:** As human development and energy needs increase, flexibility should be considered on a case-by-case basis.	• All projects would be analyzed on a case-by-case basis; stipulations and mitigation would be developed as needed.
Emphasis Area D • Allow no utility corridors and no new facilities except those authorized through Wilderness Act provisions.	**Yes:** WSAs	

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
Emphasis Area F • Major utility corridors (powerlines of 115 kV and above and pipelines 6" in diameter and above) would generally not be allowed to protect the cultural resources natural setting.	**No:** Is the 6+" diameter pipeline restriction still valid?	Consider modifying with: All projects would be analyzed on a case-by-case basis; stipulations and mitigation would be developed as needed to protect the cultural resources natural setting.
Emphasis Area J Major utility corridors would generally not be allowed in commercial forests but would be allowed in woodland; exceptions could occur with specific analysis.	**Yes:** All projects would be analyzed on a case-by-case basis; stipulations and mitigation would be developed as needed.	
Emphasis Area L Major utility corridors will be considered on a case-by-case basis.	**Yes:** ACECs All projects would be analyzed on a case-by-case basis; stipulations and mitigation would be developed as needed.	Consider modifying with: Open to major utility development, except any surface disturbance which would affect threatened or endangered plant species, their potential habitat, riparian areas, areas with scenic value or other special management areas.
Area L1 - ACEC Major utility corridors would not be allowed, with the exception of a major overhead electric transmission line across Beaver and Saltado Creeks. The selected corridor would allow one overhead transmission line which must be located within a ¼ mile from the existing 69 kV line and ½ mile from the Beef Trail Road crossing Beaver Creek. The line must span the riparian areas and visual impacts must be minimized. Stipulations will be developed on a specific project basis to protect natural and scenic values.	**Yes:** The transmission line has not been constructed yet. All projects would be analyzed on a case-by-case basis; stipulations and mitigation would be developed as needed.	
Area C1 - SRMA	**Yes:**	

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
The area would be open to major utility corridors subject to VRM mitigation. The area downstream of Horsefly Creek would be open to major utilities until construction and maintenance impacts to the riparian zone reach 5% of the total riparian acreage.	All projects would be analyzed on a case-by-case basis; stipulations and mitigation would be developed as needed.	

MANAGEMENT ISSUES NOT ADEQUATELY ADDRESSED

Neither RMP identifies management objectives for communication sites.

B. POTENTIAL NEW DECISIONS FOR THE RMP REVISION

UTILITY CORRIDORS

- Map, highlight or note the designated utility corridors in the West-Wide Energy Corridor PEIS. ROD signed on January 14, 2009.
- Consider designating additional areas for potential future utility corridors.
- Use as a default decision statement for the various management units: The majority of the public lands will be open to development for utility corridors; stipulations and mitigation measures will be developed on a case-by-case, site specific basis. Applicants will be encouraged to locate new facilities within existing corridors to the extent possible.

COMMUNICATIONS SITES

Address and incorporate generally recommended criteria for authorization of communications sites within the overall planning area. Consider including the following:

- Whenever possible, applicants should co-locate equipment using available space on existing towers.
- If a new tower is needed, to the extent possible, applicants should co-locate new towers at sites with existing towers.
- All towers will be self-supporting. Guyed wires will only be allowed if proven to be necessary on a case-by-case basis.
- All towers shall be left unpainted if they are dull, galvanized steel unless painting is required per FAA guidelines. All above ground equipment (not subject to safety requirements) including antennas and buildings; shall be painted a dull, non-glare

color which blends with the environment and is approved by the BLM; typically a dark grey is preferred.

- Towers will be designed to meet site specific wind and icing conditions.
- Anti-climb devices or removable steps will be recommended on towers to discourage unauthorized climbing.
- To avoid possible impacts to birds or bats, adhere to current FWS guidelines on siting, construction, operation and decommissioning of towers, <http://migratorybirds.fws.gov/issues/towers/comtow.html>
- Ensure all antennas and communication equipment meet American National Standards Institute, Federal Communications Commission, and BLM regulations, guidelines and standards concerning radiation and safety requirements.

4.2.7 Land Tenure

A. ABILITY OF CURRENT MANAGEMENT DIRECTION TO ACHIEVE DESIRED FUTURE CONDITIONS AND ADDRESS RESOURCE DEMANDS

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
UNCOMPAHGRE BASIN RMP		
All Management Units • Prior to disposal, resources within identified tracts will be managed according to current prescription for the management unit in which they are located. • Minimal funds, if any, will be spent on improvements on lands identified for disposal. • When land is disposed, federal mineral estate will be conveyed with surface estate where it would be in the public interest.	**Yes:** Decision describes management focus until lands are disposed; states no unnecessary funds to be spent; expresses desire to avoid split estate if lands are disposed.	• Allow for disposal of lands, especially isolated tracts, which are not significant or needed in protecting resource values.
Management Unit 1 • Private lands, if available, may be acquired if they would improve livestock management.	**Yes:** Allows for acquisition of lands to improve and support desired resource outcome.	• Allow for disposal of lands, especially isolated tracts, which are not significant or needed in protecting resource values.
Management Unit 2 • Private lands, if available, may be acquired to increase crucial deer and elk winter range.	**Yes:** Allows for acquisition of lands to improve and support desired resource outcome.	• Allow for disposal of lands, especially isolated tracts, which are not significant or needed in protecting resource values.
Management Unit 7 • Private lands, if available, may be acquired to improve riparian management or to increase crucial deer and elk winter range.	**Yes:** Allows for acquisition of lands to improve and support desired resource outcome.	• Allow for disposal of lands, especially isolated tracts, which are not significant or needed in protecting resource values.
Management Unit 9 • Private lands, if available, may be acquired to improve riparian management.	**Yes:** Allows for acquisition of lands to improve and support desired resource outcome.	• Allow for disposal of lands, especially isolated tracts, which are not significant or needed in protecting resource values.

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
Management Unit 10 • Private lands, if available, may be acquired to expand elk calving areas and to improve extensive recreational opportunities.	**Yes:** Allows for acquisition of lands to improve and support desired resource outcome.	• Allow for disposal of lands, especially isolated tracts, which are not significant or needed in protecting resource values.
SAN JUAN/SAN MIGUEL RMP		
• Dispose of various parcels of public lands throughout the planning area through sales, exchanges or any other title transfer means. Priority 1: Take action on the exchange and sale proposals currently on file. Priority 2: Dispose of the lands identified as suitable for transfer.	**No:** Disposal through sales is not likely. Not aware of pending exchanges in planning area.	• Include decision describing current management focus until lands are disposed; state no unnecessary funds to be spent on parcels identified for disposal; express desire to avoid split estate if lands are disposed.
Emphasis Areas A, B, C, E, F, G, H, I, J, K, L • Allow for disposal of parcels of public land that are not significant or needed for cultural values, mineral development, water and soil, livestock, wildlife, wild horses, forestry, natural resources or recreation management. • Acquire or exchange land and subsurface mineral estate when mineral development, cultural resources, water and soil, livestock, wildlife, forestry, natural resources, ACECs or recreation management opportunities will be enhanced.	**Yes:** Allows for disposal of lands that are not significant or necessary to protect resource values. **Yes:** Allows for acquisition of lands to improve and support desired resource outcome.	
Emphasis Area B • Acquire fishing easements on acreages associated with priority streams.	**Yes:** Increases recreation opportunities	• Allow for disposal of lands (especially isolated tracts) that are not significant or needed in protecting resource values.

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
• Pursue exchange of public lands to enhance wildlife values in Dry Creek Basin with primary consideration given to CDOW; however, other opportunities to enhance wildlife values will not be dismissed.	Uncertain whether this remains relevant criteria for planning unit.	
Emphasis Area D • Acquire or exchange private lands and subsurface mineral estates within wilderness areas that will enhance wilderness values or manageability. • Acquire easements between Bedrock and the northern boundary of the Dolores River Canyon WSA. • Coordinate with the Dolores Downstream Site Selection Report, which recommended acquisition and development of a boating access site near Bedrock Bridge.	**Yes:** Protects WSAs from development and avoids split estate issues within WSAs **Yes:** Increases recreation opportunities Uncertain whether this remains relevant criteria for planning unit.	
Emphasis Area L • Disposal of isolated tracts not needed for future public land management and that do not contain important resource values may be accomplished after site-specific reviews on a case-by-case basis.	**No:** Should also allow for acquisition of lands to improve and support special management areas.	• Allow for acquisition of lands to improve and support special management areas.

B. POTENTIAL NEW DECISIONS FOR THE RMP REVISION

Acquisition of lands will be considered on a case-by-case basis when opportunities for resource improvements and management will be enhanced.

Disposal of lands will be considered on a case-by-case basis. The intent is to retain lands in public ownership; however, disposal that would enhance management goals and serve public interest may be considered. Disposal of isolated, hard to manage tracts, or lands within urban interface areas could best be achieved through land exchanges.

4.2.8 Land Use Authorizations

A. ABILITY OF CURRENT MANAGEMENT DIRECTION TO ACHIEVE DESIRED FUTURE CONDITIONS AND ADDRESS RESOURCE DEMANDS

The Uncompahgre Basin RMP did not have any decisions regarding land use authorizations. The new RMP should specifically address these.

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
SAN JUAN/SAN MIGUEL RMP		
• The BLM will make every reasonable effort to authorize primary access to private landowners (via FLPMA ROWs) when such access will not cause significant adverse impacts to other resources. County road standards will be required when the environmental impacts can in no other way be mitigated. However, the BLM will not grant additional ROWs when reasonable access already exists unless there is a compelling public need.	**Yes:** The BLM is required to allow reasonable access to private property if no other access is available.	• Consider changing to: "County road standards **may** be required…"
Emphasis Areas A, B, C, E, F, G, H, I, J, K, L • Allow other land actions when there is a clear and significant public need; when they will result in minimal adverse impacts or when they (depending on the emphasis area) will be beneficial to cultural resources, natural resource values, water and soil, grazing, wild horses, forestry, wildlife, ACECs and recreation management, or won't limit mineral development.	**Yes**	• Land use authorizations will be allowed when there is a clear and significant public need, when they will result in minimal adverse impacts or when they will be beneficial to other resources. All projects would be analyzed on a case-by-case site specific basis; stipulations and mitigation measures would be developed as appropriate.

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
Emphasis Area D • Allow no new facilities except those authorized through Wilderness Act provisions. Remove any existing, nonconforming structures unless they are determined to be of cultural or historic value or necessary for administering the area.	**Yes**	• If nonconforming structures still exist within WSAs, then the BLM should identify a timeframe for removal.
SAN MIGUEL RIVER ACEC AND SRMA AMENDMENT		
• Upgrades to the existing major electric transmission lines would be authorized within the San Miguel Canyon. Authorizations, such as rights-of-way, would not be permitted in the relic riparian communities; elsewhere such actions would be restricted to only those with an overriding public need which will not create long-term visual impacts or damage to the riparian system.	**Yes:** Allows for flexibility in future decisions while protecting the ACEC.	• Land use authorizations will be allowed when there is a clear and significant public need, when they will result in minimal adverse impacts or when they will be beneficial to other resources. All projects would be analyzed on a case-by-case site specific basis; stipulations and mitigation measures would be developed as appropriate.

B. POTENTIAL NEW DECISIONS FOR THE RMP REVISION

The potential to permit or prohibit land use authorizations (such as rights-of-way) should be specifically addressed in the RMP. General determinations should be discussed as to restrictions, special stipulations, or mitigation measures that would typically be required to protect the natural resources of the unit.

Use as a default decision statement for the various management units:

The majority of public lands will be open to land use authorizations (such as rights-of-way). Stipulations and mitigation measures will be applied on a case-by-case, site specific basis. The intended outcome is to ensure the compatibility of multiple land uses with the protection and sustainability of natural resources.

4.2.9 ☀ Withdrawals

A. ABILITY OF CURRENT MANAGEMENT DIRECTION TO ACHIEVE DESIRED FUTURE CONDITIONS AND ADDRESS RESOURCE DEMANDS

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
UNCOMPAHGRE BASIN RMP		
Powersite Withdrawals • Existing powersite withdrawals will be maintained pending determination of potential. These lands will not be subject to further consideration for disposal. No significant long-term investments will be made on these lands unless the investment could be recovered prior to development.	**Yes:** As energy needs and consumption increase, powersite withdrawals may become valuable resources to our nation.	• New and existing withdrawals will be administered in accordance with FLPMA on a case-by-case, site-specific basis.
Management Unit 16 • BOR withdrawals on Fruitland Mesa and along the Gunnison River downstream of Delta will be recommended for revocation to allow for mineral exploration and development, facilitate resource management, permit long-term land use planning, and allow for disposal of 806 acres of public land on Fruitland Mesa.	**Not sure:** The Gunnison River downstream of Delta is now within the Dominguez Escalante NCA. Current plans for Fruitland Mesa are not known, and the disposal of 806 acres should be reviewed. Existing withdrawals may help protect sage grouse concerns.	• New and existing withdrawals will be administered in accordance with FLPMA on a case-by-case, site-specific basis.

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
• Withdrawals on all other lands identified for disposal will be recommended for revocation. Portions of withdrawals which will be affected are those associated with 108 acres of the Paonia Project, 37 acres of the Gunnison/Arkansas Project, 72 acres of the Uncompahgre Valley Project and 25 acres along the East Canal. Federal mineral estate will be open to entry and location after the withdrawal is revoked.	**Not sure:** Current plans for these areas are unknown.	• New and existing withdrawals will be administered in accordance with FLPMA on a case-by-case, site-specific basis. • Federal mineral estate may not_be open for entry and location after the withdrawal is revoked, as determined on a case-by-case, site-specific basis.
SAN JUAN/SAN MIGUEL RMP		
• New withdrawals will be processed on a case-by-case basis using current guidance to determine if a formal withdrawal is needed.	**Yes:** Provides the flexibility to respond to a variety of circumstances.	
• By 1991 a review of other agency's withdrawals will be completed to determine if they should be continued, modified or revoked. Upon modification or revocation, part or all of the withdrawn land will revert to BLM management.	**No**	• Consider eliminating this decision.
• Minimize public land withdrawn from mining and mineral leasing.	**Yes:** Allows for increase in energy consumption and needs.	
• Where applicable, replace existing withdrawals with ROWs, leases, permits or cooperative agreements	**Yes:** This is the agency's current policy.	• New and existing withdrawals will be administered in accordance with FLPMA on a case-by-case, site-specific basis.
Emphasis Areas A, B, C, E, F, G, J, K • Allow other land actions when there is a clear and significant public need, when they will result in minimal adverse impacts or when they will be beneficial to	**Yes:** Provides the flexibility to respond to a variety of circumstances.	• New and existing withdrawals will be administered in accordance with FLPMA on a case-by-case, site-specific basis.

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
(depending on the emphasis area) mineral development, cultural resources, natural resource values, water and soil, grazing, forestry, wildlife, or recreation management.		
Emphasis Area D • Do not renew Federal Energy Regulatory Commission's powersite classifications on the Dolores River Canyon WSA when reviewed.	**Yes:** Protection of the WSA	• If the opportunity allows, recommend revoking the Federal Energy Regulatory Commission's powersite classifications in the Dolores River Canyon WSA.
Emphasis Areas L • Other land actions will be allowed only if they are designed to meet the ACEC management objective or when there is a clear and significant public need.	**Yes:** Provides the flexibility to respond to a variety of circumstances.	• New and existing withdrawals will be administered in accordance with FLPMA on a case-by-case, site-specific basis.

MANAGEMENT ISSUES NOT ADEQUATELY ADDRESSED

- The new plan should include a management objective essentially stating that the lands program will continue to administer both existing and new withdrawals in accordance with FLPMA regulations on a case-by-case, site-specific basis.
- Where applicable, authorize ROWs, leases, permits, or cooperative agreements instead of withdrawals. If existing withdrawals were revoked, the lands would likely be managed in accordance with the surrounding lands and objectives of the management unit in which they are located.

B. POTENTIAL NEW DECISIONS FOR THE RMP REVISION

New withdrawals will be processed on a case-by-case, site-specific basis using current guidance provided by FLMPA. Where applicable, authorize ROWs, leases, permits or cooperative agreements instead of withdrawals.

Withdrawals on recreation sites and facilities would be considered.

If existing withdrawals are modified or revoked, the lands will be managed in accordance with the surrounding lands and objectives of the management unit in which they are located.

C. AREAS OF RELATIVE ECOLOGICAL IMPORTANCE TO GUIDE LAND USES AND MANAGEMENT

None identified.

4.3.1 ☀ Areas of Critical Environmental Concern

A. ABILITY OF CURRENT MANAGEMENT DIRECTION TO ACHIEVE DESIRED FUTURE CONDITIONS AND ADDRESS RESOURCE DEMANDS

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
Fairview Research Natural Area/ACEC • Plant monitoring studies will be developed in cooperation with the Colorado Natural Areas Program and actions designed to improve habitat conditions initiated. • Oil and gas leases will have a no-surface-occupancy stipulation, the area will be withdrawn from entry and location for locatable minerals and all surface-disturbing activities will be restricted to protect and enhance endangered species habitats.	**Yes and No:** Management has been adequate to protect the endangered plant species within the ACEC. There appears to be a correlation between some level of disturbance and areas where clay-loving wild buckwheat does well.	• The phrase "all surface-disturbing activities will be restricted to protect and enhance endangered species habitats" should be modified to allow for management actions that may benefit sensitive plant species. • Enlarge or change the Fairview ACEC boundary to include the largest and most productive population of clay-loving wild buckwheat (currently located outside of the ACEC south and west of South Fairview). • Exclude ROWs, energy corridors, land exchanges, and similar land actions.
Needle Rock Outstanding Natural Area/ACEC • The area will be managed to protect the scientific and scenic qualities of this site. • Oil and gas leases will contain a no-surface-occupancy stipulation, the area will remain withdrawn from entry and location for locatable minerals, and • The area will be managed under VRM Class I guidelines.	**Yes:** Management has been adequate to protect the values within the ACEC.	

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
Adobe Badlands Outstanding Natural Area/ACEC • The area will be managed to protect its unique scenic qualities, improve threatened and endangered species habitat, and reduce active erosion. • Oil and gas leases will contain a no-surface-occupancy stipulation; forage utilization will be limited if necessary to reduce erosion rates; and the area will be protected from surface-disturbing activities which would degrade scenic qualities or accelerate erosion.	**Yes:** Management has been adequate to protect the unique values within the ACEC.	• Enlarge the Adobe Badlands boundary to include the entire WSA. • Exclude ROWs, energy corridors, land exchanges, and similar land actions.
San Miguel ACEC/SRMA • Protection of the unique riparian resources, protection of scenic values, and recreation management.	**Yes:** Management has been adequate to protect the unique riparian resources and scenic values within the ACEC.	

B. POTENTIAL NEW DECISIONS FOR THE RMP REVISION

Evaluate ACEC nominations for relevance and importance, and consider these in the RMP.

C. AREAS OF RELATIVE IMPORTANCE TO GUIDE LAND USES AND MANAGEMENT

None identified.

4.3.2 National Scenic Byways

A. ABILITY OF CURRENT MANAGEMENT DIRECTION TO ACHIEVE DESIRED FUTURE CONDITIONS AND ADDRESS RESOURCE DEMANDS

The Uncompahgre Basin and San Juan/San Miguel RMPs do not specifically address management decisions for scenic byways.

Management direction for scenic byways traversing the UFO is set by the respective byway committees. BLM staff is actively involved in the management of scenic byways within the UFO and represents BLM interests through participation in meetings and other activities. These committees consist of public and private sector recreation and tourism providers who share ideas about marketing potential and resource protection.

B. POTENTIAL NEW DECISIONS FOR THE RMP REVISION

The BLM is a member of the Colorado National Scenic Byway Committee and will continue to work with this group on interpretive planning and implementation, and to ensure that byway management objectives and BLM management objectives are compatible.

Consider areas visible from scenic byways for higher Visual Resource Management ratings.

C. AREAS OF RELATIVE IMPORTANCE TO GUIDE LAND USES AND MANAGEMENT

All American Road - San Juan Skyway

The San Juan Skyway was designated as an All-American Road in 1996. This 236-mile scenic byway travels southwest from Ridgway over Dallas Divide and along Leopard Creek on Highway 62. The loop joins Highway 145 near Placerville and continues past Mountain Village (just west of Telluride) through the San Juan National Forest to Cortez. From Cortez, the skyway heads east on Highway 160 to Durango, and then north along Highway 550, passing through Silverton and Ouray before returning to Ridgway.

All American Road - Grand Mesa Scenic and Historic Byway

In 1996, Colorado Highway 65 over Grand Mesa was designated as a National Scenic Byway. It is one of ten America's Byways in Colorado. This 63-mile route begins in Cedaredge, heads north through Mesa, and ends at the junction with Interstate-70. A spur road on top of the mesa leads to Land's End.

Unaweep/Tabeguache Scenic Byway

This 133-mile southwest Colorado route begins in Placerville on Highway 145 and heads northwest through Naturita and the former uranium/vanadium mining town of Uravan. The byway continues on Highway 141 through Gateway, past the Gateway Canyons Resort, and ends in Whitewater.

West Elk Loop

The 205-mile West Elk Loop begins in Carbondale, Colorado and travels south along Highway 133 through the towns of Redstone and Paonia. The route continues south and then east along Highway 92 towards the town of Gunnison. At Gunnison, the loop heads north along Highway 135 through Crested Butte and meets up once again with Highway 133, where it continues north back to Carbondale.

4.3.3 Wild and Scenic Rivers

A. ABILITY OF CURRENT MANAGEMENT DIRECTION TO ACHIEVE DESIRED FUTURE CONDITIONS AND ADDRESS RESOURCE DEMANDS

The Uncompahgre Basin RMP and the San Juan/San Miguel RMP do not contain any decisions regarding Wild and Scenic Rivers.

B. POTENTIAL NEW DECISIONS FOR THE RMP REVISION

A Draft Wild and Scenic River Eligibility Report for the planning area was completed in September 2009, and public comments were received through March 29, 2010. A Final Eligibility Report will incorporate those comments, along with a determination of which river segments will continue forward to the suitability phase. A Wild and Scenic River Suitability Report will be prepared as part of the Uncompahgre RMP revision. Depending on the suitability determination, the BLM could recommend to Congress one or more segments for Wild and Scenic River designation.

4.3.4 Wilderness Areas and Wilderness Study Areas

A. ABILITY OF CURRENT MANAGEMENT DIRECTION TO ACHIEVE DESIRED FUTURE CONDITIONS AND ADDRESS RESOURCE DEMANDS

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
UNCOMPAHGRE BASIN RMP		
• Recommend 20,827 acres (10,402 in Camel Back WSA and 10,425 in Adobe Badlands WSA) as preliminarily nonsuitable for wilderness designation under Section 603 of FLPMA. • These areas will be managed under Interim Management Policy and Guidelines for Lands Under Wilderness Review, pending congressional action.	**Yes and No:** Management decision is consistent with the Interim Management Policy.	No change is needed for the Adobe Badlands WSA, although designation of the Camel Back WSA should be revisited.
SAN JUAN/SAN MIGUEL RMP		
• Recommended 28,539 acres (13,354 acres in UFO planning area) in Dolores River Canyon WSA as preliminarily suitable for wilderness designation (under Section 603 of FLPMA), pending mineral survey.	**Yes:** Management decision is adequate.	No change necessary. Mineral survey should be located (if one was completed).
• Recommend 74,844 acres (only the 1st two are in the Uncompahgre planning area) as preliminarily nonsuitable for wilderness designation under Section 603 of FLPMA: 913 in Dolores River Canyon; 7,908 in Tabeguache Creek; 9,040 in Cahone Canyon; 12,742 in	**Yes and No:** Management decision is consistent with the Interim Management Policy.	Revisit recommendation for nonsuitable wilderness designations.

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)	OPTIONS FOR CHANGE
Cross Canyon; 19,562 in McKenna Peak; 7,129 in Menefee Mountain; 11,287 in Squaw/Papoose Canyon; and 6,303 in Weber Mountain. • These areas will be managed under Interim Management Policy and Guidelines for Lands Under Wilderness Review, pending congressional action.		
SAN JUAN/SAN MIGUEL RMP AMENDMENT (THE COLORADO WILDERNESS ACT)		
The Tabeguache Area (17,240 acres; 7,748 acres of BLM Tabeguache WSA) was designated by Congress in 1993 as the "Tabeguache Area." The Tabeguache Area must be managed by the BLM and USFS so as to maintain the area's "presently existing wilderness character and potential for inclusion in the National Wilderness Preservation System."	Yes Management decision is consistent with legislation mandated by Congress	No changes necessary
GRAND JUNCTION RMP		
Recommended 18,835 acres (1803 acres in the Uncompahgre planning area) in Sewemup Mesa WSA as preliminarily suitable for wilderness designation (under Section 603 of FLPMA), pending mineral survey. Recommended 305 acres in Sewemup Mesa WSA as preliminarily nonsuitable for wilderness designation under Section 603 of FLPMA. These areas will be managed under Interim Management Policy and Guidelines for Lands Under Wilderness Review, pending congressional action.	Yes Management decision is consistent with IMP.	No change necessary. Mineral survey should be located (if one was completed).

MANAGEMENT ISSUES NOT ADEQUATELY ADDRESSED

- No objectives were identified in the 1989 Uncompahgre Basin RMP.
- All WSAs that fall within the UFO boundary (except the Camelback WSA) are open for mechanized use.
- The Adobe Badlands WSA falls within Management Units 15, 2, and 5, and the Camel Back WSA falls within Management Units 1, 2, 3, and 9. Some of these management units have decisions that do not conform to the Wilderness Interim Management Policy. These decisions consist of travel management, visual resource management, and overall management decisions.
- Although addressed in the Grand Junction RMP, a portion of the Sewemup WSA falls within the planning area and should be addressed in the Uncompahgre RMP.

B. POTENTIAL NEW DECISIONS FOR THE RMP REVISION

Except for the Adobe Badlands WSA, the current management of WSAs within the planning area has been adequate to protect the wilderness characteristics of those areas. However, increased urbanization and recreation uses have created some problem areas that threaten wilderness characteristics. Increased monitoring by recreation and law enforcement staff may help to alleviate some of these problems. This issue should be addressed in the revised RMP through route designations, travel management decisions, restoration and rehabilitation efforts in order to continue to protect the wilderness characteristics of these WSAs.

In addition, the revised RMP should reflect BLM guidance requiring that all WSAs be managed as VRM Class I areas.

Because none of the WSAs has been formally withdrawn from mineral entry (as identified in the 1989 RMP), the potential for mineral entry could further threaten wilderness characteristics. The RMP revision provides the UFO with an opportunity to review mineral entry status.

4.3.5 Special Recreation Management Areas

Special Recreation Management Areas are addressed in the Recreation Section.

4.4.1 Tribal Interests

A. ABILITY OF CURRENT MANAGEMENT DIRECTION TO ACHIEVE DESIRED FUTURE CONDITIONS AND ADDRESS RESOURCE DEMANDS

The Uncompahgre Basin RMP and the San Juan/San Miguel RMP do not contain any decisions regarding Tribal Interests.

B. POTENTIAL NEW DECISIONS FOR THE RMP REVISION

MANAGEMENT OBJECTIVES NOT ADEQUATELY ADDRESSED

The existing land use plans do not address recent legislative requirements, including the Native American Graves Protection and Repatriation Act, 1992 amendments to the National Historic Preservation Act, and Executive Order 13007 regarding Indian Sacred Sites, and do not have specific resource management goals that address these directives.

While the RMPs do not contain specific guidance relating to tribal interests, as part of the cultural resource program, the UFO has engaged in Native American consultation to identify traditional cultural properties, sacred/religious sites, and special use areas. Letters to the Southern Ute, Ute Mountain Ute, and Northern Ute tribes have been sent asking for their comments and input. Phone contact is routinely made to confirm tribes' interest in commenting and input, and consultation with interested tribes will continue throughout the planning process. If tribally sensitive areas are identified or become known through the Native American notification or consultation process, their concerns are currently addressed through site and project specific modification and/or mitigation. Current UFO management objectives are to protect and preserve Native American cultural and sacred sites and Native American access to these sites whenever possible. The UFO will take no action that would adversely affect these areas or location without consulting the appropriate Native Americans.

The BLM is mandated to consult with Native American tribes concerning the identification of cultural values, religious beliefs, and traditional practices of Native American people that may be affected by actions on federal lands. The BLM has developed several sets of guidelines for consultation with Native American groups and evaluation of cultural resources with an emphasis on traditional use values. BLM Manuals 8160, *Native American Coordination and Consultation,* and H-8160-1, *General Procedural Guidance for Native American Consultation*, provide consultation requirements and procedural guidance to ensure that the consultation record demonstrates, "that the responsible manager has made a reasonable

and good faith effort to obtain and consider appropriate Native American input in decision making" (H8160-1, 2002:4).

BLM Handbook H-8110 on *Evaluating Cultural Resources* offers guidelines for management considerations when allocating cultural resources to use categories, including considerations for traditional use values.

C. AREAS OF RELATIVE ECOLOGICAL IMPORTANCE TO GUIDE LAND USES AND MANAGEMENT

None identified.

4.4.2 Public Safety

A. ABILITY OF CURRENT MANAGEMENT DIRECTION TO ACHIEVE DESIRED FUTURE CONDITIONS AND ADDRESS RESOURCE DEMANDS

The Uncompahgre Basin RMP and the San Juan/San Miguel RMP do not contain any decisions regarding public safety management.

B. POTENTIAL NEW DECISIONS FOR THE RMP REVISION

A decision to the effect that we will abide by the National Contingency Plan (40-CFR 300) and other applicable laws is recommended. The National Contingency Plan has its own procedures for items addressed in NEPA and other laws (such as ESA and the Archeological Resources Protection Act), along with a strict public participation process.

Public safety is managed according to BLM policy. Management of hazardous materials, substances, and waste, including storage, transportation, and spills, will be conducted in compliance with 29 CFR 1910, 49 CFR 100-185, 40 CFR 100-400, specifically 40 CFR 300, Comprehensive Environmental Response Compensation and Liability Act, Resource Conservation and Recovery Act, Superfund Amendment Reauthorization Act, Toxic Substances Control Act, Clean Water Act, and other Federal and State regulations and policies regarding hazardous materials management.

All hazmat response in the planning area is conducted in accordance with the local plan and the National Contingency Plan. For general hazmat response, no other management decisions are necessary as we are obligated by law to respond in accordance with the National Contingency Plan.

The UFO responds to illegal dumping of materials through law enforcement, hazardous materials response procedures, and contractor personnel. Any response to hazardous materials incidents is in conformance with approved BLM plans and procedures conforming to federal and state guidelines.

All lessees, permittees, and operators on land within the planning area comply with all laws and regulations pertaining to hazardous materials.

The UFO will adhere to the Hazardous Materials Incident Contingency Plan. Periodically review the plan, and periodically update the plan as needed to maintain compliance with all applicable laws and regulations that pertain to hazardous materials (adaptive management).

A decision on the method to dispose of uranium mill tailings:

To provide for the disposal, long-term stabilization, and control of uranium mill tailings in a safe and environmentally sound manner and to minimize or eliminate radiation health hazards to the public, Congress enacted the Uranium Mill Tailings Radiation Control Act of 1978 (UMTRCA). This Act established two programs to protect the public and the environment from uranium mill tailings. Under Title I, DOE was charged with completing surface reclamation at 24 inactive uranium mill tailings piles. Under Title II, cleanup is occurring at 16 uranium recovery facilities currently licensed by the NRC.

Beyond the authority of UMTRCA, EPA has authority to protect the public and the environment from exposures to both the hazardous and toxic characteristics of uranium mining overburden, which are classified as "Technologically Enhanced Naturally Occurring Radioactive Material" (TENORM). EPA frequently extends this authority to individual states, or federal land management agencies, which regulate the environmental impacts under clean water and clean air laws. These organizations also have a general authority to protect people and the environment from the adverse effects of mining activities (BLM, 2008).

MANAGEMENT ISSUES NOT ADEQUATELY ADDRESSED

Hazardous Materials Response

Hazmat Response is exempt from NEPA. This could be very controversial but our solicitors have said they would not defend us if we used NEPA to address hazmat site remediation in place of the National Contingency Plan. The plan has its own procedures that address the same stuff addressed in NEPA and other laws (Endangered Species, Archeological Resources Protection Act, etc.) must be addressed, along with a strict public participation process. In view of this, a statement in the RMP to the effect that we will abide by the National Contingency Plan (40-CFR 300) and other applicable laws is the best way to address this.

Public safety is managed according to BLM policy. Management of hazardous materials, substances, and waste, including storage, transportation, and spills, will be conducted in compliance with the Comprehensive Environmental Response Compensation and Liability Act, the Resource Conservation and Recovery Act, Superfund Amendment Reauthorization Act, Toxic Substances Control Act, Clean Water Act, and 29 CFR 1910, 49 CFR 100-185, 40 CFR 100-400, as well as other federal and state regulations and policies regarding hazardous materials management.

The reference to 40 CFR, part 300, National Oil and Hazardous Substances Pollution Contingency Plan is particularly significant. Local Hazmat Contingency Plans are tiered to, and directed by this National Contingency Plan. All hazmat response in the planning area is conducted in accordance with the local plan and the National Contingency Plan. For general hazmat response, no other management decisions are necessary as we are obligated by law to respond in accordance with the National Contingency Plan.

The UFO has available the Hazardous Materials Incident Contingency Plan. The plan is periodically reviewed and updated by the UFO hazmat coordinator and safety officer as

needed to maintain compliance with all applicable laws and regulations pertaining to hazardous materials.

Illegal Dumping of Hazardous Materials

The UFO responds to illegal dumping of materials through law enforcement, hazardous materials response procedures, and contractor personnel. Any response to hazardous materials incidents is in conformance with approved BLM plans and procedures conforming to national and state guidelines. The UFO ensures that lessees, permittees, and operators on land within the planning area comply with all laws and regulations pertaining to hazardous materials.

Uranium Mill Tailings

To provide for the disposal, long-term stabilization, and control of uranium mill tailings in a safe and environmentally sound manner and to minimize or eliminate radiation health hazards to the public, Congress enacted the Uranium Mill Tailings Radiation Control Act of 1978. This Act established two programs to protect the public and the environment from uranium mill tailings. Under Title I, the Department of Energy was charged with completing surface reclamation at 24 inactive uranium mill tailings piles. Under Title II, cleanup is occurring at 16 uranium recovery facilities currently licensed by the NRC.

The EPA has authority beyond that of the Act to protect the public and the environment from exposures to both the hazardous and toxic characteristics of uranium mining overburden, which are classified as "Technologically Enhanced Naturally Occurring Radioactive Material." The EPA frequently extends this authority to individual states or federal land management agencies, which regulate the environmental impacts under clean water and clean air laws. These organizations also have a general authority to protect people and the environment from the adverse effects of mining activities (BLM 2008).

C. AREAS OF RELATIVE ECOLOGICAL IMPORTANCE TO GUIDE LAND USES AND MANAGEMENT

None identified.

4.4.3 ☀ Social and Economic Conditions

To be completed by EMPSI.

A. ABILITY OF CURRENT MANAGEMENT DIRECTION TO ACHIEVE DESIRED FUTURE CONDITIONS AND ADDRESS RESOURCE DEMANDS

CURRENT PLANNING DECISION	IS DECISION RESPONSIVE TO CURRENT ISSUES? REMARKS (RATIONALE)		OPTIONS FOR CHANGE
Inset decision language and or description. You can paste decisions you listed in Chapter 3 into this column.	(Y/N)	Describe why the decision is/is not adequate.	Insert options for changing management. As appropriate, include decisions from other jurisdictions that warrant consideration.

B. POTENTIAL NEW DECISIONS FOR THE RMP REVISION

None Identified.

C. AREAS OF RELATIVE ECOLOGICAL IMPORTANCE TO GUIDE LAND USES AND MANAGEMENT

None identified.

CHAPTER FIVE Consistency and Coordination with Other Plans

According to guidance found in 43 CFR 1610, BLM RMPs and amendments must be consistent, to the extent practical, with officially approved or adopted resource-related plans of state and local governments, other federal agencies, and tribal governments, so long as the guidance and RMPs are also consistent. BLM RMPs must also be consistent with the purposes, policies, and programs of FLPMA and other federal laws and regulations applicable to public lands, including federal and state pollution control laws (see 43 CFR 1610.3-2 (a)).

If these other entities do not have officially approved or adopted resource-related plans, then BLM RMPs must, to the extent practical, be consistent with their officially approved and adopted resource-related policies and programs. This consistency will be accomplished so long as BLM RMPs incorporate the policies, programs, and provisions of public land laws and regulations and federal and state pollution control laws (see 43 CFR 1610.3-2 (b)).

Before the BLM approves the proposed RMP decisions, the Governor of Colorado has sixty days in which to identify inconsistencies between the proposed plan and state plans and programs, and to provide written comments to the BLM State Director. The BLM and the state may mutually agree on a shorter review period satisfactory to both. If the Governor does not respond within this period, it is assumed that the proposed RMP decisions are consistent.

If the Governor recommends changes in the proposed plan that were not raised during the public participation process, the BLM State Director shall provide the public with an opportunity to comment on the recommendations (per 43 CFR 1610.3-2 (e)). This public comment opportunity will be offered for thirty days, and may coincide with the thirty-day comment period for the Notice of Significant Change. If the BLM State Director does not accept the Governor's recommendations, then the Governor has thirty days to appeal in writing to the national BLM Director (per 43 CFR 1610.3-2(e)).

County, town, and state agency, and other federal agency plans for neighboring areas or cross-jurisdictional purposes are further discussed in the following sections. Plans listed or discussed in the following sections should be consulted as applicable during development of the RMP.

5.1 ☀ County and City Plans

- City of Montrose Comprehensive Plan (2008)
- Conceptual Trail System Plan for Ridgway, Colorado
- Delta County Master Plan (2007)
- Gunnison County Comprehensive Plan
- Gunnison County Land Use Resolution (2006)
- Gunnison County Temporary Regulations for Oil and Gas Operations (2003)
- Mesa County Community growth and development plans
- Mesa County Weed Plan
- Mesa County Weed Plan for Oil and Gas
- Mesa County Comprehensive Energy Plan
- Montrose County Master Plan (Draft 2010)
- Ouray Community Plan (2004)
- Ouray County Land Use Code (2008)
- Ouray County Master Plan (1999)
- San Miguel County Master Plan
    - San Miguel County Comprehensive Development Plan (Amended 2008)
    - San Miguel County Open Lands Plan
    - San Miguel County Trails Master Plan
    - Telluride Regional Area Master Plan
    - Wright's Mesa Master Plan
- Town of Cedaredge Master Plan (2005)
- Town of Ridgway 2009 Community Survey Final Report
- Town of Ridgway Comprehensive Plan (2000)
- Town of Norwood Watershed Protection District Regulations (2008)
- Town of Norwood Major Streets and Future Land Use Plan

5.2 ☀ State Agency Plans

DOCUMENT NAME:	COLORADO DIVISION OF WILDLIFE STRATEGIC PLAN
Date:	2010-2020
Purpose:	It is the policy of the state of Colorado that the wildlife and their environment are to be protected, preserved, enhanced, and managed for the use, benefit, and enjoyment of the people of this state and its visitors. It is further declared to be the policy of this state that there shall be provided a comprehensive program designed to offer the greatest possible variety of wildlife-related recreational opportunity to the people of this state and its visitors and that, to carry out such program and policy, there shall be a continuous operation of planning, acquisition, and development of wildlife habitats and facilities for wildlife-related opportunities [C.R.S. 33-1-101 (1)]. CDOW's mission is to perpetuate the wildlife resources of the state and provide people the opportunity to enjoy them. CDOW's Strategic Plan defines values and expectations, consistent with the Division's mission, that form a roadmap for wildlife management in the coming years. In addition, the Strategic Plan provides a foundation for policy analysis and priority setting for current wildlife management issues and for unforeseen issues that will inevitably arise over the five-year period covered by the Strategic Plan.
Common, Dependent, and Interdependent Resources:	Specific plan objectives for CDOW Fish, Wildlife, and Habitats Program include the following: • Protect, restore and enhance habitat for fish and wildlife. • Manage proactively to prevent and control fish and wildlife diseases and introductions of invasive species to protect fish and wildlife populations. • Ensure the long-term viability of native fish and wildlife and strive to maintain the broadest representation of the diversity of native wildlife in suitable habitats across the state. • Maintain healthy and viable game and sport fish populations sufficient to meet the demand for hunting, fishing and trapping, while minimizing landowner conflicts.
Planning Implications:	The BLM should work with CDOW to evaluate and coordinate oil and gas management actions that may conflict with the priority items listed above.
DOCUMENT NAME:	**COLORADO COMPREHENSIVE WILDLIFE CONSERVATION STRATEGY (2005)**
Purpose:	Catalogs the current status of many Colorado wildlife species, threats to the habitats upon which they depend, and an articulation of strategies that can be employed to lessen those threats. It is based upon the best available science, the collective judgment of many Colorado scientists, and also reflects the interests and concerns of citizens with a stake in Colorado wildlife conservation. It reflects the fundamental goal of CDOW and the state as a whole, which is to secure wildlife populations such that they do not require protection via

DOCUMENT NAME:	COLORADO DIVISION OF WILDLIFE STRATEGIC PLAN
	federal or state listing regulations. It also fulfills the requirements of the State Wildlife Grants program *(Title IX, Public Law 106-553 and Title 1, Public Law 107-63)* by addressing the eight elements stipulated in that legislation.
Common, Dependent, and Interdependent Resources:	Landscapes, habitats, and wildlife do not recognize jurisdictional boundaries.
Planning Implications:	Any proposed activities on lands involving wildlife must be coordinated with regional partners.

Rangewide Conservation Strategy for 3 sensitive fishes (3SPP range-wide conservation agreement and strategy published pdf at S:\Biological_Resources\TESpecies\Guidance)

5.3 Other Federal Agency Plans

- BLM Moab Field Office, Final RMP (2008)
- BLM Monticello Field Office, Final RMP (2008)
- BLM Gunnison Field Office, Final RMP (1993)
- Black Canyon of the Gunnison National Monument and Curecanti National Recreation Area (1997)
- Grand Mesa, Uncompahgre and Gunnison National Forest Plan (1983)
- Grand Mesa, Uncompahgre and Gunnison National Forest Plan revision (temporarily suspended)
- Colorado River Basin Salinity Control Program (Colorado River Basin Salinity Control Act, Public Law 93-320, June 1974)
- Curecanti National Recreation Area Resource Protection Study/EIS (2008)
- San Juan Public Lands Center Draft RMP (Draft revision pending)

5.4 Potential Cooperating Agencies

AGENCY
Bureau of Reclamation, Western Colorado Area Office
City of Montrose
Colorado Department of Natural Resources, Southwest Region
Colorado River Water Conservation District
Delta County
Gunnison County
Montrose County
Ouray County
San Miguel County
Town of Cedaredge
Town of Hotchkiss
Town of Mountain Village
Town of Norwood
Town of Nucla
Town of Olathe
Town of Orchard City
Town of Paonia
Town of Ridgway
U.S. Fish and Wildlife Service, Western Colorado Ecological Services Field Office
U.S. Forest Service, Grand Mesa, Uncompahgre and Gunnison NF

CHAPTER SIX
Specific Mandates

The foundation of public land management is in the mandates and authorities provided in laws, regulations, and executive orders. The BLM planning process (as described in 43 CFR 1600) is authorized and mandated through two important laws: the Federal Land Policy and Management Act of 1976 and the National Environmental Policy Act of 1969. In addition to these acts, several other acts, Instructional Memorandums, information bulletins, manuals, and handbooks give direction and authority to the BLM. The following are some of the documents that direct the management of public lands and resources in the Uncompahgre Planning Area.

THE SPECIFIC MANDATES CHAPTER CONSISTS OF FIVE SECTIONS:

- LAWS, REGULATIONS, AND ORDERS
- INSTRUCTION MEMORANDUMS, INFORMATION BULLETINS, MANUAL SECTIONS, HANDBOOKS, AND TECHNICAL NOTES
- APPLICABLE COLORADO STATE LAWS AND REGULATIONS
- MEMORANDA AND AGREEMENTS
- APPLICABLE PLANNING DOCUMENTS

6.1 ☀ Laws, Regulations, and Orders

- 2009 Implementation Strategy for the Federal Wildland Fire Policy
- American Indian Religious Freedom Act (49 United States Code (USC) 47125 et sequens)
- Appropriations Act of 1952, McCarran Amendment
- Archaeological Resources Protection Act of 1979, as amended (16 USC 470)
- Classification of Multiple Use Act of September 1964, in accordance with 43 CFR 2400
- Clean Air Act of 1955 (42 USC §§ 7401-7671q.)
- Clean Water Act of 1987, as amended (33 USC 1251)
- Colorado River Basin Salinity Control Act of 1974
- Endangered Species Act of 1973, as amended (16 USC 1531 et sequens)
- Executive Order 11288 (water quality management and pollution abatement plans)
- Executive Order 11644 (Use of Off-Road Vehicles on the Public Lands)
- Executive Order 11738 (Enforce the Clean Air Act and the Clean Water Act in the procurement of Goods, Materials, and Services)
- Executive Order 11987 (Exotic Flora and Fauna)
- Executive Order 13007 (Indian Sacred Sites)
- Executive Order 13084 (Consultation and Coordination with Indian Tribal Governments)
- Federal Cave Resources Protection Act of 1988 (16 USC 4301 et sequens)
- Federal Land Policy Management Act of 1976 (43 USC 1701 et sequens)
- Federal Noxious Weed Act of 1974, as amended (7 USC 2814)
- Federal Water Pollution Control Act (commonly known as the Clean Water Act), as amended (33 USC 1251-1387)
- Federal Wildland Fire Management Policy (1995)
- Fish and Wildlife Coordination Act (16 USC 661 et sequens)
- Healthy Forests Restoration Act of 2003
- Historic Sites Act of 1935 (16 USC 461)
- Migratory Bird Conservation Act of 1929, as amended (16 USC 715)
- Migratory Bird Treaty Act of 1918, as amended (16 USC 703-712)
- Mining and Mineral Policy Act of 1970 (30 USC 181 et sequens)

- National Ambient Air Quality Standards (40 CFR 50.4-50.12)
- National Environmental Policy Act of 1969 (42 USC 4321 et sequens)
- National Historic Preservation Act, as amended (16 USC 470)
- Native American Graves Protection and Repatriation Act, as amended (25 USC 3001 et sequens)
- Noise Control Act of 1972 (42 USC 4901 et sequens)
- Noxious Weed Control Act of 2004 (Public Law 108-412)
- Oil and Gas Onshore Orders
- Onshore Oil and Gas Leasing Reform Act of 1987 (30 USC 181 et sequens)
- Public Rangelands Improvement Act of 1978 (43 USC 869 et sequens)
- Recreation and Public Purposes Act of 1926, as amended (43 USC 869 et sequens)
- Review and Update of the 1995 Federal Wildland Fire Management Policy (2001)
- The R&PP Amendment Act of 1988
- The Sikes Act of 1974, as amended (16 USC 670 et sequens)
- Soil and Water Resources Conservation Act of 1977 (16 USC 2001)
- Surface Mining Control and Reclamation Act of 1977 (30 USC 1201 et sequens)
- Taylor Grazing Act of 1934 (43 USC 315)
- The Common Varieties of Mineral Materials Act of 1947
- The Mineral Leasing Act of 1920
- The Mineral Leasing Act for Acquired Lands of 1947
- The Multiple Use Mining Act of 1955
- The Organic Administration Act of 1897
- The Surface Mining Control and Reclamation Act of 1977
- The United States Mining Laws of 1872
- Title CFR 43 (Public Lands, Interior), Parts 2100, 2200, 2300, 2700, 2800, 2900, 3100, 3200, 3400, 3500, 3600, and 3800
- Water Resources Development Act of 1974
- Wild and Scenic Rivers Act, as amended (16 USC 1271 et sequens)
- Wilderness Act, as amended (16 USC 1131 et sequens)

6.2 ☀ Memorandums, Bulletins, Manuals, Handbooks, and Notes

- BLM-H-1601-1 (Land Use Planning)
- BLM-H-1790-1 (NEPA Handbook)
- BLM-H-2100-1 (Acquisitions)
- BLM-H-2200 (Land Exchanges)
- BLM-H-3042-1 (Solid Mineral Reclamation)
- BLM-H-3150-1 (Onshore Oil and Gas Geophysical Exploration)
- BLM-H-3160-5 (Inspection and Enforcement Documentation and Strategy Development)
- BLM-H-3420-1 (Competitive Coal Leasing)
- BLM-H-3600-1 (Mineral Materials)
- BLM-H-3720-1 (Abandoned Mine Land Program Policy)
- BLM-H-3809-1 (Surface Management)
- BLM-H-4180-1 (Wilderness Inventory and Study Procedures)
- BLM-H-8410-1 (Visual Resource Inventory)
- BLM-H-8550-1 (Interim Management Policy and Guidelines for Lands Under Wilderness Review)
- BLM-H-9214-1 (Prescribed Fire Management)
- BLM-M-1613 (Areas of Critical Environmental Concern)
- BLM-M-2200 (Land Exchanges)
- BLM-M-2881 (Mineral Leasing Act – General)
- BLM-M-3600 (Mineral Materials Disposal)
- BLM-M-3720 (Abandoned Mine Land Program Policy)
- BLM-M-3800 (Mining Claims Under the General Mining Laws)
- BLM-M-4180 (Rangeland Health Standards)
- BLM-M-6840 (Special Status Species Management)
- BLM-M-7150 (Provides guidance in the conduct of maintenance of water utilization and development, water quality, water yield and timing, and water rights)

- BLM-M-7300 (Air Resource Management Manual)
- BLM-M-8100 (Cultural Resource Management)
- BLM-M-8270 (Paleontological Resource Management)
- BLM-M-8340 (OHV Management)
- Colorado IB 2003-020 (Travel Management Guidelines)
- Colorado IM 2007-020 (Comprehensive Travel Management Planning and OHV Designations)
- IB 98-116 (Clean Water Action)
- IB 2002-101 (Cultural Resource Information)
- IM 78-410 (Protection of Wetlands and Riparian Areas)
- IM 78-523 (Compliance with BLM Interim Floodplain Management Procedures)
- IM 87-261 (Implementation of the Riparian Area Management Policy)
- IM 99-085 (Federal Multi-Agency Source Water Agreement)
- IM 99-123 (Reporting to the Colorado River Salinity Control Forum)
- IM 2002-174 (Oil and Gas Leasing Stipulations)
- IM 2003-127 (Integration of the Energy Policy and Conservation Act Inventory Results into Land Use Planning and Energy use Authorizations)
- IM 2003-158 (Memorandum of Understanding (MOU) between BLM and the Animal and Plant Health Inspection Service Addressing the Management of Grasshoppers and Mormon Crickets)
- IM 2003-226 (Fire Program Analysis System – Development of Fire Management Objectives)
- IM 2004-005 (Clarification of OHV Designations and Travel Management in the BLM Land Use Planning Process)
- IM 2005-006 (Solar Energy Development Policy)
- IM 2005-008 (Black-tailed, White-tailed, and Gunnison Prairie Dog Conservation Update)
- IM 2008-014 (Clarification of Guidance and Integration of Comprehensive Travel and Transportation Management Planning into the Land Use Planning)
- IM 2009-043 (Wind Energy Development Policy)
- Interagency Standards for Fire and Fire Aviation Operations (The Red Book) (2010)
- Interagency Prescribed Fire Planning and Implementation Procedures Guide (July 2008)
- Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development (commonly referred to as The Gold Book)

- Technical Notes 346: Erosion condition classification system
- Technical Notes 364: 1980-82 salinity status report: results of Bureau of Land Management studies on public lands in the Upper Colorado River Basin
- Technical Notes 369: Considerations in rangeland watershed monitoring
- Technical Notes 373: Diffuse-source salinity Mancos shale terrain
- Technical Notes 405: A framework for analyzing the hydrologic conditions of watersheds

6.3 ☀ Applicable Colorado State Laws and Regulations

- Colorado Air Quality Control Commission, Regulation Number 9, Open Burning, Prescribed Fire, and Permitting, 5 CCR, 1001-11
- Colorado Water Quality Control Act
- Colorado Sound Law
- Colorado OHV Act
- Colorado OHV Regulations
- Colorado Oil and Gas Conservation Act, CRS § 34-60-100, et seq.
- Colorado Snowmobile Act
- Colorado Recreation Trails Act
- Colorado Revised Statues - Title 37, Water and Irrigation
- Colorado Surface Coal Mining Reclamation Act, 34-33-101 ET SEQ., C.R.S. 1973 As Amended
- Primary Drinking Water Regulations - 5 CCR 1003-1 (amended January 2005; effective March 2005)
- Regulation 31 - The Basic Standards and Methodologies for Surface Water (amended August 2005; effective December 2005 and December 2007)
- Regulation No. 39 - Colorado River Salinity Standards (adopted May 1980; amended 1982 and 1997)
- Regulation No. 41- The Basic Standards for Groundwater
- Regulation No. 42 - Site Specific Water Quality Classifications and Standards For Groundwater
- Regulation No. 93 - Section 303(d) List Water Quality Limited Segments Requiring TMDLs (adopted March 2006)
- Regulation No. 94 - Colorado's Monitoring and Evaluation List (adopted March 2006)
- Title 34 Mineral Resources Article 32, Colorado Mined Land Reclamation Act
- Title 34 Mineral Resources Article 32.5, Colorado Mined Land Reclamation Act for the Extraction of Construction Materials

6.4 ☀ Memoranda and Agreements

- Federal Coal Management Programmatic Memorandum of Agreement among the BLM, Office of Surface Mining, DOI, USGS, and the Advisory Council on Historic Preservation
- Interagency Memorandum of Understanding (MOU) between the BLM and U.S. Department of Agriculture (60F26045-48) (May 1995)
- Interagency MOU between the BLM UFO, Grand Junction Field Office, San Juan Public Lands Center, and Department of Energy for Uranium Lease Tract Projects (April 2010)
- Interagency MOU between the BLM and the Bureau of Reclamation to work together in developing a written Implementation Plan for the Selenium Management Program and to participate in the implementation under a future agreement. (NOTE: to be signed May 2010)
- Interagency Agreement between the Bureau of Reclamation and the BLM (March 1983)
- Inter-office Service Level Agreement between the BLM UFO, Grand Junction Field Office, and San Juan Public Lands Center for Uranium Lease Tract Projects (April 2010)
- Master MOU with the FWS (December 1986)
- MOU for Coordination and Enhancement of Services to and by the Outfitting Industry in Colorado on National Forest System, BLM and State Public Lands (2007)
- MOU between the Colorado's Outfitters Association and the USDI, Bureau of Land Management, Colorado (2006)
- MOU between Colorado Mountain Club and the USDI Bureau of Land Management, Colorado State Office (2008)
- MOU between the Colorado Off-Highway Vehicle Coalition and the COHVCO Foundation and the USDI Bureau of Land Management, Colorado State Office (2005)
- MOU between International Mountain Bicycling Association and Bicycle Colorado and the USDI Bureau of Land Management, Colorado State Office (2005)
- MOU between USDI Bureau of Land Management, Colorado State Office and Colorado River Outfitters Association and Colorado State Parks (2007)
- MOU between USDI Bureau of Land Management and The Access Fund (2005)

- MOU between USDI Bureau of Land Management, USDA Forest Service and US Fish and Wildlife Service and Federal Lands Hunting, Fishing, and Shooting Sports Roundtable (2006)
- MOU between USDI Bureau of Land Management and The Corps Network (2008)
- Rangeland Programmatic Memorandum of Agreement among the BLM, the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers
- State Protocol Agreement between the Colorado State Director of the Bureau of Land Management and the Colorado State Historic Preservation Officer regarding the Manner in which the Bureau of Land Management will meet its Responsibilities under the National Historic Preservation Act and the National Programmatic Agreement (1998)

6.5 ☀ Applicable Planning Documents

LAND USE PLANS AND AMENDMENTS

- Environmental Assessment of Gunnison Travel Interim Restrictions for Portions of Gunnison, Hinsdale, Delta, Montrose, and Saguache Counties, Colorado (August 2000)
- Resource Management Plan Amendment/Environmental Assessment for the Uncompahgre Field Office Dry Creek Travel Management Plan (December 2009)
- Resource Management Plan Amendment/Environmental Assessment for the Uncompahgre Field Office Travel Management Plan (February 2010)
- San Juan-San Miguel Resource Management Plan and Final Environmental Impact Statement, Montrose District, Colorado and San Juan Resource Area and Uncompahgre Basin Resource Area (September 1985)
- San Juan-San Miguel Resource Management Plan Amendment on the Proposed Action Alternative of the Colorado Oil and Gas Leasing and Development Final Environmental Impact Statement, January 1991, Montrose District, San Juan/San Miguel Planning Area (October 1991)
- San Juan-San Miguel Resource Management Plan Amendment for the San Miguel River ACEC and SRMA (February 1993)
- Uncompahgre Basin Resource Management Plan and Record of Decision (July 1989)
- Uncompahgre Basin Resource Management Plan Amendment for the Uncompahgre Basin Planning Area to allow the use of fire through prescribed and planned ignitions on all 483,037 acres within the Uncompahgre Basin Planning Area (EA No. CO-030-U-92-20) (June 1992)
- Uncompahgre Basin Resource Management Plan Amendment Decision Record and Finding of No Significant Impact to amend the existing land disposal decision in the Uncompahgre Basin Resource Management Plan (Environmental Assessment CO-034-94-23) (September 1994)
- Uncompahgre Basin Resource Management Plan and San Juan/San Miguel Resource Management Plan Amendment to Adopt Standards for Public Land Health and Guidelines for Livestock Grazing Management (March 1997)

ACTIVITY LEVEL PLANS

- Approved Resource Management Plan Amendments/Record of Decision for Designation of Energy Corridors on Bureau of Land Management-Administered Lands in the 11 Western States (January 2009)
- Final Vegetation Treatments using Herbicides on Bureau of Land Management Lands in 17 Western States Programmatic Environmental Impact Statement (June 2007)
- Wind Energy Development Programmatic Environmental Impact Statement and Associated Land Use Plan Amendments (December 2005)
- Resource Management Plan Amendments for Geothermal Leasing in the Western United States (December 2008)
- Solar Energy Development Programmatic Environmental Impact Statement to develop and implement agency-specific programs that would facilitate environmentally responsible utility-scale solar energy development in six western states (Scheduled for release in Fall 2010)
- Uncompahgre Field Office Fire Management Plan (2004) (2008 pending)

ENDANGERED SPECIES RECOVERY PLANS

- Black-Footed Ferret Recovery Plan (1978)
- Bonytail Chub Recovery Plan FWS (September 1990)
- Colorado Squawfish Recovery Plan (1991)
- Determination of Critical Habitat for the Colorado River Endangered Fishes: Razorback Sucker, Colorado Pikeminnow, Humpback Chub, and Bonytail Chub FWS (March 1994)
- Determination that the Bonytail Chub (Gila elegans) is an Endangered Species FWS (April 1980)
- Dudley Bluffs Bladderpod and Dudley Bluffs Twinpod Recovery Plan (1993)
- Endangered and Threatened Wildlife and Plants; the Razorback Sucker Determined To Be an Endangered Species FWS (October 1991)
- Endangered Species List - 1967 FWS (Colorado Pikeminnow, Humpback chub) (March 1967)
- Final Recovery Plan, Southwestern Willow Flycatcher (2002)
- Gray Wolf Recovery Plan (1987)
- Humpback Chub Recovery Plan FWS (September 1990)
- Incorporate the Canada Lynx Conservation Assessment and Strategy into Colorado Resource Management Plans (March 2002)
- Mexican Spotted Owl Recovery Plan (1995)

- Razorback Sucker Recovery Plan FWS (1998)
- Recovery Goals: Amendment and Supplement to the Bonytail Chub Recovery Plan FWS (August 2002)
- Recovery Goals: Amendment and Supplement to the Colorado Squawfish (pikeminnow) Recovery Plan FWS (August 2002)
- Recovery Goals: Amendment and Supplement to the Humpback Chub Recovery Plan FWS (August 2002)
- Recovery Goals: Amendment and Supplement to the Razorback Sucker Recovery Plan FWS (August 2002)

HABITAT PLANS

- BLM National Sage-Grouse Habitat Conservation Strategy (November 2004)

RECREATION MANAGEMENT PLANS

- San Miguel Watershed Plan (1998)

OTHER POLICY AND GUIDING DIRECTION

- Designation Order; San Miguel County, CO; Establishments of 7 Day Camping Limit on Public Lands Within San Miguel and Montrose Counties (March 1995)
- Colorado Policy on Cultural Clearances for Travel Planning (Addendum 1 to the Colorado Protocol: Section 106 Requirements for Comprehensive Travel and Transportation Management Planning)
- Recreation Management Guidelines to Meet Public Land Health Standards on Bureau of Land Management Lands in Colorado (2000)
- National OHV Strategy
- National Mountain Bike Strategy
- Federal Wildland Fire Management Policy and Program Review - Final Report (December 1995)
- Review and Update of the 1995 Federal Wildland Fire Management Policy (January 2001)
- Interagency Strategy for the Implementation of Federal Wildland Fire Management Policy (June 2003)
- Interagency Wildland Fire Use Implementation Procedures Reference Guide (May 2007)
- Interagency Prescribed Fire Planning and Implementation Procedures Guide (July 2008)

CHAPTER SEVEN Scoping Report Summary

When it is finalized, the Scoping Report will be available online at www.UFORMP.com.

CHAPTER EIGHT
List of Preparers

NAME	DISCIPLINE	RESPONSIBILITY
BLM Colorado State Office—		
Scott Archer	Air Quality Specialist	Air Quality
BLM Uncompahgre Field Office—		
Bruce Krickbaum	Planning & Environmental Coordinator	RMP/EIS Project Manager
Debbie Burch	Range Conservationist	Livestock Grazing
Amanda Clements	Ecologist	Vegetation
Desty Dyer	Mining Engineer	Coal
Robert Ernst	Geologist	Geology & Minerals
Glade Hadden	Archaeologist	Cultural & Paleontological Resources
Ken Holsinger	Biologist	Forestry & Fuels
Dan Huisjen	Fire Ecologist	Wildland Fire
Julie Jackson	Outdoor Recreation Planner	Recreation, Travel, & Special Designations
Kurt Kubik	Range Conservationist	Livestock Grazing
Jeff Litteral	Hydrologist	Soils & Water
D. Maggie Magee	Technical Writer/Editor	Report Editing & Formatting
Dennis Murphy	Hydrologist	Soils & Water
Teresa Pfifer	Lands & Minerals Staff Supervisor	Lands
Linda Reed	Realty Specialist	Lands
Lynae Rogers	Range Conservationist	Livestock Grazing & Invasive Species
Amy Sharp	Outdoor Recreation Planner	Recreation
Charles Sharp	Wildlife Biologist	Wildlife & Special Status Species
Barbara Sharrow	Field Manager	Report Review
Kirk Sherrill	Geographical Information Systems Specialist	Mapping & Spatial Analysis
Melissa Siders	Biology Staff Supervisor	Wildlife & Special Status Species
David Sinton	Geographical Information Systems Lead	Mapping & Spatial Analysis
Dean Stindt	Range Conservationist	Livestock Grazing
Thane Stranathan	Natural Resource Specialist	Oil & Gas

CHAPTER NINE
Glossary

Actual Use - The number of animal unit months consumed by livestock based on the numbers of livestock and grazing dates submitted by the livestock operator and confirmed by periodic field checks by the BLM.

Air Pollution - The contamination of the atmosphere by any toxic or radioactive gases and particulate matter as a result of human activity.

Allotment - An area of land in which one or more livestock operators graze their livestock. Allotments generally consist of BLM lands, but may also include other federally managed, state owned, and private lands. An allotment may include one or more separate pastures. Livestock numbers and periods of use are specified for each allotment.

Allotment Management Plan (AMP) - A concisely written program of livestock grazing management, including supportive measures, if required, designed to attain specific management goals in a grazing allotment. An AMP is prepared in consultation with the permittees, lessees, and other affected interests. Livestock grazing is considered in relation to other uses of the range and to renewable resources, such as watershed, vegetation, and wildlife. An AMP establishes seasons of use, the number of livestock to be permitted, the range improvements needed, and the grazing system.

Analysis of the Management Situation (AMS) - Assessment of the current management direction. It includes a consolidation of existing data needed to analyze and resolve identified issues, a description of current BLM management guidance, and a discussion of existing problems and opportunities for solving them.

Area of Critical Environmental Concern (ACEC) – An area within public lands where special management attention is required (when such areas are developed or used or where no development is required) to protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources, or other natural systems or processes, or to protect life and safety from natural hazards (from H-6310-1, Wilderness Inventory and Study Procedures).

Atmospheric Deposition - Air pollution produced when acid chemicals are incorporated into rain, snow, fog or mist and fall to the earth. Sometimes referred to as "acid rain" and comes from sulfur oxides and nitrogen oxides, products of burning coal and other fuels and from certain industrial processes. If the acid chemicals in the air are blown into areas where

the weather is wet, the acids can fall to Earth in the rain, snow, fog or mist. In areas where the weather is dry, the acid chemicals may become incorporated into dusts or smokes.

Animal Unit Month (AUM) - The amount of forage needed by an "animal unit" (AU) grazing for one month. The animal unit in turn is defined as one mature 1,000-pound cow and her suckling calf.

Big Game - Indigenous ungulate wildlife species that are hunted, such as elk, deer, bison, bighorn sheep, and pronghorn antelope.

Candidate species - Species for which the FWS has sufficient information on their status and threats to support proposing for listing as endangered or threatened under the ESA but for which issuance of a proposed rule is currently precluded by higher priority listing actions. Separate lists for plants, vertebrate animals, and invertebrate animals are published periodically in the Federal Register.

Casual Use - Activities involving practices that do not ordinarily cause appreciable disturbance or damage to the public lands, resources or improvements and, therefore, do not require a right-of-way grant or temporary use permit (43 CFR 2800). Any short term noncommercial activity which does not cause appreciable damage or disturbance to public lands, their resources or improvements, and which is not prohibited by closure of the lands to such activities (43 CFR 2920). Casual use generally includes the collecting of geochemical, rock, soil, or mineral specimens using hand tools, hand panning, and non-motorized sluicing. It also generally includes use of metal detectors, gold spears, and other battery-operated devices for sensing the presence of minerals, and hand battery-operated dry washers. Casual use does not include use of mechanized earth-moving equipment, truck-mounted drilling equipment, suction dredges, motorized vehicles in areas designated as closed to off-road vehicles, chemicals, or explosives. It also does not include occupancy or operations where the cumulative effects of the activities result in more than negligible disturbance.

Cheatgrass - Cheatgrass is an annual grass that forms tufts up to two feet tall. The leaves and sheaths are covered in short, soft hairs. Cheatgrass invades rangelands, pastures, prairies, and other open areas, and has the potential to completely alter ecosystems it invades. It can completely replace native vegetation and change fire regimes and is most problematic in areas of the western United States with lower precipitation levels.

Clean Air Act of 1963 and Amendments - Federal legislation governing air pollution control.

Closed - Generally denotes that an area is not available for a particular use or uses; refer to specific definitions found in law, regulations, or policy guidance for application to individual programs. For example, 43 CFR 8340.0-5 sets forth the specific meaning of "closed" as it relates to off-highway vehicle use, and 43 CFR 8364 defines "closed" as it relates to closure and restriction orders (from H-1601-1, BLM Land Use Planning Handbook).

Condition Class (Fire Regimes) - Fire Regime Condition Classes are a measure describing the degree of departure from historical fire regimes, possibly resulting in alterations of key ecosystem components such as species composition, structural stage, stand age, canopy closure, and fuel loadings. One or more of the following activities may have caused this departure: fire suppression, timber harvesting, livestock grazing, introduction and establishment of exotic plant species, introduced insects or disease, or other management activities.

Conditions of Approval - Conditions or provisions (requirements) under which an Application for a Permit to Drill or a Sundry Notice is approved.

Critical Habitat - An area occupied by a threatened or endangered species on which are found physical and biological features (1) essential to the conservation of the species, and (2) which may require special management considerations or protection.

Designated roads and trails - Specific roads and trails identified by the BLM (or other agencies) where some type of motorized vehicle use is appropriate and allowed either seasonally or year-round.

Disposal - Transfer of public land out of federal ownership to another party through sale, exchange, Recreation and Public Purposes Act, Desert Land Entry or other land law statutes.

Easement - A right afforded a person or agency to make limited use of another's real property for other purposes.

Eligibility - Qualification of a river for inclusion into the National Wild and Scenic Rivers System through the determination that it is free-flowing and, with its adjacent land area, possesses at least one river-related value considered to be outstandingly remarkable (from M-8351, BLM WSR Policy and Program).

Endangered Species - Any species which is in danger of extinction throughout all or a significant portion of its range (from M6840, Special Status Species Manual).

Environmental Impact Statement (EIS) - A detailed statement prepared by the responsible official in which a major Federal action which significantly affects the quality of the human environment is described, alternatives to the proposed action provided, and effects analyzed (from BLM National Management Strategy for OHV Use on Public Lands).

Extensive Recreation Management Area - Areas in which significant recreation opportunities and problems are limited and explicit recreation management is not required. Minimal management actions related to the Bureau's stewardship responsibilities are adequate in these areas.

Federal Land Policy and Management Act of 1976 (FLPMA) - Public Law 94-579, October 21, 1976, often referred to as the BLM's "Organic Act," which provides the majority of the BLM's legislated authority, direction policy and basic management guidance.

Fire Suppression - All work activities connected with fire extinguishing operations, beginning with discovery of a fire and continuing until the fire is completely out.

Fluid Minerals - Oil, gas, coal bed natural gas, and geothermal resources.

Functioning at Risk - (1) Condition in which vegetation and soil are susceptible to losing their ability to sustain naturally functioning biotic communities. Human activities, past or present, may increase the risks. Rangeland Reform Final EIS at 26. (2) Uplands or riparian-wetland areas that are properly functioning, but a soil, water, or vegetation attribute makes them susceptible to degradation and lessens their ability to sustain natural biotic communities. Uplands are particularly at risk if their soils are susceptible to degradation. Human activities, past or present, may increase the risks (Rangeland Reform Draft EIS Glossary). SEE ALSO Properly Functioning Condition and Nonfunctioning Condition (from H-4180-1, BLM Rangeland Health Standards Manual).

Grazing Preference - The total number of AUMs on public land apportioned and attached to base property owned or controlled by a lessee.

Habitat - An environment which meets a specific set of physical, biological, temporal or spatial characteristics that satisfy the requirements of a plant or animal species or group of species for part or all of their life cycle.

Heavy Metal - Heavy metals occur naturally in the ecosystem, with large variations in concentration. In modern times, anthropogenic sources of heavy metals (pollution) have been introduced to the ecosystem. Motivations for controlling heavy metal concentrations in gas streams are diverse. Some of them are dangerous to health or to the environment, some may cause corrosion, and some are harmful in other ways.

Herd Management Area - Public land under BLM jurisdiction that has been designated for special management emphasizing the maintenance of an established wild horse or burro herd.

Integrated Pest Management - The use of all appropriate weed control measures, including fire, as well as mechanical, chemical, biological, and cultural techniques, in an organized and coordinated manner on a site-specific basis.

Intermittent Stream - An intermittent stream is a flowing system under normal weather conditions. During the dry season and throughout minor drought periods, these streams will not exhibit flow. Geomorphologic characteristics are not well defined and are often inconspicuous. In the absence of external limiting factors (pollution, thermal modifications, etc.), biology is scarce and adapted to the wet and dry conditions of the fluctuating water level.

K factor - A soil erodibility factor used in the universal soil loss equation that is a measure of the susceptibility of soil particles to detachment and transport by rainfall and runoff. Estimation of the factor takes several soil parameters into account, including: soil texture, percent of sand greater than 0.10 mm, soil organic matter content, soil structure, soil

permeability, clay mineralogy, and coarse fragments. K factor values range from .02 to .64, the greater values indicating the highest susceptibilities to erosion.

Late Season - Fall or late summer grazing.

Land Classification - When, under criteria of 43 CFR 2400, a tract of land has potential for either retention for multiple use management or for some form of disposal, or for more than one form of disposal, the relative scarcity of the values involved and the availability of alternative means and sites for realization of those values will be considered. Long-term public benefits will be weighed against more immediate or local benefits. The tract will then be classified in a manner which will best promote the public interest.

Land tenure adjustments - Ownership or jurisdictional changes to improve the manageability of BLM lands and their usefulness to the public. The BLM has numerous authorities for repositioning lands into a more consolidated pattern, disposing of lands, and entering into cooperative management agreements. These land pattern improvements are completed primarily through the use of land exchanges, but also through land sales, jurisdictional transfers to other agencies, and through the use of cooperative management agreements and leases.

Land use allocation - The identification in a land use plan of the activities and foreseeable development that are allowed, restricted, or excluded for all or part of the planning area, based on desired future conditions. (from H-1601-1, BLM Land Use Planning Handbook).

Land use plan - A set of decisions that establish management direction for land within an administrative area, as prescribed under the planning provisions of FLPMA; an assimilation of land-use-plan level decisions developed through the planning process outlined in 43 CFR 1600, regardless of the scale at which the decisions were developed. The term includes both RMPs and MFPs. (from H-1601-1, BLM Land Use Planning Handbook).

Laramide Orogeny - The Laramide Orogeny (Greek word for mountain building) was a period of mountain building in western North America which began during the Late Cretaceous period, 70 to 80 million years ago, and ended 35 to 55 million years ago. The major feature that was created by this orogeny was the Rocky Mountains, but evidence of this period is found from Alaska to Mexico and as far east as the Black Hills. The phenomenon is named for the Laramie Mountains of eastern Wyoming.

Leasable Minerals - Those minerals or materials subject to lease by the federal government under the Mineral Leasing Act of 1920. They include coal, phosphate, asphalt, sulphur, potassium, sodium minerals, oil and gas, as well as geothermal resources.

Lease - Section 302 of FLPMA provides BLM with authority to issue leases for the use, occupancy, and development of public lands. Leases are issued for purposes such as a commercial filming, advertising displays, commercial or noncommercial croplands, apiaries, livestock holding or feeding areas not related to grazing permits and leases, harvesting of native or introduced species, temporary or permanent facilities for commercial purposes (does not include mining claims), residential occupancy, ski resorts, construction equipment

storage sites, assembly yards, oil rig stacking sites, mining claim occupancy if the residential structures are not incidental to the mining operation, and water pipelines and well pumps related to irrigation and non-irrigation facilities. The regulations establishing procedures for the processing of these leases and permits are found in 43 CFR 2920.

Lek - An area where certain bird species (such as sage-grouse) assemble to carry on display and courtship behavior.

Limited - Designated areas and trails where the use of off-road vehicles is subject to restrictions, such as limiting the number or types or vehicles allowed, dates and times of use (seasonal restrictions), limiting use to existing roads and trails, or limiting use to designated roads and trails. Under the designated roads and trails designation, use would be allowed only on roads and trails that are signed for use. Combinations of restrictions are possible, such as limiting use to certain types of vehicles during certain times of the year (from BLM National Management Strategy for OHV Use on Public Lands).

Locatable Minerals - Minerals subject to exploration, development, and disposal by staking mining claims as authorized by the Mining Law of 1872, as amended. This includes deposits of gold, silver, and other uncommon minerals not subject to lease or sale.

Maintenance Action - A minor adjustment to a land use plan that does not require an amendment.

Mineral - Any naturally formed inorganic material, solid or fluid inorganic substance that can be extracted from the earth, any of various naturally occurring homogeneous substances (as stone, coal, salt, sulfur, sand, petroleum, water, or natural gas) obtained for man's use, usually from the ground. Under Federal laws, considered as locatable (subject to the general mining laws), leasable (subject to the Mineral Leasing Act of 1920), and salable (subject to the Materials Act of 1947).

Mineral Entry - The filing of a claim on public land to obtain the right to any locatable minerals it may contain.

Mineral Estate - The ownership of minerals, including rights necessary for access, exploration, development, mining, ore dressing, and transportation operations.

Mineral Materials - Materials such as sand and gravel and common varieties of stone, pumice, pumicite, and clay that are not obtainable under the mining or leasing laws. but that can be acquired under the Materials Act of 1947, as amended.

Mining Claim - A parcel of land that a miner takes and holds for mining purposes, having acquired the right of possession by complying with the Mining Law and local laws and rules. A mining claim may contain as many adjoining locations as the locator may make or buy. There are four categories of mining claims: lode, placer, mill site, and tunnel site.

Mitigation -
(a) Avoiding an impact altogether by not taking a certain action or parts of an action.

(b) Minimizing an impact by limiting the degree or magnitude of the action and its implementation.
(c) Rectifying an impact by repairing, rehabilitating, or restoring the affected environment.
(d) Reducing or eliminating an impact over time by preservation and maintenance operations during the life of the action.
(e) Compensating for an impact by replacing or providing substitute resources or environments.

Multiple Use - Managing public lands and their various resource values so that they are utilized in a combination that will best meet the present and future needs of the American people. Making the most judicious use of the land for some or all of these resources or related services over areas large enough to provide sufficient latitude for periodic adjustments in use to changing needs and conditions; the use of some land for less than all of the resources; a combination of balanced and diverse resource uses that takes into account the long-term needs of future generations for renewable and nonrenewable resources, including, but not limited to, recreation, range, timber, minerals, watershed, wildlife and fish, and natural scenic, scientific and historical values; and harmonious and coordinated management of the various resources without permanent impairment of the productivity of the land and the quality of the environment with consideration being given to the relative values of the resources and not necessarily to the combination of uses that will give the greatest economic return or the greatest unit output.

National Wild and Scenic Rivers System - A system of nationally designated rivers and their immediate environments that have outstanding scenic, recreational, geologic, fish and wildlife, historic, cultural, and other similar values and are preserved in a free-flowing condition. The system consists of three types of streams: (1) **recreational** - rivers or sections of rivers that are readily accessible by road or railroad and that may have some development along their shorelines and may have undergone some impoundments or diversion in the past, (2) **scenic** - rivers or sections of rivers free of impoundments with shorelines or watersheds still largely undeveloped but accessible in places by roads, and (3) **wild** - rivers or sections of rivers free of impoundments and generally inaccessible except by trails, with watersheds or shorelines essentially primitive and waters unpolluted.

No Surface Occupancy (NSO) - No Surface Occupancy can be used in one way to define a NSO area where no surface-disturbing activities of any nature or for any purpose would be allowed. For example, construction or the permanent or long-term placement of structures or other facilities for any purpose would be prohibited in an NSO area. No surface occupancy can also be used as a stipulation or mitigation requirement for controlling or prohibiting selected land uses or activities that would conflict with other activities, uses, or values in a given area. When used in this way, the stipulation or mitigation requirement is applied to prohibit one or more specific types of land and resource development activities or surface uses in an area, while other—perhaps even similar—types of activities or uses (for other purposes) would be allowed. For example, protecting important rock art relics from destruction may require closing the area to the staking of mining claims and surface

mining, off-road vehicle travel, construction or long-term placement of structures or pipelines, powerlines, general purpose roads, and livestock grazing. Conversely, the construction of fences to protect the rock art from vandalism or from trampling or breakage by livestock, an access road or trail, and other visitor facilities to provide interpretation and opportunity for public enjoyment of the rock art would be allowed. Further, if there were interest in development of leasable minerals in the area, leases for oil and gas, coal, and so forth, could be issued with a "no surface occupancy" stipulation or mitigation requirement for the rock art site, which would still allow access to the leasable minerals from adjacent lands and underground. The term "no surface occupancy" has no relationship or relevance to the presence of people in an area.

Nonfunctioning Condition - (1) Condition in which vegetation and ground cover are not maintaining soil conditions that can sustain natural biotic communities. (2) Riparian-wetland areas are considered to be in nonfunctioning condition when they don't provide adequate vegetation, landform, or large woody debris to dissipate stream energy associated with high flows and thus are not reducing erosion, improving water quality, or other normal characteristics of riparian areas. The absence of a floodplain may be an indicator of nonfunctioning condition.

Objective - A description of a desired condition for a resource. Objectives can be quantified and measured and, where possible, have established timeframes for achievement.

Off-highway vehicle (OHV) - Any motorized vehicle capable of, or designed for, travel on or immediately over land, water, or other natural terrain, excluding: (1) any non-amphibious registered motorboat: (2) any military, fire, emergency, or law enforcement vehicle while being used for emergency purposes; (3) any vehicle whose use is expressly authorized by the authorized officer, or otherwise officially approved; (4) vehicles in official use; and (5) any combat or combat support vehicle when used for national defense.

Open - Designated areas and trails where off-road vehicles may be operated, subject to operating regulations and vehicle standards set forth in BLM Manuals 8341 and 8343, or an area where all types of vehicle use is permitted at all times, subject to the standards in BLM Manuals 8341 and 8343.

Outstandingly Remarkable Values - Values among those listed in Section 1(b) of the Wild and Scenic Rivers Act: "scenic, recreational, geological, fish and wildlife, historical, cultural, or other similar values...." Other similar values which may be considered include ecological, biological or botanical, paleontological, hydrological, scientific or research values.

Ozone - A faint blue gas produced in the atmosphere from chemical reactions of such sources as burning coal, gasoline and other fuels, and chemicals found in products including solvents, paints, hairsprays, etc.

Perennial Stream - Perennial streams carry flowing water continuously throughout the year, regardless of weather conditions. It exhibits well-defined geomorphologic characteristics and in the absence of pollution, thermal modifications, or other man-made

disturbances has the ability to support aquatic life. During hydrological drought conditions, the flow may be impaired.

Permitted Use - The forage allocated by, or under the guidance of, an applicable land use plan for livestock grazing in an allotment under a permit or lease, and expressed in Animal Unit Months.

Planning Area - A geographic area for which land use and resource management plans are developed and maintained.

Prescribed Burn/Fire - Controlled application of fire to wildland fuels in either their natural or modified state under specified environmental conditions that allow the fire to be confined to a predetermined area and at the same time to produce the fire intensity and rate of spread required to attain planned resource management objectives.

Prevention of Significant Deterioration (PSD) - An air pollution permitting program intended to ensure that air quality does not diminish in attainment areas.

Properly Functioning Condition - (1) An element of the Fundamental of Rangeland Health for watersheds, and therefore a required element of state or regional standards and guidelines under 43 CFR § 4180.2(b). (2) Condition in which vegetation and ground cover maintain soil conditions necessary to sustain natural biotic communities. Riparian wetland areas are functioning properly when adequate vegetation, landform, or large woody debris is present to dissipate stream energy associated with high water flows, thereby reducing erosion and improving water quality; filter sediment, capture bed load, and aid floodplain development; improve floodwater retention and groundwater recharge; develop root masses that stabilize streambanks against cutting action; develop diverse ponding and channel characteristics to provide the habitat and the water depth, duration, and temperature necessary for fish production, waterfowl breeding, and other uses; and support greater biodiversity. The functioning condition of riparian-wetland areas is influenced by geomorphic features, soil, water, and vegetation. (4) Uplands function properly when the existing vegetation and ground cover maintain soil conditions capable of sustaining natural biotic communities. The functioning condition of uplands is influenced by geomorphic features, soil, water, and vegetation.

Public land - Land or interest in land owned by the United States and administered by the Secretary of the Interior through the BLM without regard to how the United States acquired ownership, except lands located on the Outer Continental Shelf, and lands held for the benefit of Indians, Aleuts, and Eskimos.

Rangeland Health - The degree to which the integrity of the soil and ecological processes of rangeland ecosystems are sustained.

Reasonable Foreseeable Development (RFD) Scenario - The prediction of the type and amount of oil and gas activity that would occur in a given area. The prediction is based on geologic factors, past history of drilling, projected demand for oil and gas, and industry interest.

Recreation and Public Purposes Act (of 1926) - The Recreation and Public Purposes Act provided for the lease and sale of public lands determined valuable for public purposes. The objective of the Recreation and Public Purposes Act is to meet the needs of State and local government agencies and non-profit organizations by leasing or conveying public land required for recreation and public purpose uses. Examples of uses made of Recreation and Public Purposes lands are parks and greenbelts, sanitary landfills, schools, religious facilities, and camps for youth groups. The act provides substantial cost-benefits for land acquisition and provides for recreation facilities or historical monuments at no cost.

Recreation Opportunity Spectrum - A continuum used to characterize recreation opportunities in terms of setting, activity and experience opportunities. The spectrum covers a range of recreation opportunities from primitive to urban. With respective to river management planning, the Recreation Opportunity Spectrum represents one possible method for delineating management units or zones.

Recreational River - A river or section of river that is readily accessible by road or railroad, that may have some development along its shoreline, and that may have undergone some impoundment or diversion in the past.

Resource Management Plan (RMP) - A land use plan as prescribed by the Federal Land Policy and Management Act that establishes, for a given area of land, land-use allocations, coordination guidelines for multiple-use, objectives, and actions to be achieved.

Right-of-Way (ROW) - Means the public lands authorized to be used or occupied for specific purposes pursuant to a right-of-way grant, which are in the public interest and which require rights-of-way over, upon, under, or through such lands.

Riparian Area - A form of wetland transition between permanently saturated wetlands and upland areas. Riparian areas exhibit vegetation or physical characteristics that reflect the influence of permanent surface or subsurface water. Typical riparian areas include lands along, adjacent to, or contiguous with perennially and intermittently flowing rivers and streams, glacial potholes, and the shores of lakes and reservoirs with stable water levels. Excluded are ephemeral streams or washes that lack vegetation and depend on free water in the soil.

Rock Art - Petroglyphs (carvings) or pictographs (paintings) created on natural rock surfaces by native people and depicting their history and culture.

Rotation - Regular change in grazing between pastures in an allotment for a permitted period.

Salable Minerals - Common mineral varieties such as sand and gravel found on public lands and used mainly for construction. Salable minerals are disposed of by sales to the public or free-use permits to government agencies or nonprofit organizations.

Scenic Byway - Highway route with a roadside or corridor of special aesthetic, cultural, or historic value. An essential part of the highway is its scenic corridor. The corridor may contain outstanding scenic vistas, unusual geologic features, or other natural elements.

Scenic River - A river or section of river that is free of impoundments and whose shorelines are largely undeveloped but accessible in places by roads.

Season of Use - The time during which livestock grazing is permitted on a given range area, as specified in a grazing lease.

Sensitive Species - Species designated as sensitive by the BLM State Director, including species that are under status review, have small or declining populations, live in unique habitats, or require special management. BLM Manual 6840 provides policy and guidance for managing special status species.

Special recreation management area (SRMA) - A public land unit identified in land use plans to direct recreation funding and personnel to fulfill commitments made to provide specific, structured recreation opportunities (including activities, experiences, and benefits). The BLM recognizes three distinct types of SRMAs: community-based, intensive, and undeveloped big open.

State Implementation Plan - A detailed description of the programs a state will use to carry out its responsibilities under the Clean Air Act. State implementation plans are a collection of regulations used by a state to reduce air pollution.

Surface-disturbing Activities (or Surface Disturbance) - The physical disturbance and movement or removal of land surface and vegetation. These activities range from the very minimal to the maximum types of surface disturbance associated with such things as off-road vehicle travel or use of mechanized, rubber-tired, or tracked equipment and vehicles; some timber cutting and forest silvicultural practices; excavation and development activities associated with use of heavy equipment for road, pipeline, power line and other types of construction; blasting; strip, pit, and underground mining and related activities, including ancillary facility construction; oil and gas well drilling and field construction or development and related activities; range improvement project construction; and recreation site construction.

Threatened Species - Any species which is likely to become endangered within the foreseeable future throughout all or a significant portion of its range.

Total Maximum Daily Load - An estimate of the total quantity of pollutants (from point, nonpoint, and natural sources) allowed into waters without exceeding applicable water quality criteria.

Traditional Cultural Property - A property that derives significance from traditional values associated with it by a social and/or cultural group such as an Indian tribe or local community. A traditional cultural property may qualify for the National Register if it meets the criteria and criteria exceptions in 36 CFR 60.4.

Valid Existing Rights - Any legitimate lease established prior to a new authorization, change in land designation, or in regulation.

Visibility (Air Quality) - A measurement of the ability to see and identify objects at different distances.

Visitor Day - Twelve visitor hours that may be aggregated by one or more persons in single or multiple visits.

Visitor Use - Visitor use of a resource for inspiration, stimulation, solitude, relaxation, education, pleasure, or satisfaction.

Visual Resource Management (VRM) Classes - Visual resource management classes define the degree of acceptable visual change within a characteristic landscape. A class is based on the physical and sociological characteristics of any given homogeneous area and serves as a management objective. Categories assigned to public lands based on scenic quality, sensitivity level, and distance zones. Each class has an objective which prescribes the amount of change allowed in the characteristic landscape. (from H-1601-1, BLM Land Use Planning Handbook). The four classes are described below:

- Class I provides for natural ecological changes only. This class includes primitive areas, some natural areas, some wild and scenic rivers, and other similar areas where landscape modification activities should be restricted.
- Class II areas are those areas where changes in any of the basic elements (form, line, color, or texture) caused by management activity should not be evident in the characteristic landscape.
- Class III includes areas where changes in the basic elements (form, line, color, or texture) caused by a management activity may be evident in the characteristic landscape. However, the changes should remain subordinate to the visual strength of the existing character.
- Class IV applies to areas where changes may subordinate the original composition and character; however, they should reflect what could be a natural occurrence within the characteristic landscape.

Volatile Organic Compounds (VOCs) - Volatile organic chemicals that produce vapors readily; at room temperature and normal atmospheric pressure. Volatile organic chemicals include gasoline, industrial chemicals such as benzene, solvents such as toluene and xylene, and tetrachloroethylene (perchloroethylene, the principal dry cleaning solvent).

Wild River - A river or section of river that is free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted. Wild rivers represent vestiges of primitive America.

Wilderness - A congressionally designated area of undeveloped federal land retaining its primeval character and influence, without permanent improvements or human habitation, that is protected and managed to preserve its natural conditions and that (1) generally appears to have been affected mainly by the forces of nature, with human imprints

substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) has at least 5,000 acres or is large enough to make practical its preservation and use in an unimpaired condition; and (4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historic value.

Wilderness Characteristics - Wilderness characteristics include size, the appearance of naturalness, outstanding opportunities for solitude or a primitive and unconfined type of recreation. They may also include ecological, geological, or other features of scientific, educational, scenic, or historical value. However Section 2(c) of the Wilderness Act of 1964 has been updated by IM- 2003-195, dated June 20, 2003. Indicators of an area's naturalness include the extent of landscape modifications; the presence of native vegetation communities; and the connectivity of habitats. Outstanding opportunities for solitude or primitive and unconfined types of recreation may be experienced when the sights, sounds, and evidence of other people are rare or infrequent, in locations where visitors can be isolated, alone or secluded from others, where the use of the area is through non-motorized, non-mechanical means, and where no or minimal developed recreation facilities are encountered.

Wilderness Study Area (WSA) - A designation made through the land use planning process of a roadless area found to have wilderness characteristics as described in Section 2(c) of the Wilderness Act of 1964.

Wildland Fire - Any fire, regardless of ignition source, that is burning outside of a prescribed fire and any fire burning on public lands or threatening public land resources, where no fire prescription standards have been prepared.

Wildland-Urban Interface (WUI) - An area within or adjacent to an at risk community that has been identified by a community in its wildfire protection plan or, for areas that do not have such a plan, an area extending; 1) ½ mile from the boundary of an at risk community, or 2) 1 ½ miles when other criteria are met (such as a sustained steep slope or a geographic feature aiding in creating an effective fire break) or is condition class III land, or 3) is adjacent to an evacuation route.

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Appendix A - Table of Livestock Grazing Allotments

TABLE 2.36 - LIVESTOCK GRAZING IN THE PLANNING AREA

ALLOT-MENT #	ALLOTMENT NAME	BLM ACRES	OTHER ACRES	TOTAL ALLOT-MENT	% PUBLIC LAND FORAGE	STATUS CODE	ACTIVE AUMS	SUSPEND AUMS	TOTAL PERMIT AUMS	STOCK TYPE	GRAZING PERIOD BEGIN DATE	GRAZING PERIOD END DATE	GRAZING PERIOD BEGIN DATE	GRAZING PERIOD END DATE
0019	CHAFFEE	2,188	162	2,351	100	C	80	0	80	cattle	6/1	6/15	10/1	10/15
2660	RADIO TOWER	424	630	1,054	10	C	14	0	14	cattle	4/15	5/15	12/15	2/15
3277	DELTA PIPELINE	6,023	4	6,027	100	C	563	0	563	sheep	12/1	3/20		
5000	LOWER ROUBIDEAU CANYON	572	120	692	100	C	24	0	24	cattle	5/15	5/16	11/30	12/1
5018	CRAWFORD RESERVOIR	260	0	260	100	C	24	0	24	cattle	5/2	10/29		
5027	ADOBE	313	81	394	24	C	24	0	24	cattle	5/1	5/31		
5028	DOUG CREEK	403	625	1,028	40	C	60	0	60	cattle	5/16	6/30		
5029	SPRING GULCH	1,155	1,273	2,429	20	C	111	0	111	cattle	6/1	9/20		
5034	RAWHIDE - COFFEE POT	1,246	5	1,251	20	C	33	0	33	sheep	5/16	5/29	10/1	11/5
5036	BIG GULCH - 40	40	0	40	100	C	6	0	6	sheep	4/15	5/31		
5040	PINE RIDGE	80	400	480	1	C	14	0	14	cattle	6/1	11/15		
5041	EAST GOULD RESERVOIR	603	691	1,294	20	C	20	0	20	cattle	5/16	6/15		
5043	COLLINS	201	766	967	10	C	10	0	10	cattle	5/16	6/15		
5044	BIG PASTURE	202	1,821	2,023	5	C	15	0	15	cattle	5/16	6/15		
5049	SMITH FORK IND.	462	207	670	100	C	6	0	6	cattle	5/1	6/1	6/1	7/1
5050	ALLEN RESERVOIR	212	486	698	29	C	39	0	39	cattle	6/1	6/30	10/15	10/30
5051	RIM ROCK ALLOTMENT	42	1,037	1,079	1	C	1	0	1	cattle	5/1	12/31		
5052	CUT OFF ALLOTMENT	30	129	159	1	C	1	0	1	cattle	4/1	9/30		
5501	FLATIRON	2,700	7	2,707	100	C	333	0	333	cattle	11/21	1/11		
5502	SANDY WASH	7,257	161	7,418	100	I	707	213	920	sheep	12/1	3/15		
5503	GREEN	754	298	1,052	100	C	39	88	127	cattle	5/1	6/30	10/10	1/10
5504	ROATCAP	2,811	181	2,992	100	C	264	0	264	cattle	5/1	7/30	10/10	1/10

ALLOT-MENT #	ALLOTMENT NAME	BLM ACRES	OTHER ACRES	TOTAL ALLOT-MENT	% PUBLIC LAND FORAGE	STATUS CODE	ACTIVE AUMS	SUSPEND AUMS	TOTAL PERMIT AUMS	STOCK TYPE	GRAZING PERIOD BEGIN DATE	GRAZING PERIOD END DATE	GRAZING PERIOD BEGIN DATE	GRAZING PERIOD END DATE
5505	TRANSFER ROAD	2,738	126	2,864	100	C	214	182	396	cattle	12/3	1/4		
5506	CUSHMAN	6,651	53	6,704	100	C	728	0	728	sheep	12/15	3/15		
5507	PIPELINE	10,187	22	10,209	100	C	600	0	600	cattle	5/15	6/30	10/10	1/9
5508	GOVERNMENT SPRINGS	2,218	0	2,218	100	I	125	0	125	sheep	5/1	5/30	10/19	11/30
5509	COAL CREEK	303	203	507	100	C	42	0	42	cattle	4/1	5/30		
5510	BALD HILLS	270	1,296	1,566	7	C	22	1	23	cattle	6/1	11/9		
5511	SHAVANO MESA	2,089	0	2,089	100	C	200	126	326	sheep	2/1	3/14		
5512	FRANKLIN MESA	2,844	0	2,844	100	C	315	0	315	cattle	5/15	6/30	10/10	1/10
5513	DRY CREEK BASIN	6,172	0	6,172	100	C	385	0	385	cattle	5/15	6/30	10/10	1/9
5514	EAST FORK DRY CREEK	156	634	790	7	C	11	0	11	cattle	6/1	8/10	7/23	10/1
5515	SOUTH PINEY	4,822	0	4,822	100	C	184	0	184	cattle	5/15	6/30	10/10	1/8
5516	PINEY ALLOTMENT	3,738	973	4,711	85	I	373	31	404	cattle	6/1	10/5		
5517	SPRING CREEK	448	62	510	100	C	59	0	59	cattle	5/31	10/16		
5518	DAVE WOOD ROAD	2,635	5	2,639	100	C	144	125	269	sheep	5/9	6/8	11/1	12/31
5519	SIMMS MESA	9,322	0	9,322	100	I	450	0	450	sheep	5/1	5/30	10/19	11/30
5520	LOWER HORSEFLY COMBINED	6,606	154	6,760	100	I	307	0	307	sheep	5/1	5/30	10/19	11/30
5521	HIGHWAY 90	6,002	202	6,204	97	C	313	695	1,008	sheep	4/15	6/3	2/8	2/28
5522	BEAVER HILL	6,014	0	6,014	100	C	576	0	576	sheep	5/8	6/15	10/1	2/28
5523	HORSEFLY	701	651	1,352	100	C	12	28	40	cattle	6/1	9/30		
5525	DRY CREEK PLACE	132	170	302	2	C	17	0	17	cattle/ horse	12/1	5/20		
5528	CHAFFEE GULCH	605	141	746	40	C	106	0	106	cattle	5/16	6/30	10/16	11/30
5529	LOG HILL	3,784	616	4,400	81	C	189	27	216	cattle/ sheep	5/1	6/11		
5530	TINKLER INDIVIDUAL	2,158	456	2,614	100	C	20	0	20	cattle	5/1	6/30		

ALLOT-MENT #	ALLOTMENT NAME	BLM ACRES	OTHER ACRES	TOTAL ALLOT-MENT	% PUBLIC LAND FORAGE	STATUS CODE	ACTIVE AUMS	SUSPEND AUMS	TOTAL PERMIT AUMS	STOCK TYPE	GRAZING PERIOD BEGIN DATE	GRAZING PERIOD END DATE	GRAZING PERIOD BEGIN DATE	GRAZING PERIOD END DATE
5533	ONION LAKES	466	0	466	100	C	30	0	30	cattle/ sheep	7/1	8/1		
5532	BURRO RIDGE	198	606	804	20	C	15	0	15	cattle	5/1	6/15		
5534	SHINN PARK/ SOUTH CANAL	5,487	25	5,512	100	C	288	28	316	sheep	12/1	1/11		
5535	CEDAR CREEK	200	960	1,160	13	C	6	0	6	cattle	5/10	5/22		
5537	DRY CEDAR	4,765	22	4,787	100	M	360	0	360	sheep	1/12	3/4		
5538	ROCK DITCH	60	75	135	28	C	9	0	9	cattle	11/1	11/30		
5540	DRY GULCH	5,504	500	6,004	100	I	250	0	250	cattle	5/1	5/30	10/1	11/1
5541	DOWNING	120	321	441	20	C	27	0	27	cattle	5/26	6/17	9/13	9/30
5546	WATERDOG BASIN	394	392	786	50	C	35	0	35	cattle	6/10	6/30		
5547	SLAGLE PASS	287	329	616	20	M	30	0	30	cattle	7/1	10/10		
5548	WASHBOARD ROCK	1,006	4,104	5,110	100	C	34	0	34	cattle	6/1	9/1		
5549	HIGH PARK	1,457	677	2,134	75	C	60	0	60	cattle	7/1	8/31		
5555	TAYLOR DRAW	636	479	1,115	6	M	18	0	18	cattle	4/26	6/15		
5562	HILLSIDE	119	39	158	100	C	40	0	40	cattle	6/6	9/15		
5563	MOONSHINE PARK	239	636	875	4	C	7	0	7	cattle	6/6	10/10		
5566	COW CREEK	516	316	832	50	C	70	35	105	cattle	6/10	7/1		
5568	BALDY	625	0	625	100	I	88	0	88	cattle	7/3	7/26		
5569	HAIRPIN	837	5	842	2	C	18	0	18	cattle	7/1	8/25		
5570	CEDAR	1,530	767	2,297	48	I	226	0	226	cattle	5/7	10/16		
5575	TAPPAN CREEK	408	0	408	100	C	18	0	18	sheep	5/1	5/30	10/19	11/30
7007	UNCOMPAHGRE BENCH	5,214	160	5,374	96	C	329	64	393	cattle	11/15	1/1		
7008	TWENTY-FIVE MESA - SOUTH	5,746	470	6,216	100	I	329	30	359	cattle	5/17	6/1	10/16	10/27
7063	GRAVEL PIT	979	182	1,161	34	C	43	0	43	cattle	5/25	6/5		

ALLOT-MENT #	ALLOTMENT NAME	BLM ACRES	OTHER ACRES	TOTAL ALLOT-MENT	% PUBLIC LAND FORAGE	STATUS CODE	ACTIVE AUMS	SUSPEND AUMS	TOTAL PERMIT AUMS	STOCK TYPE	GRAZING PERIOD BEGIN DATE	GRAZING PERIOD END DATE	GRAZING PERIOD BEGIN DATE	GRAZING PERIOD END DATE
7075	LAVENDER	1,305	2,469	3,774	100	M	31	0	31	cattle	3/1	2/28		
7076	HOUSER	4,378	3,520	7,898	6	I	164	111	275	cattle	12/1	3/14		
7200	RIVER ALLOTMENT	2,710	408	3,118	100	C	117	0	117	cattle	6/15	10/15		
7201	HOME RANCH	1,025	5,700	6,725	5	C	79	0	79	cattle	10/1	7/1		
7202	UPPER MAVERICK DRAW	493	1,433	1,926	10	C	6	69	75	cattle	11/15	12/14		
7203	NATURITA CANYON	660	127	787	15	C	28	0	28	cattle	12/1	4/1		
7204	BEAVER RIM	263	150	413	66	C	12	0	12	horse	6/6	7/5		
7205	LEOPARD CREEK	321	404	725	5	M	12	0	12	sheep	6/1	7/15	10/1	11/1
7206	MCKEE DRAW	1,302	0	1,302	100	C	74	0	74	cattle	5/15	6/14	11/15	12/15
7207	BIG BEAR CREEK	484	313	797	5	C	20	0	20	cattle	6/1	11/1		
7208	UPPER MAILBOX ALLOTMENT	717	41	758	73	C	176	0	176	cattle	5/1	6/14	12/1	12/30
7209	HAMILTON MESA	409	1,035	1,444	100	C	26	0	26	cattle	6/1	6/30	10/1	10/31
7210	LITTLE MAVERICK DRAW	292	231	523	60	I	30	0	30	cattle	1/15	2/28		
7211	LOWER BEAVER CANYON	669	0	669	100	C	50	0	50	cattle	6/1	6/30		
7213	LOWER PINION	210	581	791	3	C	3	0	3	cattle	5/15	6/1		
7216	LOWER ROC CREEK	106	173	279	10	I	5	0	5	cattle	12/25	1/25		
7218	NORWOOD HILL ALLOTMENT	189	160	349	15	C	9	0	9	cattle	10/1	11/30		
7219	BOLINGER DITCH	123	120	243	15	C	8	0	8	cattle	6/1	9/10		
7220	WILLIAMS DITCH ALLOTMENT	18	81	99	25	C	5	0	5	cattle	9/15	11/30		
7222	COVENTRY	863	0	863	100	C	70	0	70	cattle	11/16	12/6		
7223	LITTLE BALDY	1,398	1,910	3,308	20	C	175	0	175	cattle	5/16	7/15	10/1	11/14
7225	OAK HILL	42	650	692	4	C	5	0	5	cattle	6/1	11/1		
7227	REDVALE	376	0	376	100	C	20	0	20	cattle	11/1	12/14		

ALLOT-MENT #	ALLOTMENT NAME	BLM ACRES	OTHER ACRES	TOTAL ALLOT-MENT	% PUBLIC LAND FORAGE	STATUS CODE	ACTIVE AUMS	SUSPEND AUMS	TOTAL PERMIT AUMS	STOCK TYPE	GRAZING PERIOD BEGIN DATE	GRAZING PERIOD END DATE	GRAZING PERIOD BEGIN DATE	GRAZING PERIOD END DATE
7230	MUD SPRINGS	3,954	242	4,196	94	C	593	0	593	cattle	5/1	6/1	12/9	2/28
7232	BUCK	133	63	196	40	C	47	0	47	cattle/ horse	5/10	12/15		
7233	MIDDLE HAMILTON LEASE	1,186	584	1,770	50	C	75	0	75	cattle	12/15	5/15		
7234	LOWER HAMILTON	722	311	1,033	70	C	81	0	81	cattle	12/14	5/15		
7235	BRAMIER DRAW	2,561	1,036	3,597	25	C	337	0	337	cattle	12/1	2/28		
7300	DRY PARK	4,581	63	4,644	100	I	746	0	746	cattle	5/21	6/5	11/1	11/20
7301	HORSEFLY COMMON	879	0	879	100	C	50	0	50	cattle	5/20	6/2		
7302	UNCOMPAHGRE COMMON	264	320	584	4	C	58	0	58	cattle	6/1	10/15		
7303	BARKELEW DRAW-COMMON	5,935	1,079	7,014	100	I	562	0	562	cattle	5/1	6/16	10/15	11/14
14004	SOUTH BRANCH	823	224	1,046	65	M	101	0	101	cattle	6/4	6/30	10/15	10/29
*14008	25 MESA - NORTH	11,407	493	11,900	100	I	644	0	644	cattle	5/6	6/3	11/20	1/29
14010	MONITOR MESA (Winter)	15,749	186	15,934	100	I	533	640	1,173	cattle	5/16	6/1	10/16	12/1
14011	LEE BENCH	587	321	908	100	C	41	0	41	cattle	11/1	12/31		
14012	CANAL	7,872	0	7,872	100	I	798	477	1,275	sheep	12/1	3/15		
14013	BEN LOWE	5,496	0	5,496	100	C	410	352	762	cattle	5/21	5/31	10/16	12/2
14015	WHITE RANCH	530	352	882	2	I	10	0	10	cattle	4/1	6/15	10/15	12/15
*14016	WELLS GULCH	16,885	140	17,025	100	C	2,366	0	2,366	sheep	12/1	3/21		
*14017	ALKALI FLATS	12,358	70	12,428	100	C	1,387	0	1,387	sheep	12/1	3/20		
14019	DEER BASIN - MIDWAY	11,640	809	12,449	96	C	900	0	900	sheep	12/20	3/20		
*14020	ANTELOPE	2,605	170	2,775	100	C	67	0	67	sheep	3/1	4/30		
14021	POINT CREEK	1,614	4,364	5,978	24	C	101	0	101	sheep	4/16	5/31	11/16	3/10
14022	PETRIE MESA	2,839	360	3,199	100	C	104	0	104	sheep	12/9	3/20		
14023	DIRTY GEORGE	1,387	5	1,392	100	C	133	0	133	cattle	6/2	6/15	10/15	10/20

ALLOT-MENT #	ALLOTMENT NAME	BLM ACRES	OTHER ACRES	TOTAL ALLOT-MENT	% PUBLIC LAND FORAGE	STATUS CODE	ACTIVE AUMS	SUSPEND AUMS	TOTAL PERMIT AUMS	STOCK TYPE	GRAZING PERIOD BEGIN DATE	GRAZING PERIOD END DATE	GRAZING PERIOD BEGIN DATE	GRAZING PERIOD END DATE
14025	WARD CREEK DOUGHSPOON	17,182	4,228	21,410	100	I	445	0	445	cattle	5/2	6/16	10/16	11/2
14502	WILBANKS	3,069	8	3,077	100	C	443	114	557	cattle	5/16	6/15	10/16	10/25
14503	STINGLEY GULCH	1,132	0	1,132	100	C	98	0	98	cattle	5/10	6/15		
14504	LEROUX CREEK	598	169	767	34	C	32	0	32	cattle	5/25	7/10		
14505	JUNIPER KNOB	590	0	590	100	C	18	0	18	cattle	4/1	5/31	10/16	10/31
14506	OAK MESA	846	575	1,421	17	C	51	0	51	cattle	5/11	7/15		
14507	ROATCAP - JAY CREEK	9,435	3,190	12,625	100	I	955	242	1,197	cattle	5/20	7/20	11/1	12/15
14508	FIRE MOUNTAIN CANAL	118	5	123	100	C	10	0	10	cattle	4/1	5/31	11/15	12/15
14510	WEST ROATCAP	202	0	202	100	C	88	0	88	cattle	6/16	10/15		
14511	OVERLAND	159	358	516	28	C	30	77	107	cattle	6/1	7/15	10/1	10/23
14512	EAST ROATCAP IND.	198	0	198	56	C	58	0	58	cattle	7/16	8/15	10/1	10/29
14513	STEVENS GULCH COMMON	4,765	1,352	6,117	100	C	73	0	73	cattle	5/1	10/31	9/29	10/5
14514	UPPER TERROR CREEK	554	223	777	42	C	59	0	59	cattle	6/1	9/30		
14515	WEST STEVENS GULCH	1,670	803	2,473	70	C	168	0	168	cattle	5/1	10/31		
14516	HUBBARD CREEK	1,716	201	1,917	100	C	45	0	45	sheep	5/1	10/31		
14517	COAL GULCH	6,703	102	6,805	77	C	587	61	648	sheep	5/15	10/31		
14519	MUDDY CREEK	438	1,035	1,473	10	C	16	0	16	sheep	5/16	6/30	10/1	11/15
14521	STOCK DRIVEWAY	120	221	341	28	C	32	0	32	cattle	6/1	10/15		
14523	WILLIAMS CREEK	108	1,012	1,120	100	C	8	0	8	cattle	5/16	9/21		
14524	DEEP CREEK	184	643	827	100	M	3	0	3	cattle	6/10	9/20		
14525	ANTHRACITE CREEK	1,004	1,816	2,820	60	M	92	0	92	cattle	5/17	10/15		
14527	JUMBO MOUNTAIN	4,942	962	5,904	99	C	119	0	119	cattle	5/10	9/8		
14528	OAK RIDGE COMMON	3,645	89	3,734	100	C	417	0	417	cattle	5/10	6/15		

ALLOT-MENT #	ALLOTMENT NAME	BLM ACRES	OTHER ACRES	TOTAL ALLOT-MENT	% PUBLIC LAND FORAGE	STATUS CODE	ACTIVE AUMS	SUSPEND AUMS	TOTAL PERMIT AUMS	STOCK TYPE	GRAZING PERIOD BEGIN DATE	GRAZING PERIOD END DATE	GRAZING PERIOD BEGIN DATE	GRAZING PERIOD END DATE
14530	REYNOLDS/ MCDONALD	4,252	26	4,278	100	C	274	176	450	cattle	5/1	5/15	10/1	10/3
14531	POPP RANCH	205	2,036	2,241	2	C	11	0	11	cattle	5/15	6/22	11/16	12/30
14532	MCDONALD CREEK	3,821	232	4,052	100	C	209	0	209	sheep	4/1	6/20	12/15	2/1
14534	SOUTH OF TOWN	3,836	4,356	8,192	100	C	369	0	369	sheep	4/1	6/20	12/15	2/1
14536	WEST YOUNGS PEAK	197	281	478	21	C	25	25	50	cattle	5/1	6/10		
14537	YOUNGS PEAK	2,134	3	2,137	100	C	113	0	113	cattle	5/15	6/1		
14540	NORTH SADDLE PEAK	209	451	660	90	C	20	0	20	cattle	6/15	7/11		
14541	SUNSHINE MESA	42	177	219	5	C	5	0	5	cattle	5/15	9/14		
14542	NEEDLE ROCK	41	82	123	33	C	8	0	8	horse	5/15	6/15		
14544	MILK CREEK	98	0	98	100	C	13	0	13	cattle	5/16	6/29		
14547	SECTION 35	68	51	119	54	M	22	0	22	cattle	5/16	10/15		
14548	SOUTH DRY CREEK	1,195	400	1,596	78	C	50	0	50	cattle	5/1	6/30	10/15	11/15
14549	DRY CREEK	1,799	0	1,799	100	C	133	0	133	cattle	5/15	6/20	10/16	10/20
14550	LEROUX	1,983	243	2,226	88	C	158	0	158	cattle	5/16	6/26		
14551	ASPEN DITCH	400	0	400	100	C	57	0	57	sheep	12/4	12/9		
16036	BLUE CIMARRON	80	1,369	1,449	5	C	40	0	40	cattle or sheep	5/10	5/25	10/1	10/15
17001	MAILBOX PARK	6,862	2,852	9,714	42	M	194	0	194	cattle	5/1	5/20	11/1	12/6
17003	LEE LANDS	860	1,256	2,116	15	M	70	0	70	sheep	6/1	7/15	9/15	10/28
17004	DOLORES CANYON	2,903	354	3,257	100	I	123	0	123	cattle	1/3	3/1		
17010	WICKSON DRAW	3,513	606	4,119	81	I	305	0	305	cattle	4/15	5/20	11/20	11/28
17011	LA SAL CREEK	4,967	473	5,440	100	C	139	20	159	cattle	11/30	3/30		
17012	LION CANYON	530	260	790	50	M	14	0	14	cattle	4/1	10/31		
17014	MESA CREEK CRMP	93,188	7,065	100,253	99	I	4,255	0	4,255	cattle	3/1	6/6	10/25	2/28

ALLOT-MENT #	ALLOTMENT NAME	BLM ACRES	OTHER ACRES	TOTAL ALLOT-MENT	% PUBLIC LAND FORAGE	STATUS CODE	ACTIVE AUMS	SUSPEND AUMS	TOTAL PERMIT AUMS	STOCK TYPE	GRAZING PERIOD BEGIN DATE	GRAZING PERIOD END DATE	GRAZING PERIOD BEGIN DATE	GRAZING PERIOD END DATE
17018	MAVERICK DRAW ALLOTMENT	2,015	158	2,173	100	C	73	0	73	cattle	2/12	3/14		
17020	ROC CREEK ALLOTMENT	1,310	472	1,782	66	I	28	8	36	cattle	11/15	12/15		
17021	RAWLINGS INDIVIDUAL	377	22	399	100	C	18	0	18	cattle	5/1	10/31		
17022	BURN CANYON	2,317	807	3,124	56	C	91	0	91	cattle	5/15	6/14	12/20	2/28
17023	NORTH WICKSON DRAW	1,148	5,055	6,203	5	C	30	0	30	cattle	11/15	6/1		
17024	LILLYLANDS-WEST	2,532	830	3,362	100	C	224	0	224	cattle	1/15	3/29		
17027	COKE OVENS	7,552	379	7,931	100	C	224	0	224	cattle	2/15	4/15		
17030	PARK ALLOTMENT	1,039	1,805	2,844	43	C	68	0	68	cattle	10/15	6/1		
17031	TABEGUACHE CREEK	18,318	1,002	19,320	95	C	660	0	660	cattle	5/1	6/1	10/16	12/20
17032	SAWTOOTH	24,007	1,140	25,147	88	I	488	0	488	cattle	1/9	4/30		
17033	BUCKEYE	809	0	809	100	C	48	0	48	cattle	6/5	8/4	8/5	10/5
17035	NATURITA RIDGE	9,413	321	9,735	100	C	440	0	440	cattle	12/15	2/28		
17037	DAVIS MESA ALLOTMENT	4,051	0	4,051	100	I	250	0	250	cattle	12/3	4/15		
17042	DOBY CANYON	2,628	0	2,628	100	C	12	25	37	cattle	5/1	5/31		
17044	LION CREEK BASIN	5,299	12	5,311	100	C	350	0	350	cattle	5/15	6/14	10/1	12/10
17048	RAY MESA	23,131	32	23,163	100	M	802	0	802	cattle	5/15	6/14	10/1	12/10
17060	BEAVER CANYON	803	0	803	100	M	50	0	50	cattle	6/1	6/30		
17061	BIG BUCKTAIL	5,339	8	5,347	100	C	150	0	150	cattle	5/15	6/4		
17062	PARKWAY	1,132	0	1,132	100	C	35	0	35	cattle	5/13	5/28		
17078	FEEDLOT	261	412	673	7	C	13	0	13	cattle	3/1	5/31	11/1	2/28
17079	RIVER	1,395	1,422	2,817	5	C	22	0	22	cattle	3/1	5/31	11/1	2/28
17080	ROWHER CANYON	669	197	866	75	C	30	0	30	cattle	3/1	5/31	11/1	2/28
17081	SWAIN BENCH	3,083	57	3,140	100	C	23	0	23	cattle	3/6	5/31	11/1	2/28

ALLOT-MENT #	ALLOTMENT NAME	BLM ACRES	OTHER ACRES	TOTAL ALLOT-MENT	% PUBLIC LAND FORAGE	STATUS CODE	ACTIVE AUMS	SUSPEND AUMS	TOTAL PERMIT AUMS	STOCK TYPE	GRAZING PERIOD BEGIN DATE	GRAZING PERIOD END DATE	GRAZING PERIOD BEGIN DATE	GRAZING PERIOD END DATE
17082	NYSWANGER	3,492	62	3,554	100	C	1	56	57	cattle	5/1	5/15		
17085	POCKET IND.	1,322	0	1,322	100	C	5	0	5	cattle	5/10	5/14	11/13	11/20
17100	CARPENTER RIDGE-COMMON	7,064	0	7,064	100	I	265	0	265	cattle	5/15	6/19	10/6	11/12
17101	EAST PARADOX COMMON	15,003	2,393	17,396	100	I	1,254	853	2,107	cattle	12/18	2/28		
17102	SUNRISE GULCH	1,540	1,304	2,844	37	C	63	0	63	cattle	1/2	2/22		
17103	THIRD PARK COMMON	3,857	14	3,871	100	M	391	210	601	cattle	11/22	1/5		
17105	SECOND PARK	771	4,291	5,062	4	C	40	0	40	cattle	12/1	4/30		
17106	TUTTLE DRAW	1,330	57	1,387	25	C	39	0	39	cattle	5/1	5/31		
17107	COAL CANYON	5,295	190	5,485	100	C	60	102	162	cattle	5/1	5/31		
17199	BROAD CANYON	1,759	1,657	3,416	50	C	80	0	80	cattle	1/1	4/2		
17213	FAR AWAY ALLOTMENT	366	0	366	100	C	30	0	30	cattle	5/16	6/15	9/1	10/1
17253	ALDER CREEK	40	4,500	4,540	5	C	10	0	10	cattle	6/1	10/15		
TOTALS		**628,754**	**124,775**	**753,530**			**38,200**	**5,291**	**43,491**					

(*) Grazing allotments with an asterisk straddle the management boundary line (which is also the planning area division) between the UFO and the Dominguez-Escalante National Conservation Area. These allotments and the acreage respective to each planning area are:

Grazing Allotment	Approximate Acreage: Within the UFO	Within the D-E
14008 - 25 Mesa North	**6,277**	**5,623**
14016 - Wells Gulch	**10,505**	**6,520**
14017 - Alkali Flats	**8,961**	**3,467**
14020 - Antelope	**996**	**1,179**

B

Appendix B - Colorado Public Land Health Standards

Standards for Public Land Health and Guidelines for Livestock Grazing Management in Colorado

Developed in 1997, the BLM Colorado Standards for Public Land Health describe the conditions necessary to sustain public land health in relation to a landscape's potential. The standards are applied on a landscape scale and are applicable to all public land uses.

STANDARD 1

Upland soils exhibit infiltration and permeability rates that are appropriate to soil type, climate, land form, and geologic processes. Adequate soil infiltration and permeability allows for the accumulation of soil moisture necessary for optimal plant growth and vigor, and minimizes surface runoff.

Indicators:

- Expression of rills, soil pedestals is minimal.
- Evidence of actively-eroding gullies (incised channels) is minimal.
- Canopy and ground cover are appropriate.
- There is litter accumulating in place and is not sorted by normal overland water flow.
- There is appropriate organic matter in soil.
- There is diversity of plant species with a variety of root depths.
- Upland swales have vegetation cover or density greater than that of adjacent uplands.
- There are vigorous, desirable plants.

STANDARD 2

Riparian systems associated with both running and standing water function properly and have the ability to recover from major disturbance such as fire, severe grazing, or 100-year floods. Riparian vegetation captures sediment, and provides forage, habitat and bio-diversity. Water quality is improved or maintained. Stable soils store and release water slowly.

Indicators:

- Vegetation is dominated by an appropriate mix of native or desirable introduced species.
- Vigorous, desirable plants are present.

- There is vegetation with diverse age class structure, appropriate vertical structure, and adequate composition, cover, and density.
- Streambank vegetation is present and is comprised of species and communities that have root systems capable of withstanding high streamflow events.
- Plant species present indicate maintenance of riparian moisture characteristics.
- Stream is in balance with the water and sediment being supplied by the watershed (e.g., no headcutting, no excessive erosion or deposition).
- Vegetation and free water indicate high water tables.
- Vegetation colonizes point bars with a range of age classes and successional stages.
- An active floodplain is present.
- Residual floodplain vegetation is available to capture and retain sediment and dissipate flood energies.
- Stream channels with size and meander pattern appropriate for the stream's position in the landscape, and parent materials.
- Woody debris contributes to the character of the stream channel morphology.

STANDARD 3

Healthy, productive plant and animal communities of native and other desirable species are maintained at viable population levels commensurate with the species and habitat's potential. Plants and animals at both the community and population level are productive, resilient, diverse, vigorous, and able to reproduce and sustain natural fluctuations, and ecological processes.

Indicators:

- Noxious weeds and undesirable species are minimal in the overall plant community.
- Native plant and animal communities are spatially distributed across the landscape with a density, composition, and frequency of species suitable to ensure reproductive capability and sustainability.
- Plants and animals are present in mixed age classes sufficient to sustain recruitment and mortality fluctuations.
- Landscapes exhibit connectivity of habitat or presence of corridors to prevent habitat fragmentation.
- Photosynthetic activity is evident throughout the growing season.
- Diversity and density of plant and animal species are in balance with habitat/landscape potential and exhibit resilience to human activities.
- Appropriate plant litter accumulates and is evenly distributed across the landscape.

- Landscapes composed of several plant communities that may be in a variety of successional stages and patterns.

STANDARD 4

Special status, threatened and endangered species (federal and state), and other plants and animals officially designated by the BLM, and their habitats are maintained or enhanced by sustaining healthy, native plant and animal communities.

Indicators:

- All the indicators associated with the plant and animal communities standard apply.
- There are stable and increasing populations of endemic and protected species in suitable habitat.
- Suitable habitat is available for recovery of endemic and protected species.

STANDARD 5

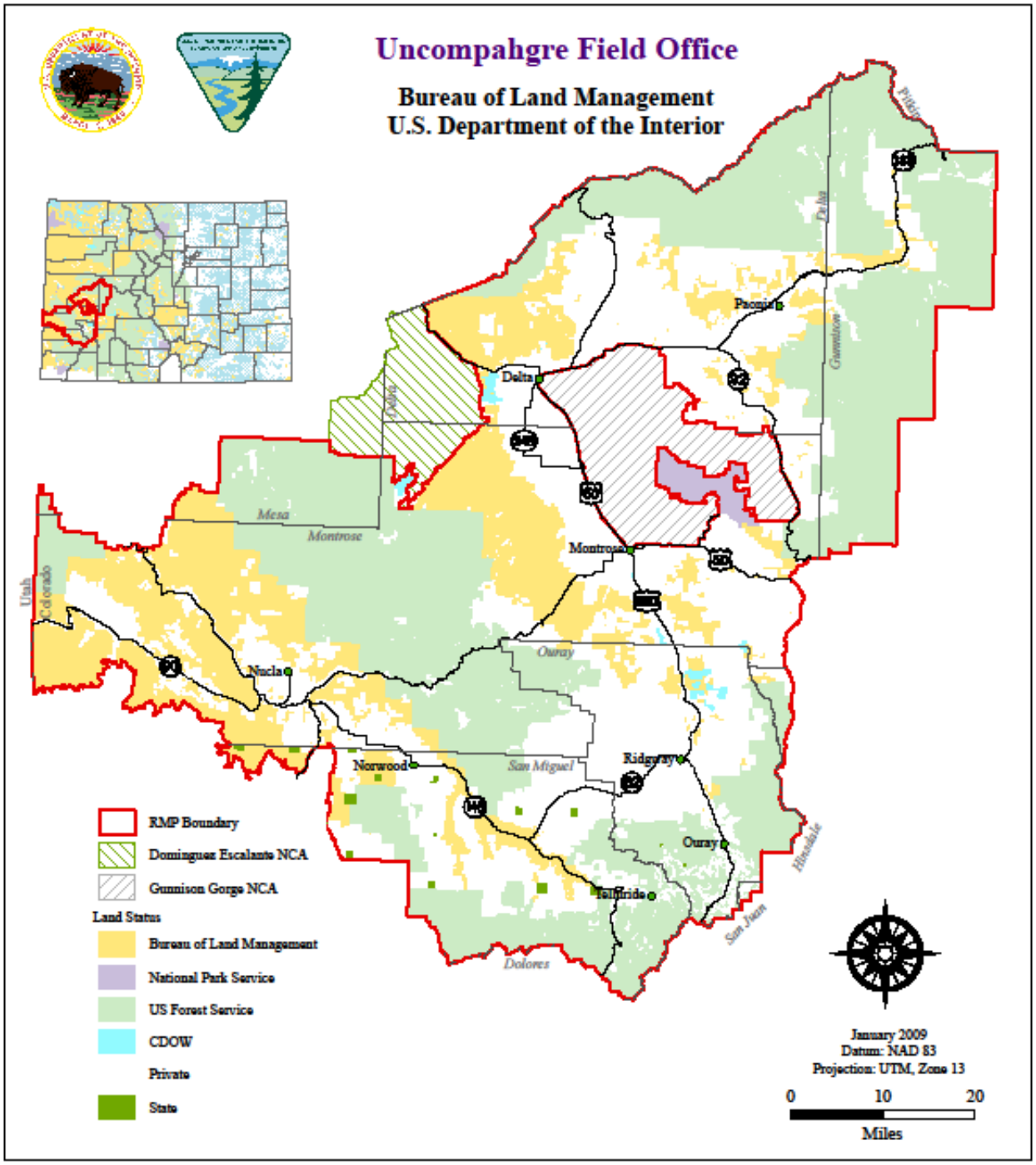
The water quality of all water bodies, including ground water where applicable, located on or influenced by BLM lands will achieve or exceed the Water Quality Standards established by the State of Colorado. Water Quality Standards for surface and ground waters include the designated beneficial uses, numeric criteria, narrative criteria, and anti-degradation requirements set forth under State law as found in (5 CCR 1002-8), as required by Section 303(c) of the Clean Water Act.

Indicators:

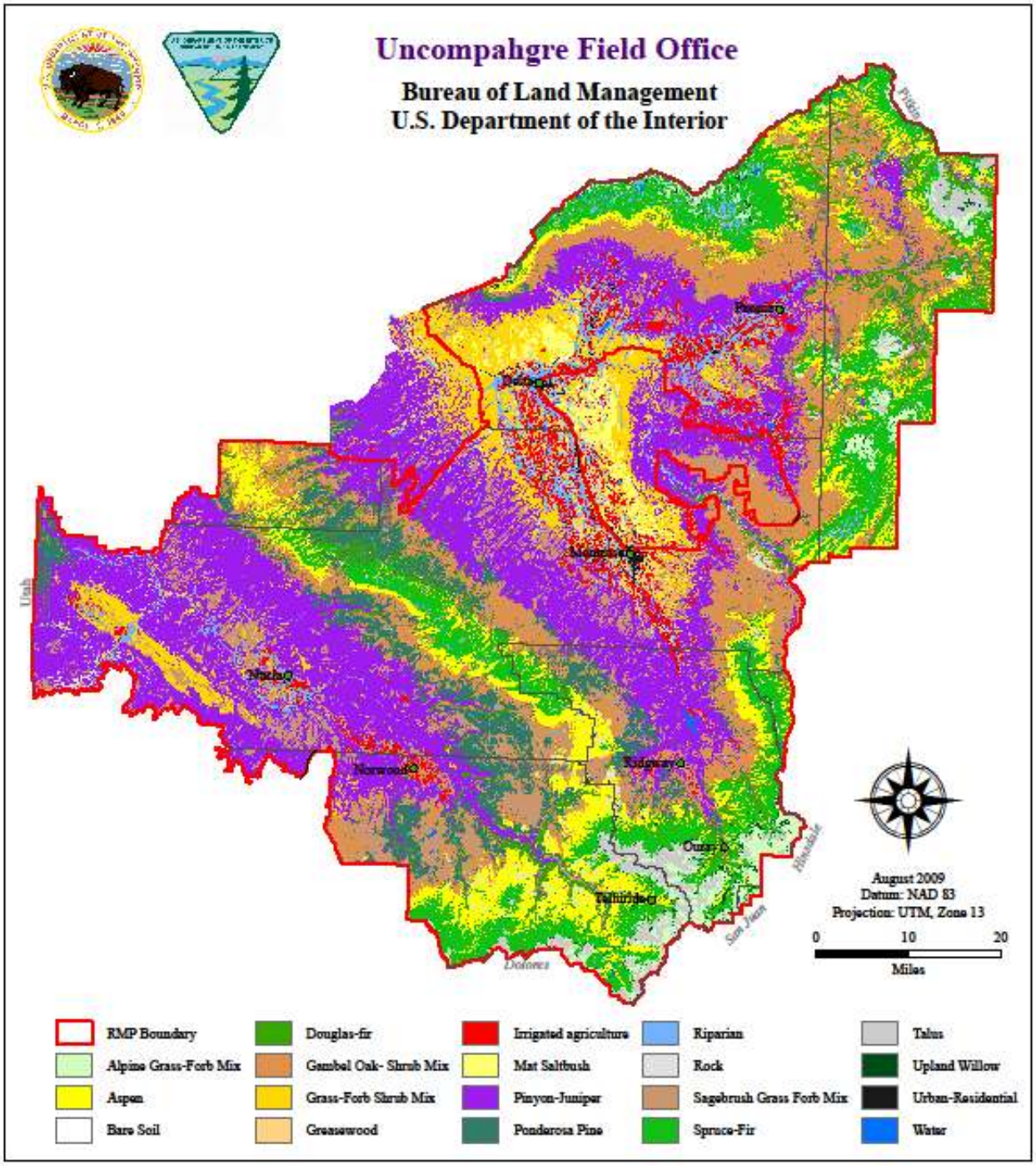
- Appropriate populations of macroinvertebrates, vertebrates, and algae are present.
- Surface and ground waters only contain substances (e.g. sediment, scum, floating debris, odor, heavy metal precipitates on channel substrate) attributable to humans within the amounts, concentrations, or combinations as directed by the Water Quality Standards established by the State of Colorado (5 CCR 1002-8).

C

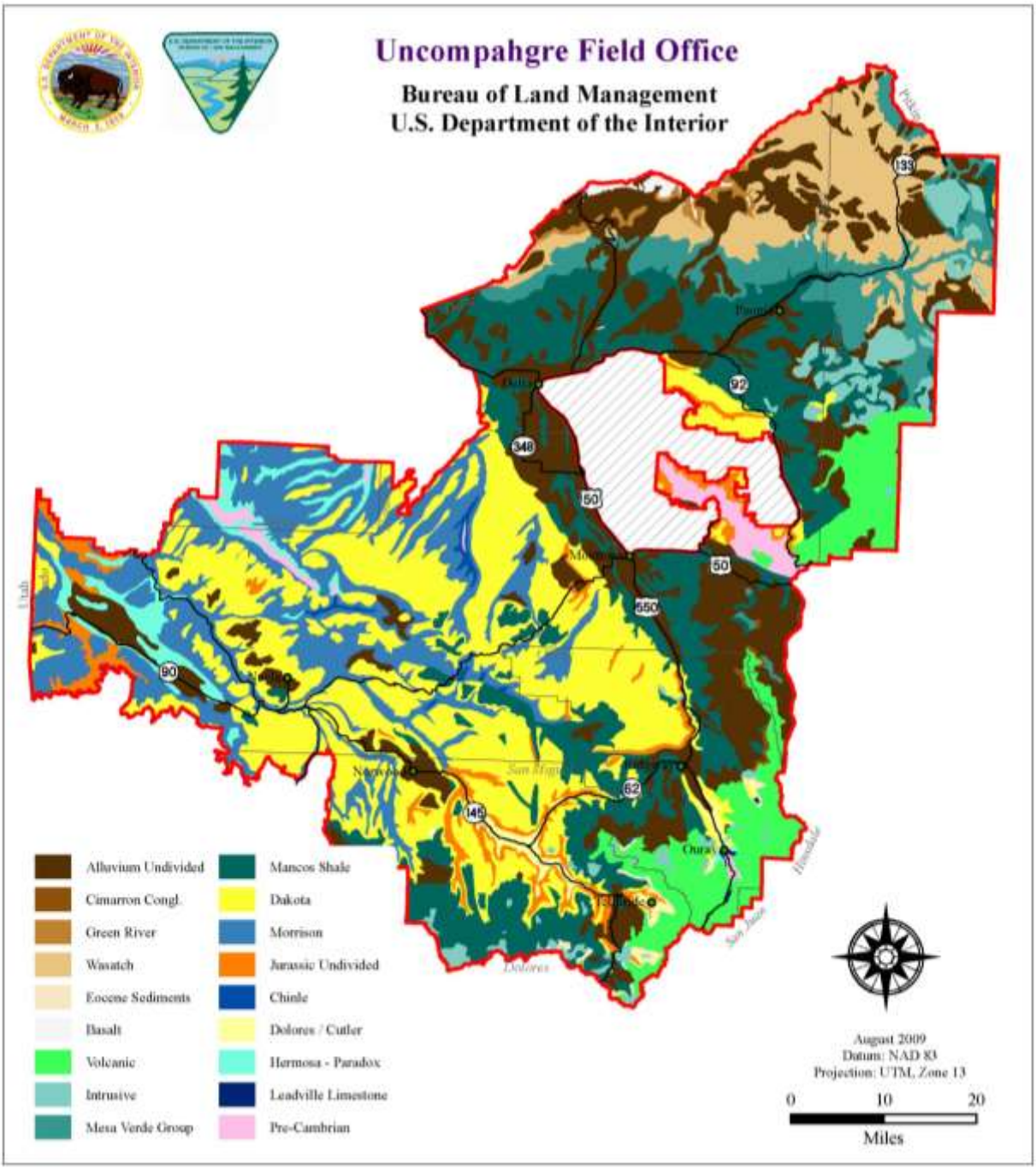
Appendix C - Maps



MAP 1-1 UNCOMPAHGRE PLANNING AREA

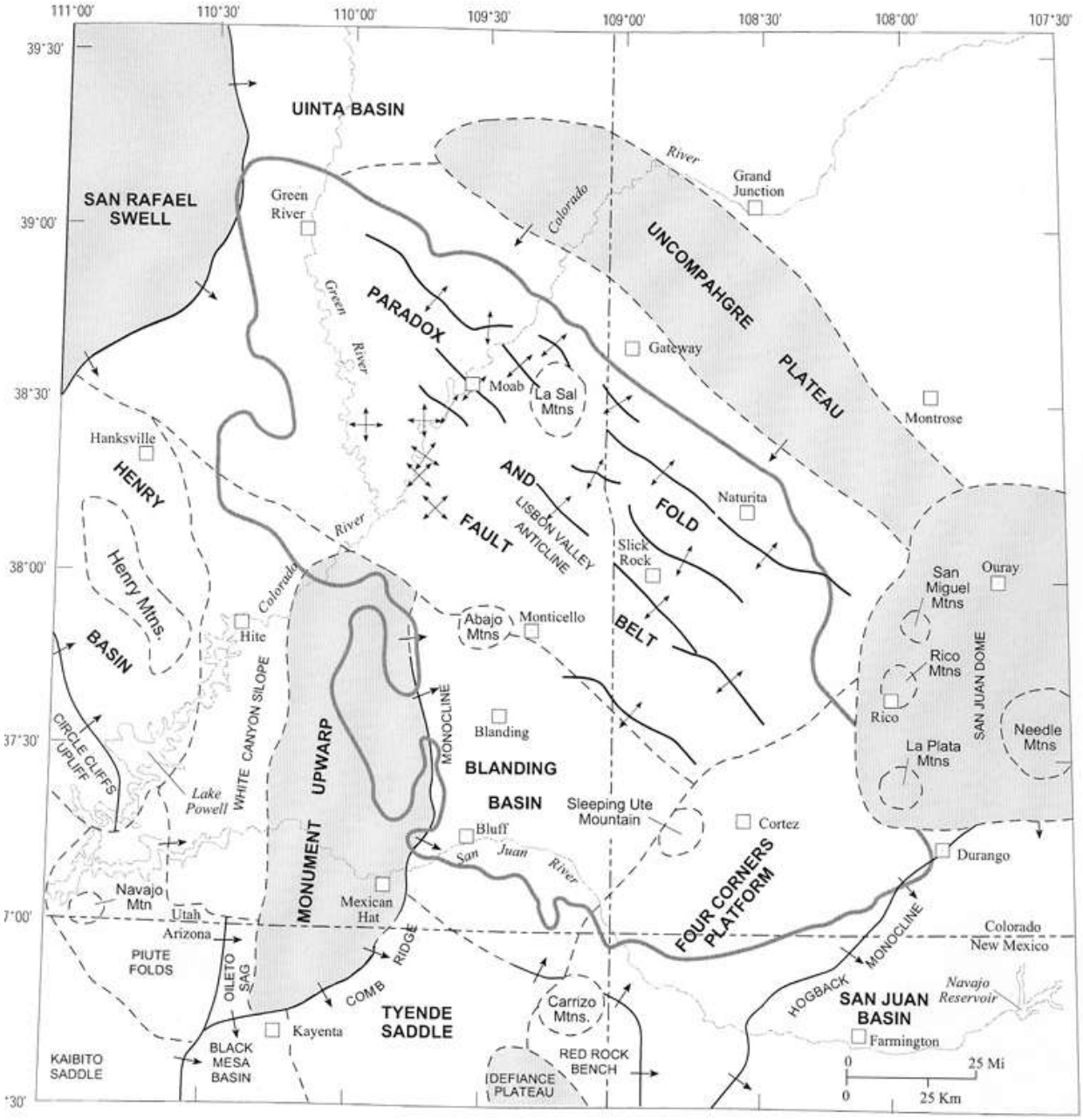


MAP 1-2 LAND COVER CLASSIFICATION IN THE UNCOMPAHGRE PLANNING AREA



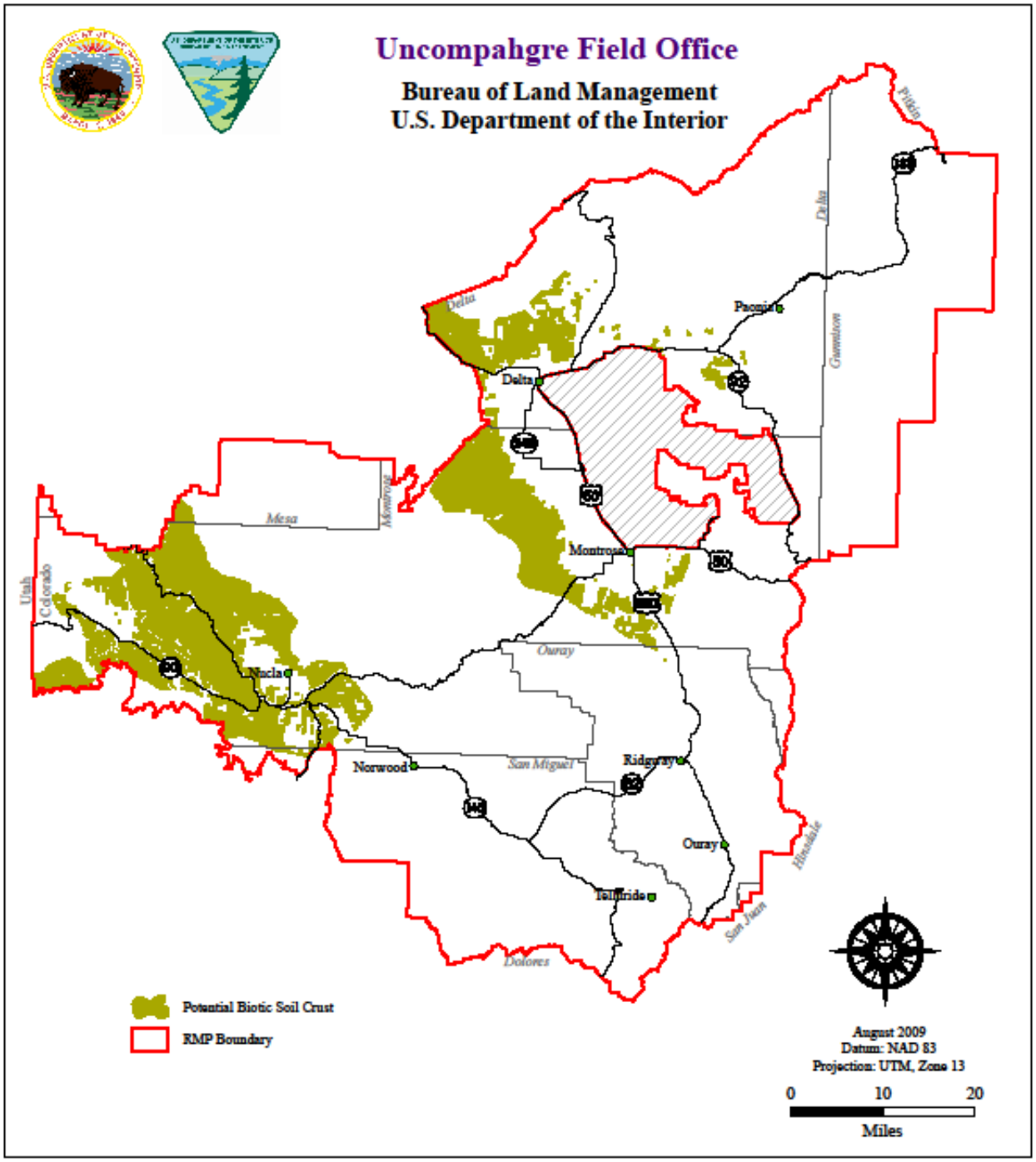
(Green 1992)

MAP 2-1 GEOLOGY OF THE UNCOMPAHGRE PLANNING AREA

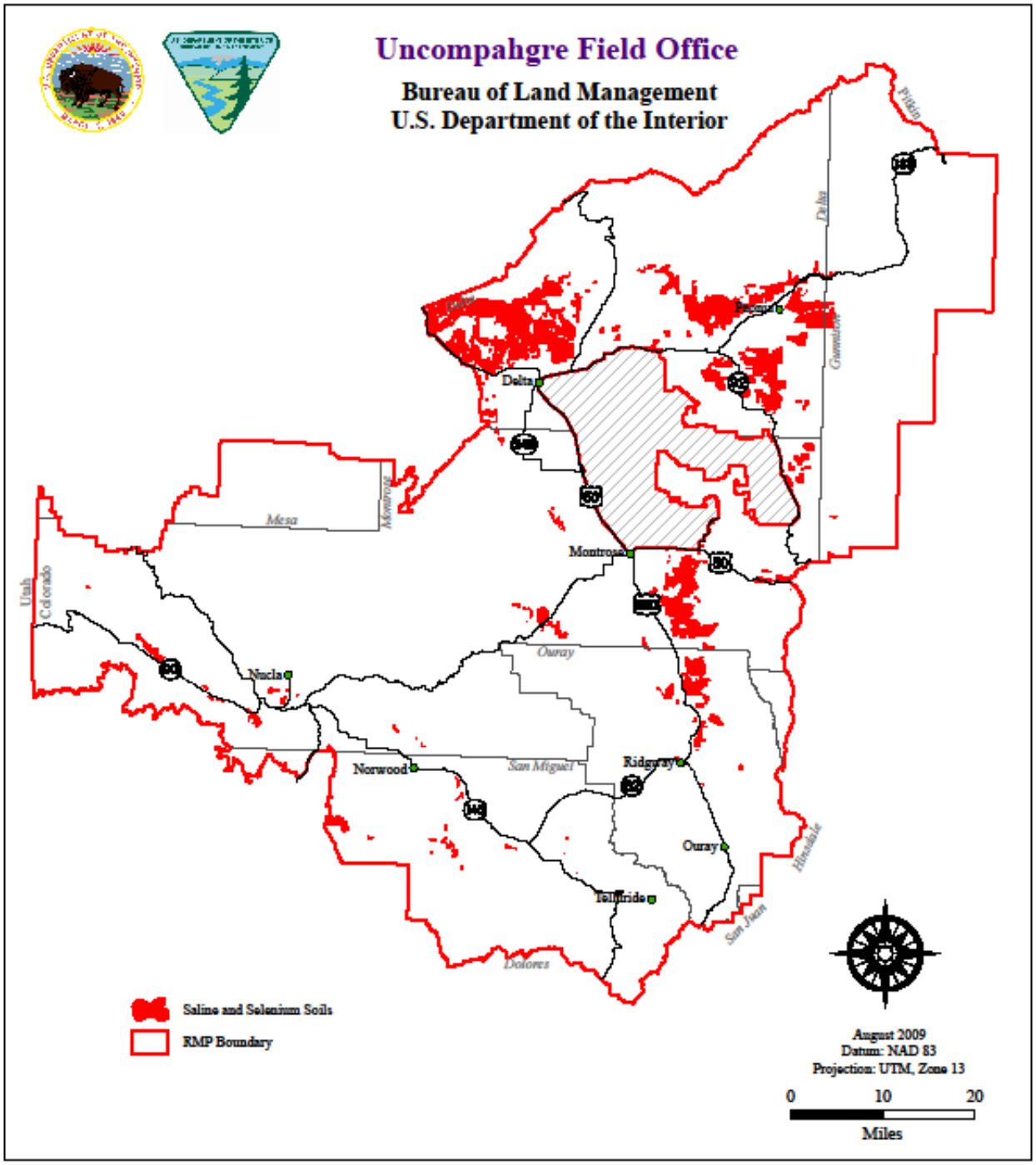


(Modified from Kelley 1958)

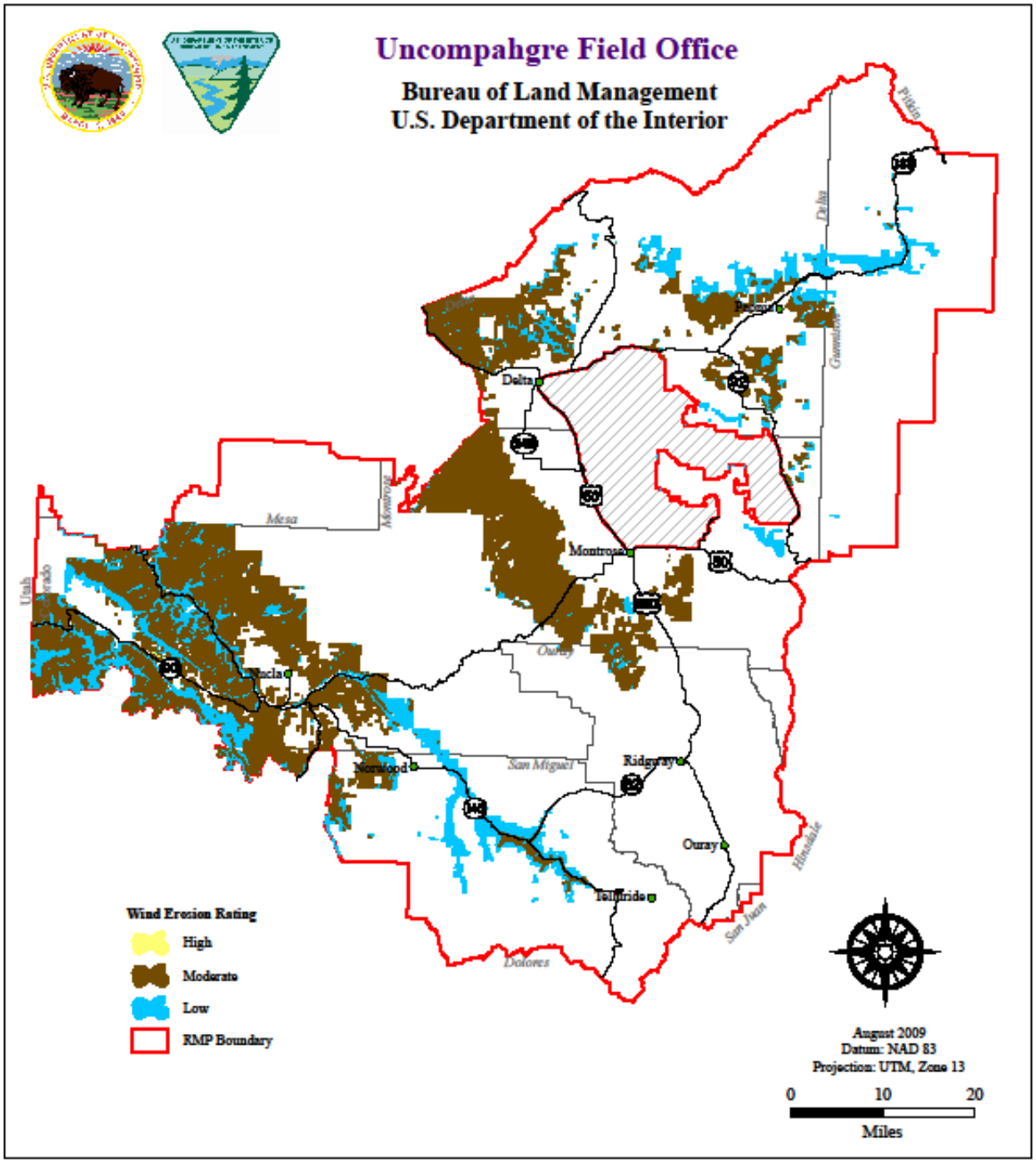
MAP 2-2 STRUCTURAL ELEMENTS OF THE PARADOX BASIN AND ADJACENT AREAS



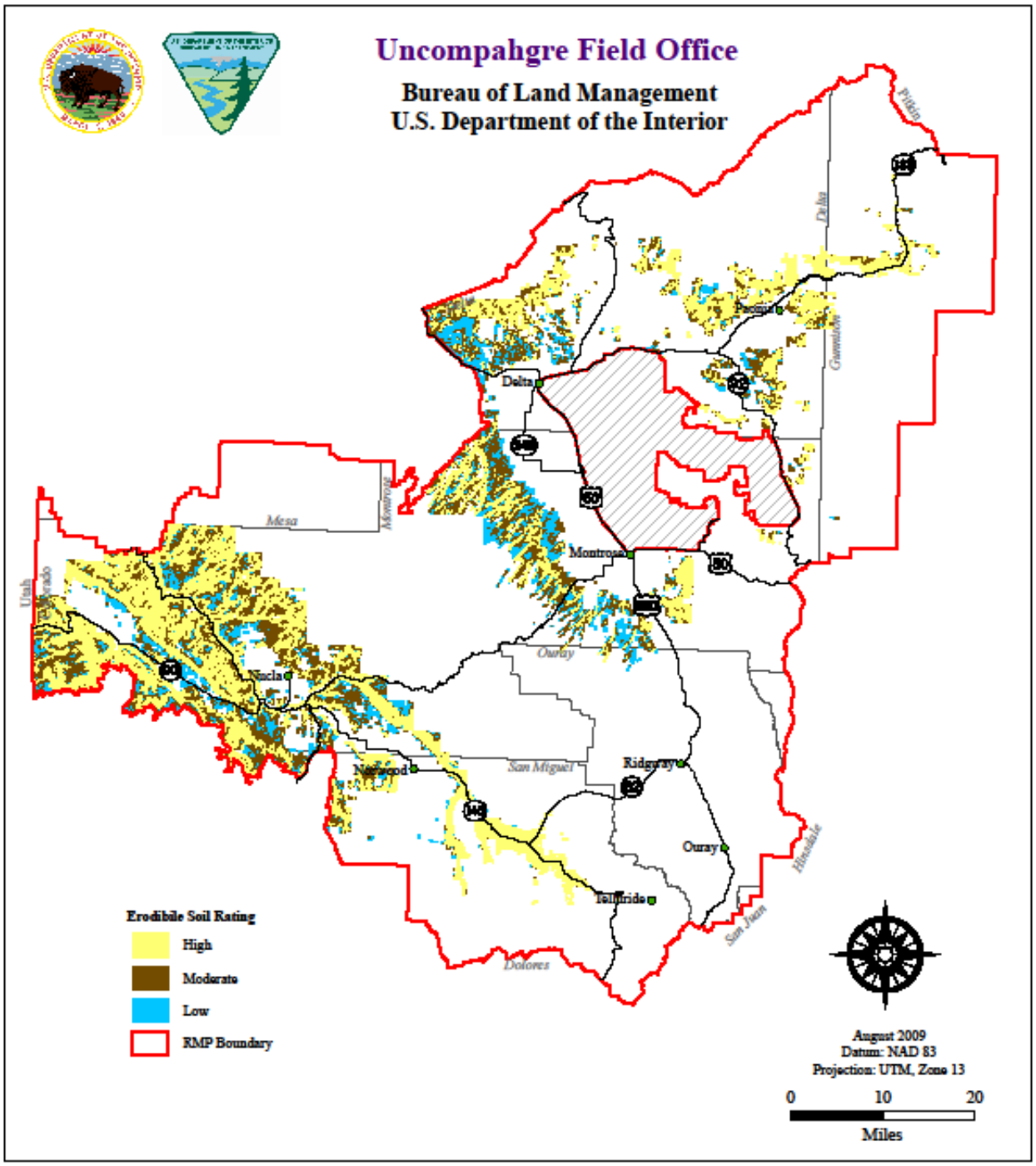
MAP 2-3 BIOTIC SOIL CRUST LOCATIONS IN THE UNCOMPAHGRE PLANNING AREA



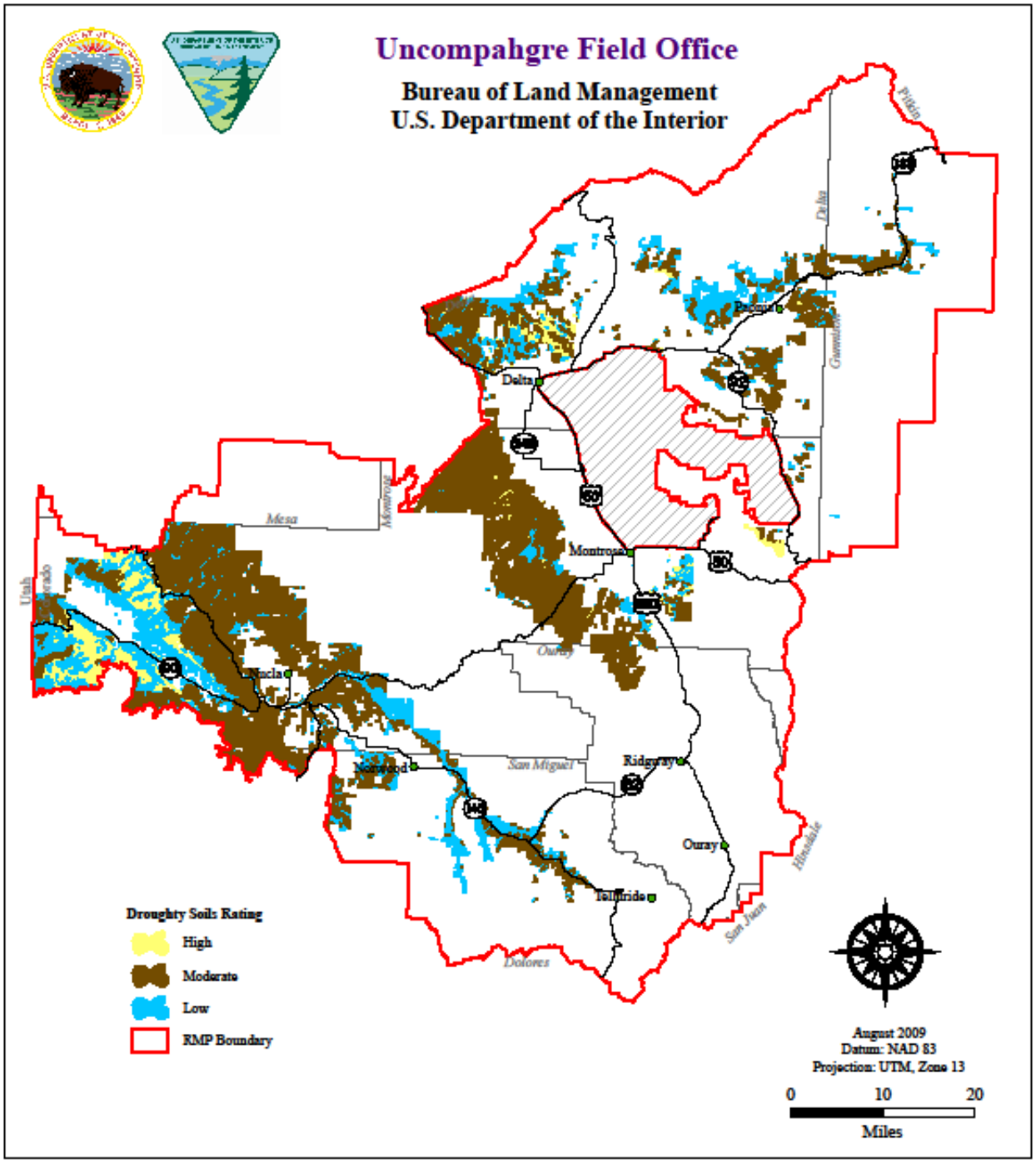
MAP 2-4 SALINE AND SELENIUM ENRICHED SOILS IN THE PLANNING AREA



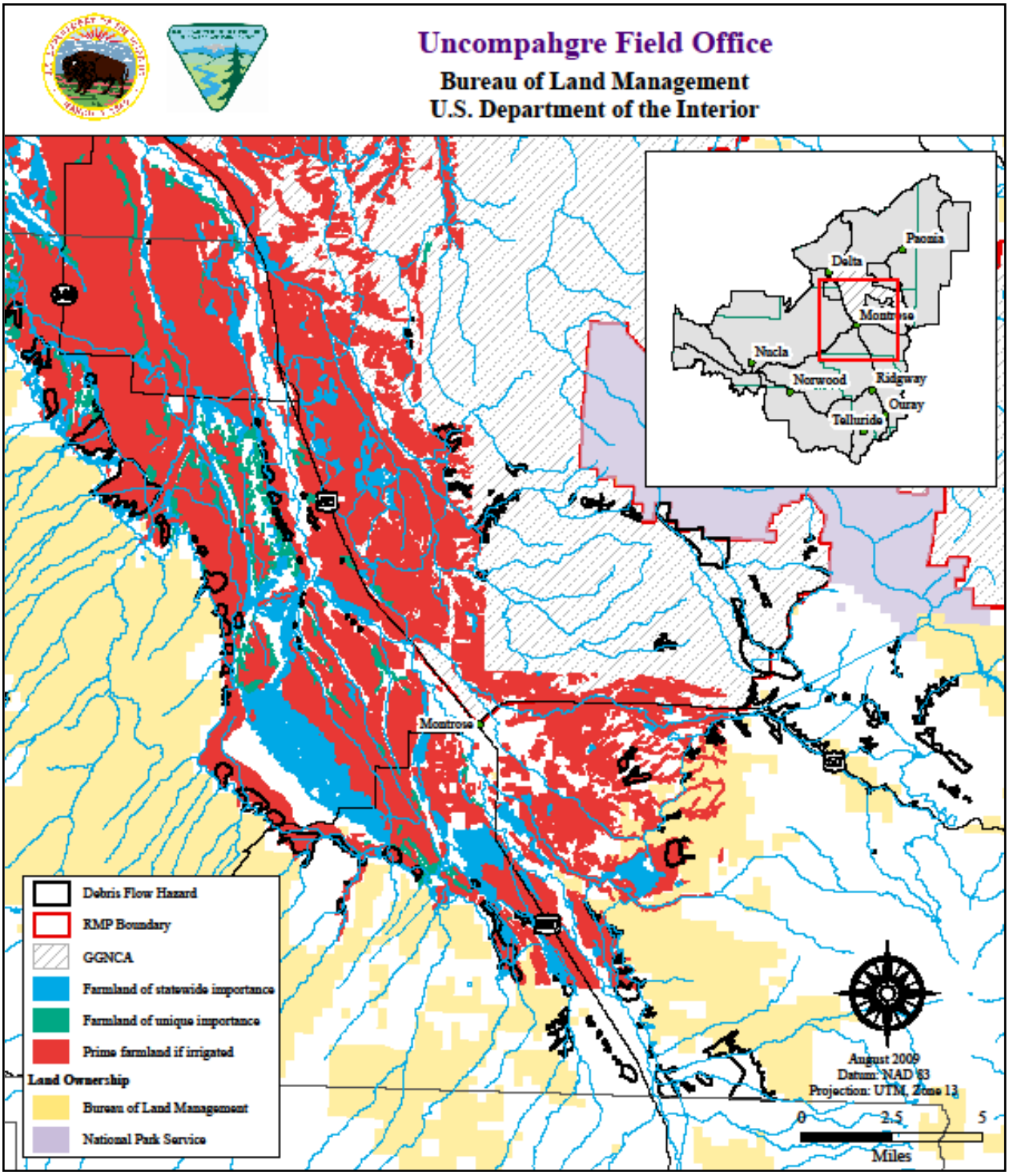
MAP 2-5 WIND EROSION AREAS IN THE UNCOMPAHGRE PLANNING AREA



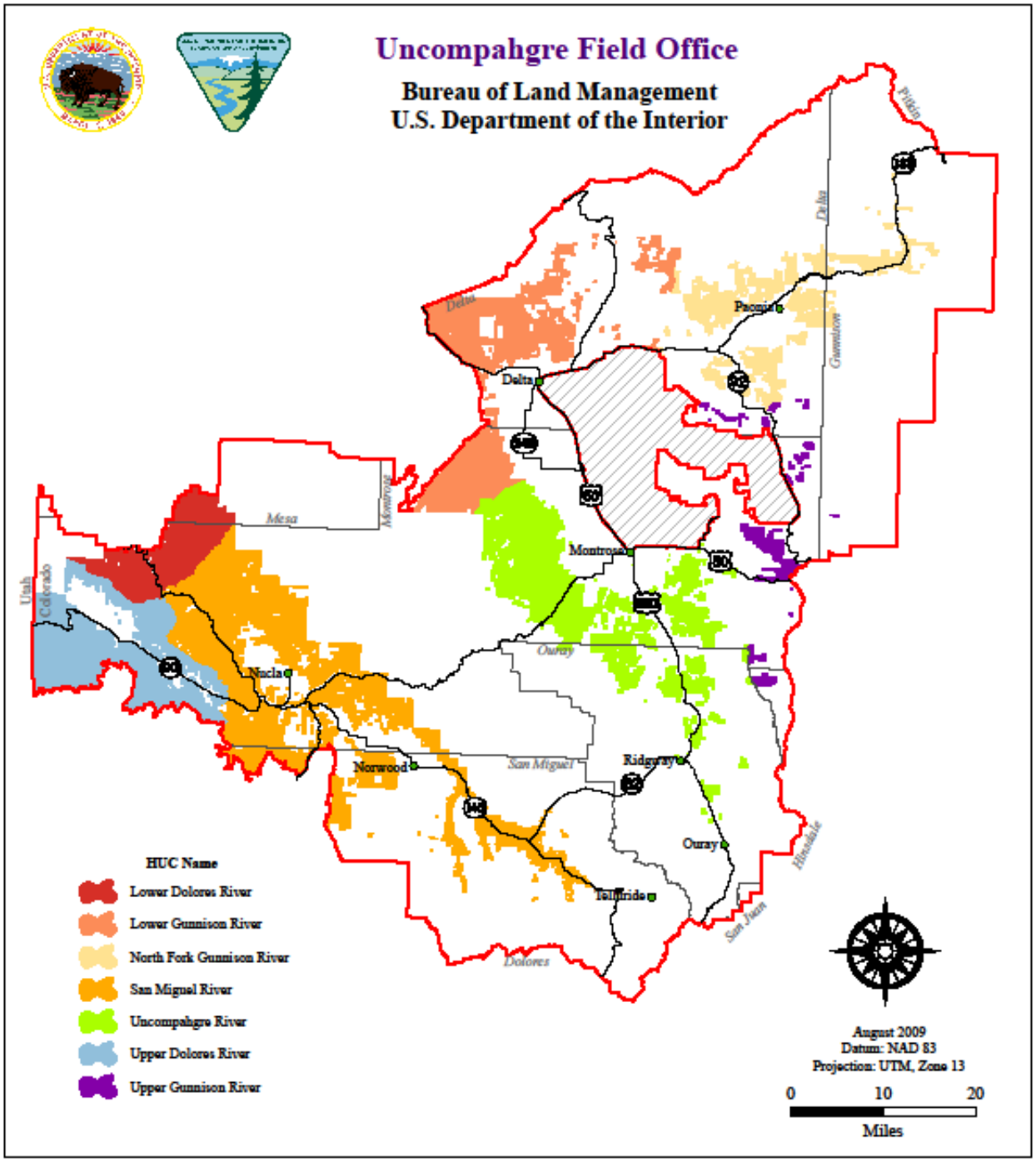
MAP 2-6 SOIL EROSION CAPACITY IN THE UNCOMPAHGRE PLANNING AREA



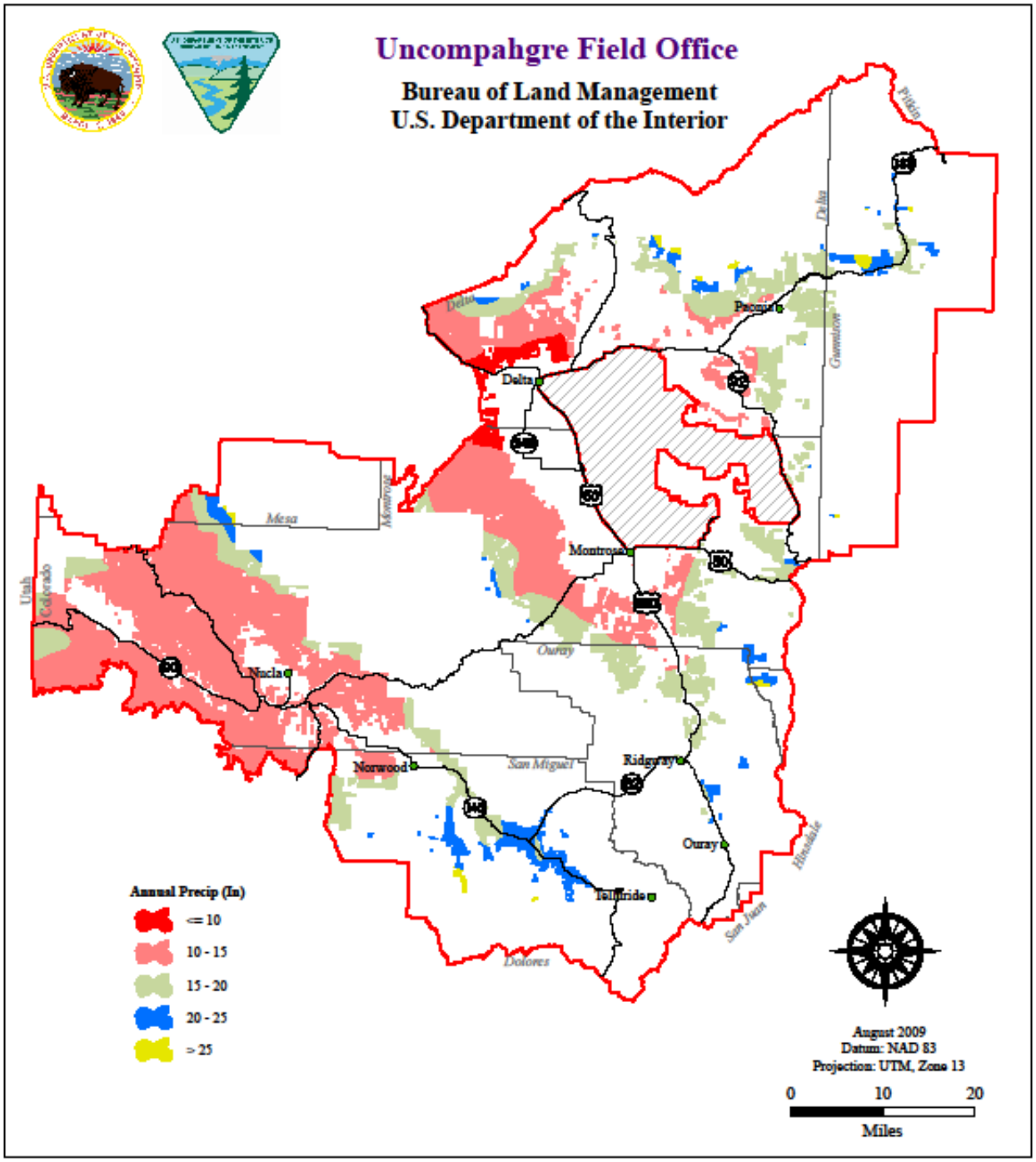
MAP 2-7 DROUGHTY SOIL RATING AREAS IN THE UNCOMPAHGRE PLANNING AREA



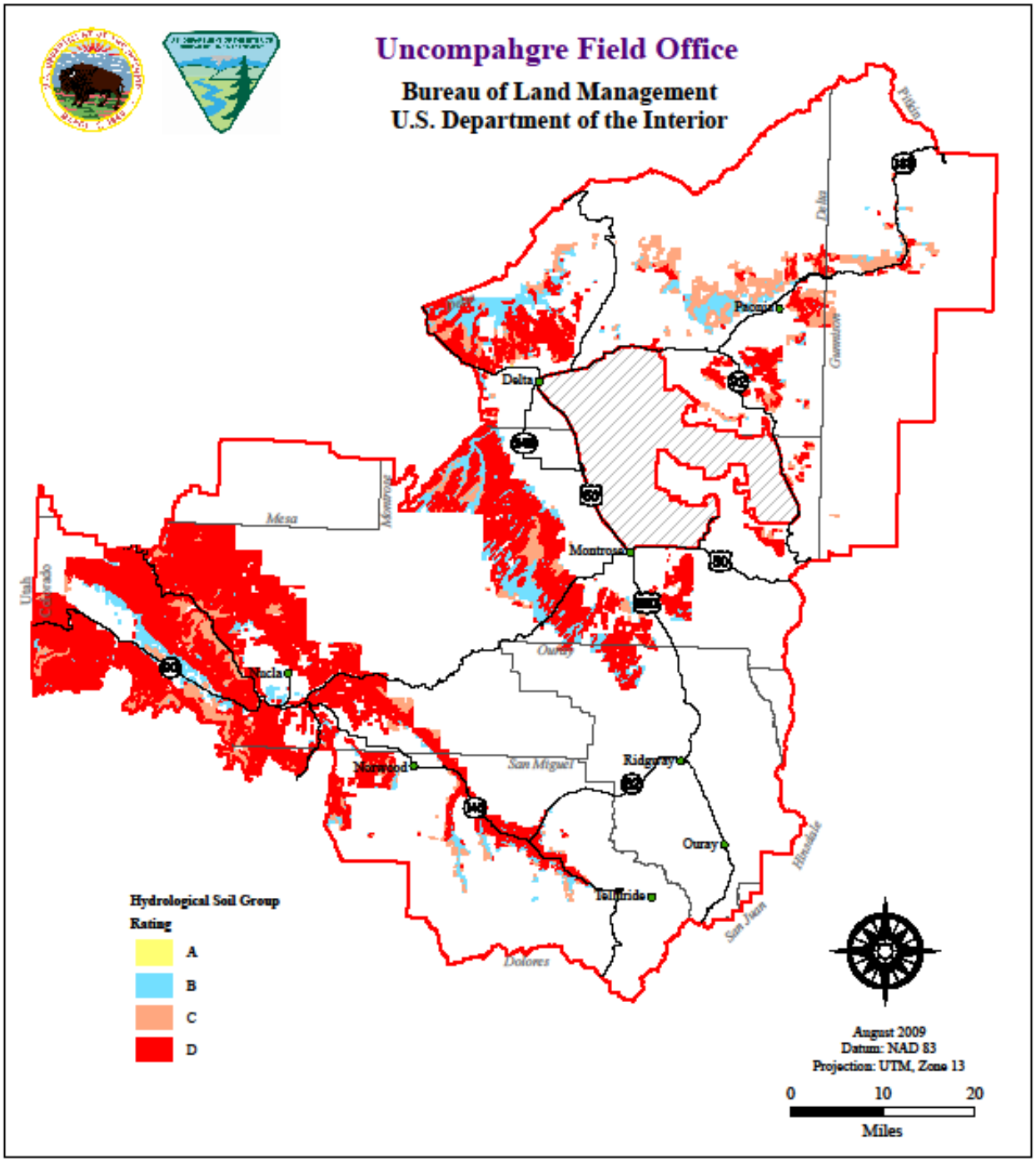
MAP 2-8 FLOOD HAZARD AREAS IN THE UNCOMPAHGRE PLANNING AREA



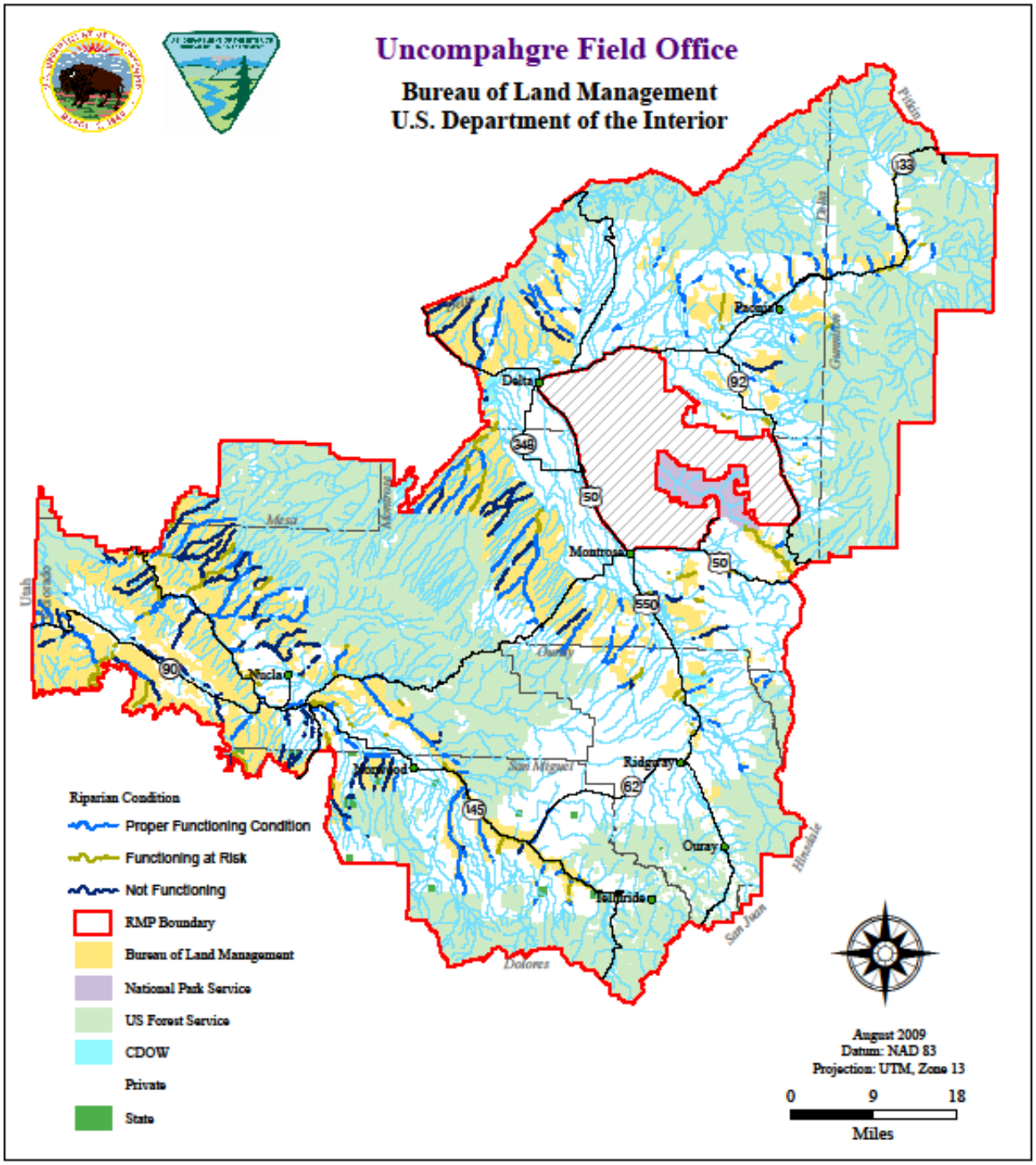
MAP 2-9 MAJOR HYDROLOGIC UNITS IN THE UNCOMPAHGRE PLANNING AREA



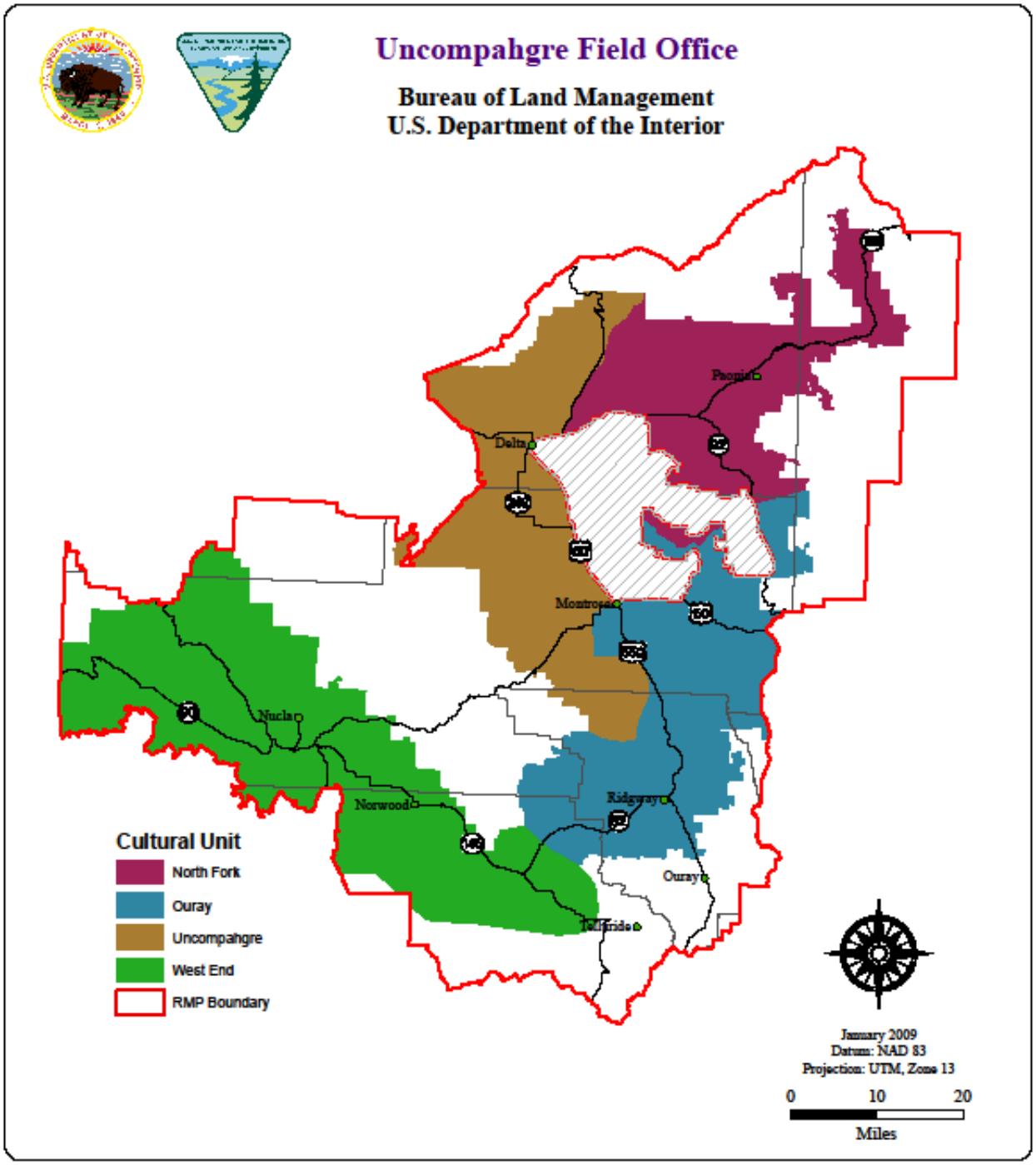
MAP 2-10 ANNUAL PRECIPITATION IN THE UNCOMPAHGRE PLANNING AREA



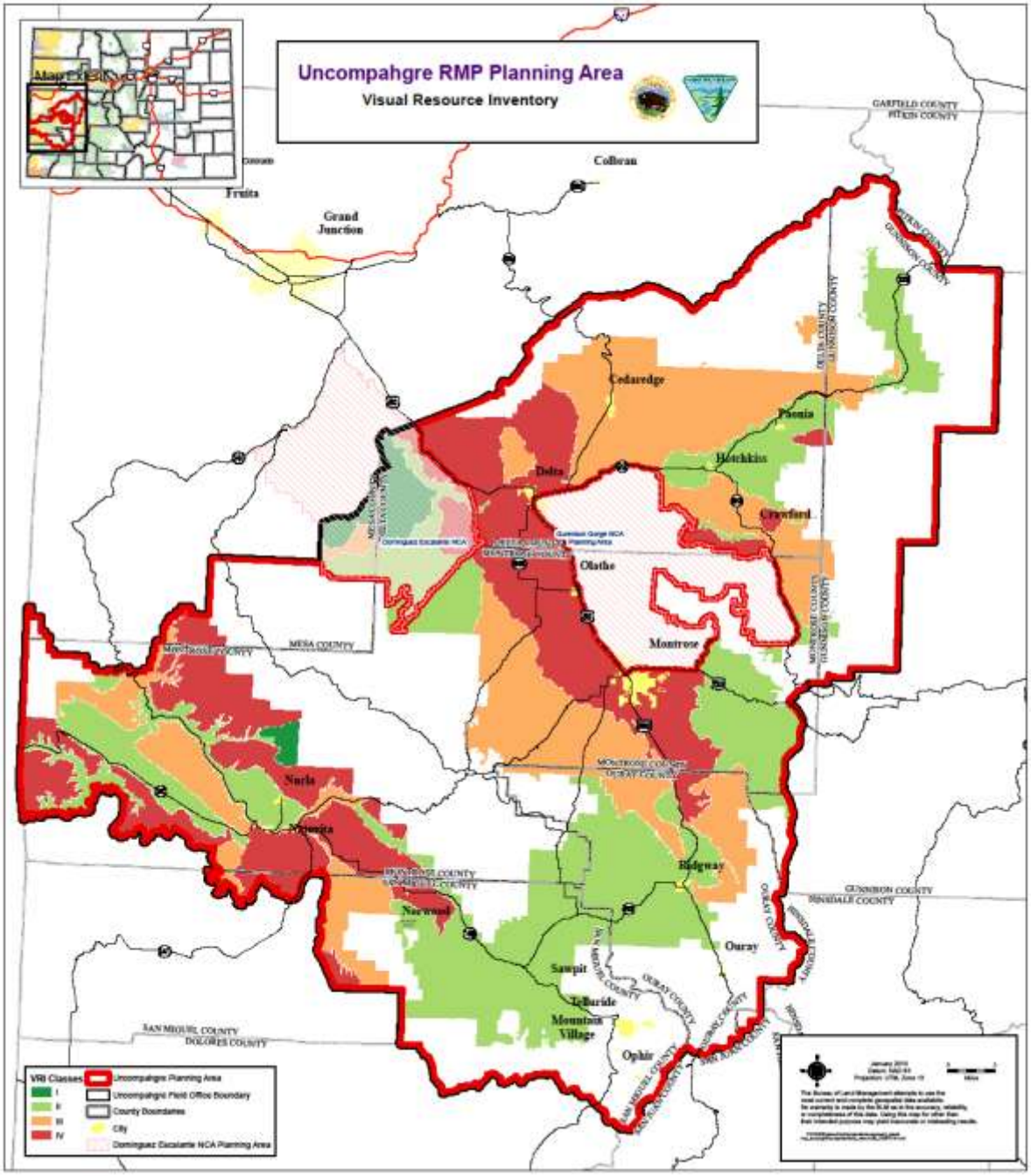
MAP 2-11 DISTRIBUTION OF HYDROLOGIC SOIL GROUPS IN THE PLANNING AREA



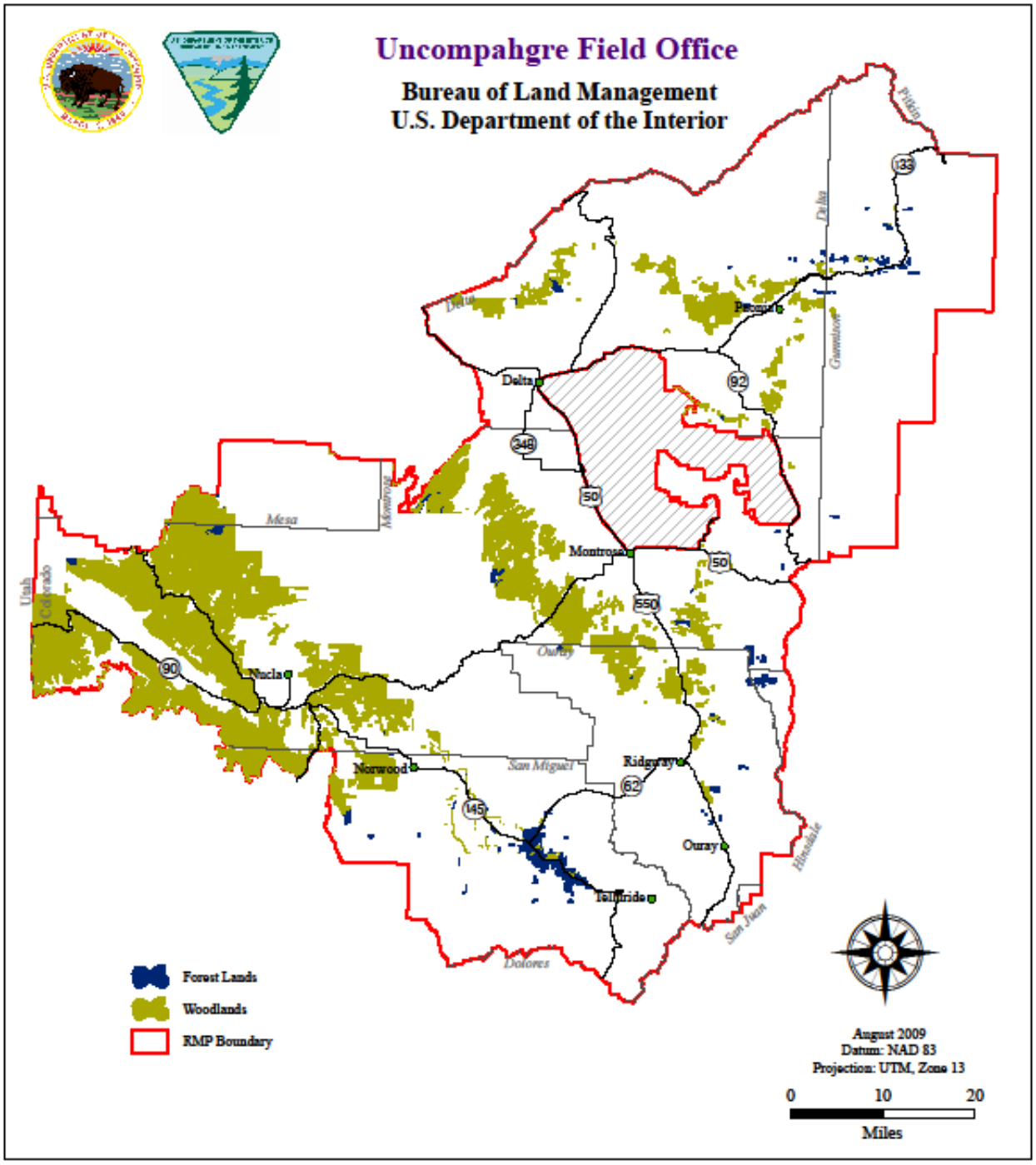
MAP 2-12 RIPARIAN FUNCTIONING CONDITION ASSESSMENT OF THE PLANNING AREA



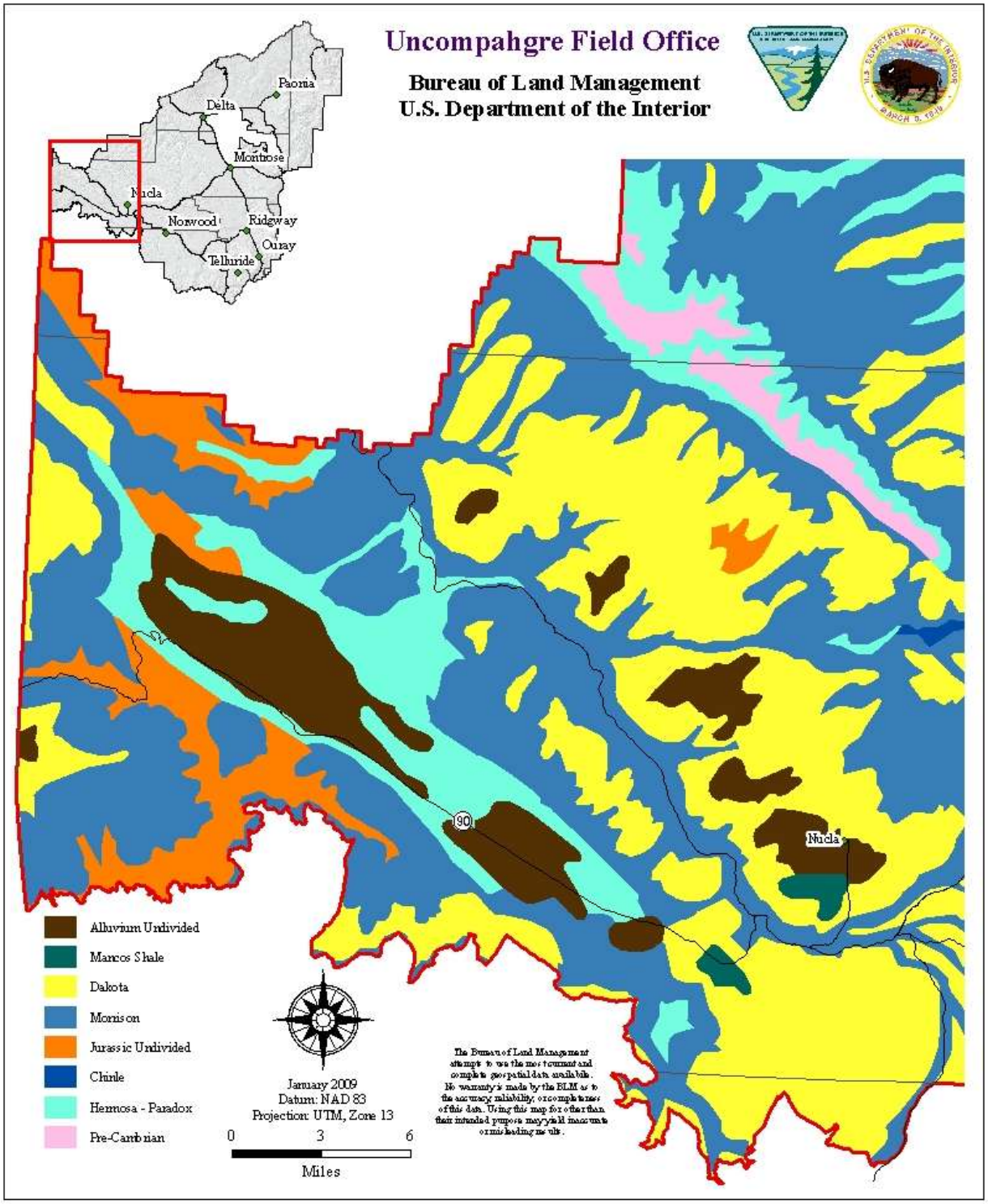
MAP 2-13 CULTURAL RESOURCE UNITS IN THE UNCOMPAHGRE PLANNING AREA



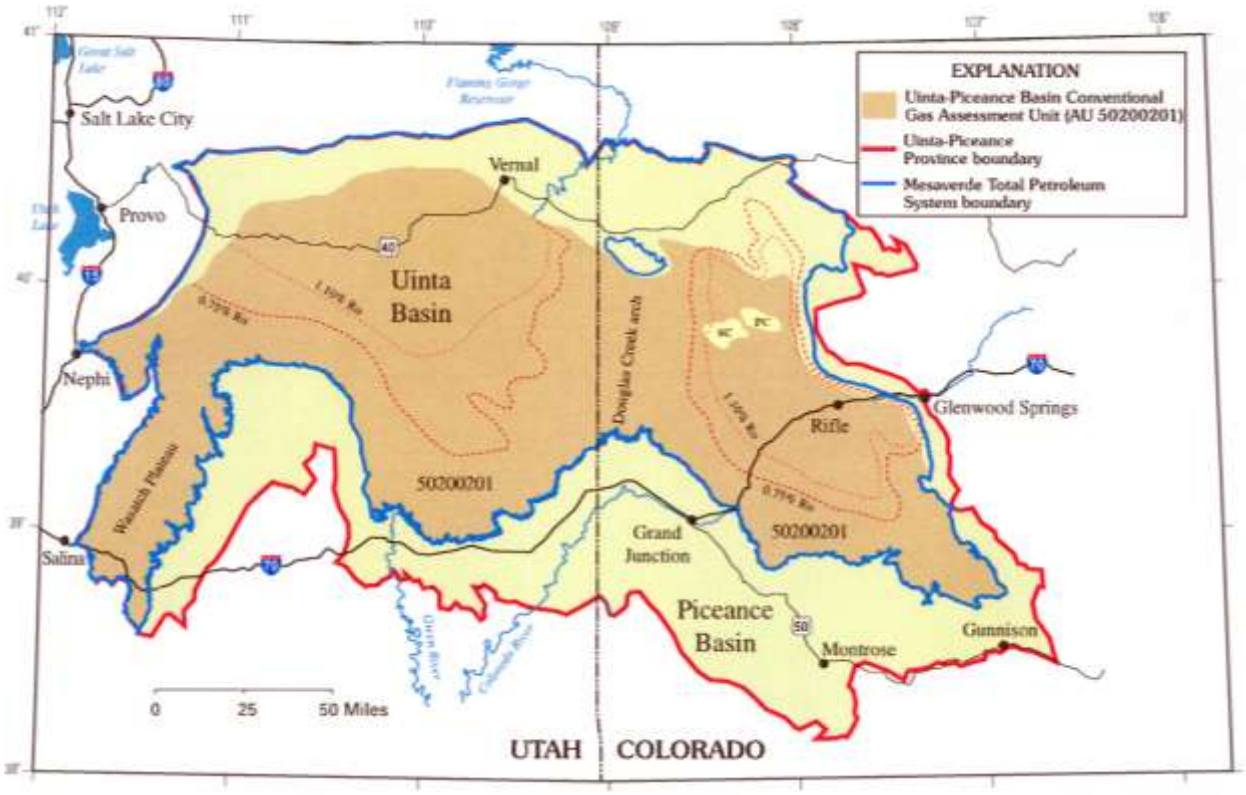
MAP 2-14 VISUAL RESOURCE INVENTORY OF THE UNCOMPAHGRE PLANNING AREA



MAP 2-15 FOREST AND WOODLANDS IN THE UNCOMPAHGRE PLANNING AREA

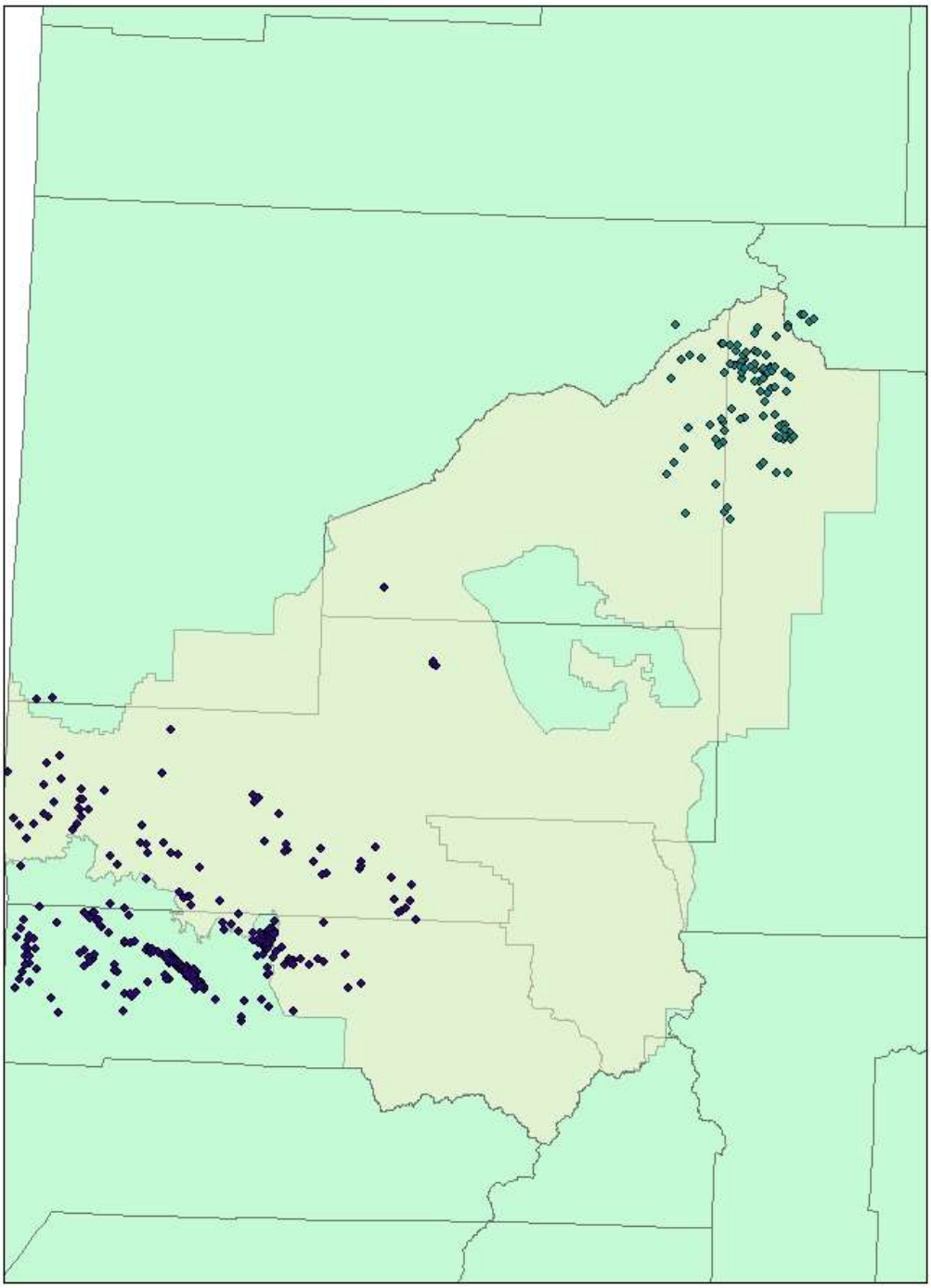


MAP 2-16 GEOLOGY OF THE PARADOX VALLEY URANIUM BELT (URAVAN)



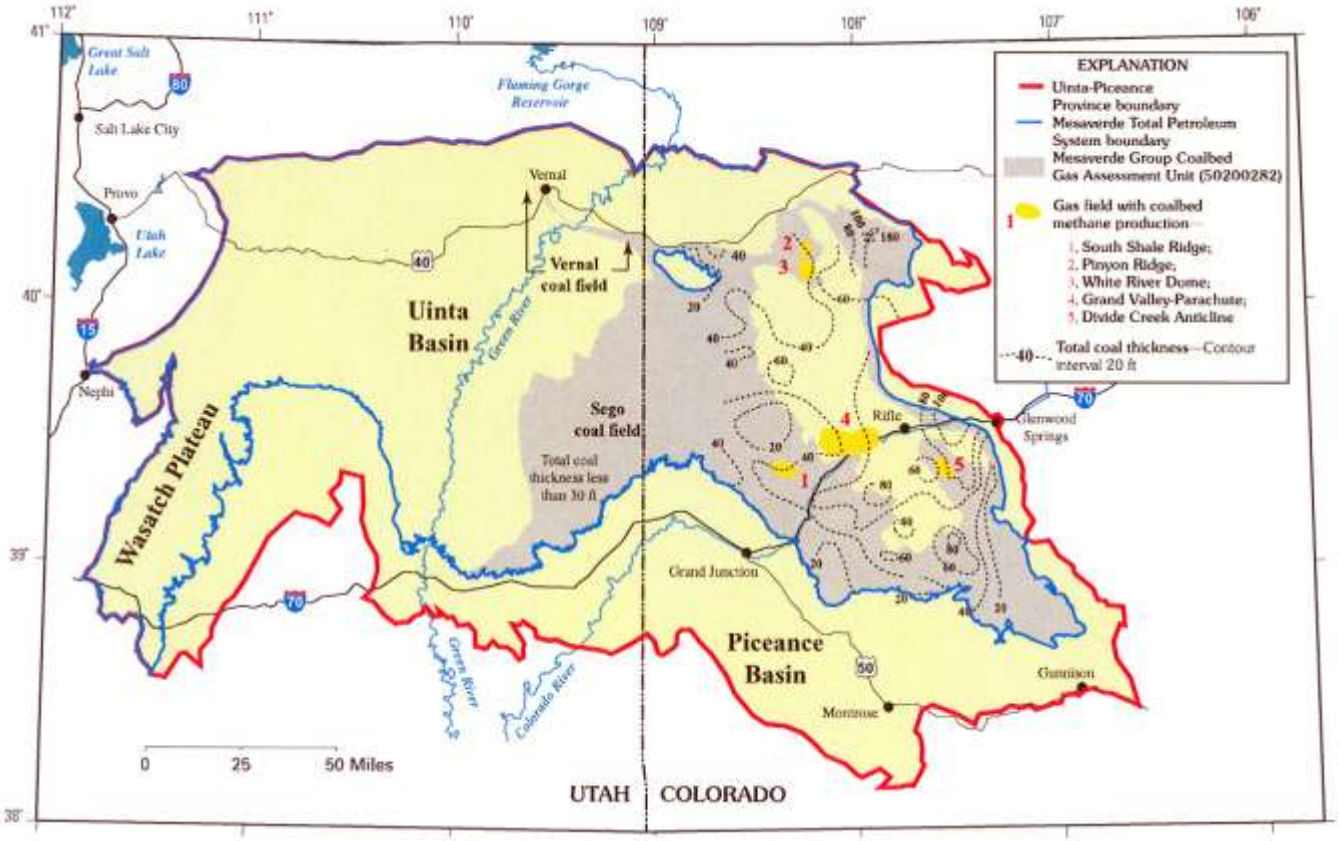
(USGS 2002)

MAP 2-17 PICEANCE BASIN STRUCTURAL GEOLOGY AND MESAVERDE GROUP BOUNDARY

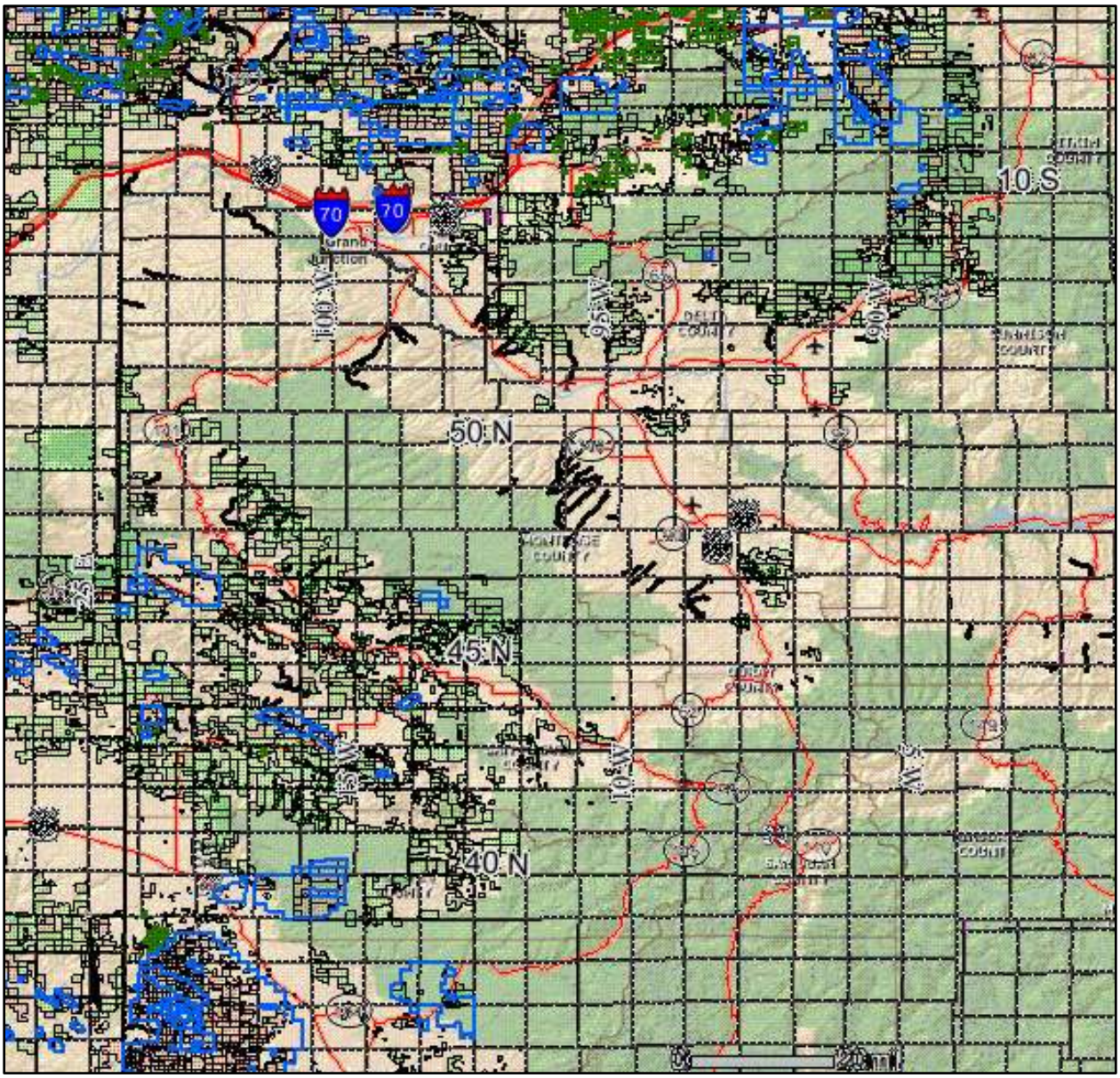


MAP 2-18 OIL AND GAS WELL LOCATIONS IN THE UNCOMPAHGRE PLANNING AREA

- **North Fork Area in upper right**
- **West End Area in lower left**

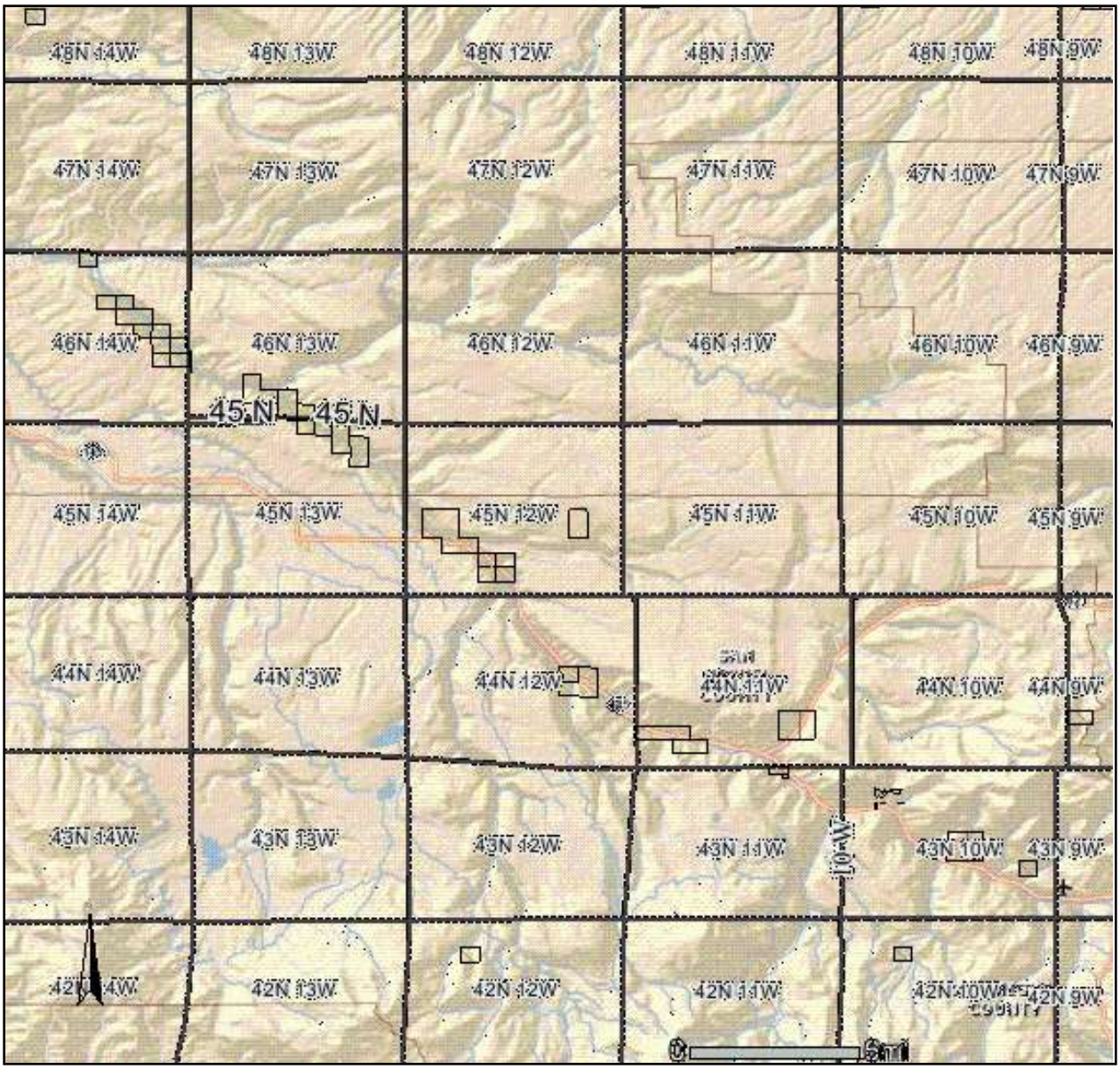


MAP 2-19 MESAVERDE GROUP COAL THICKNESS IN SOUTHERN PICEANCE BASIN

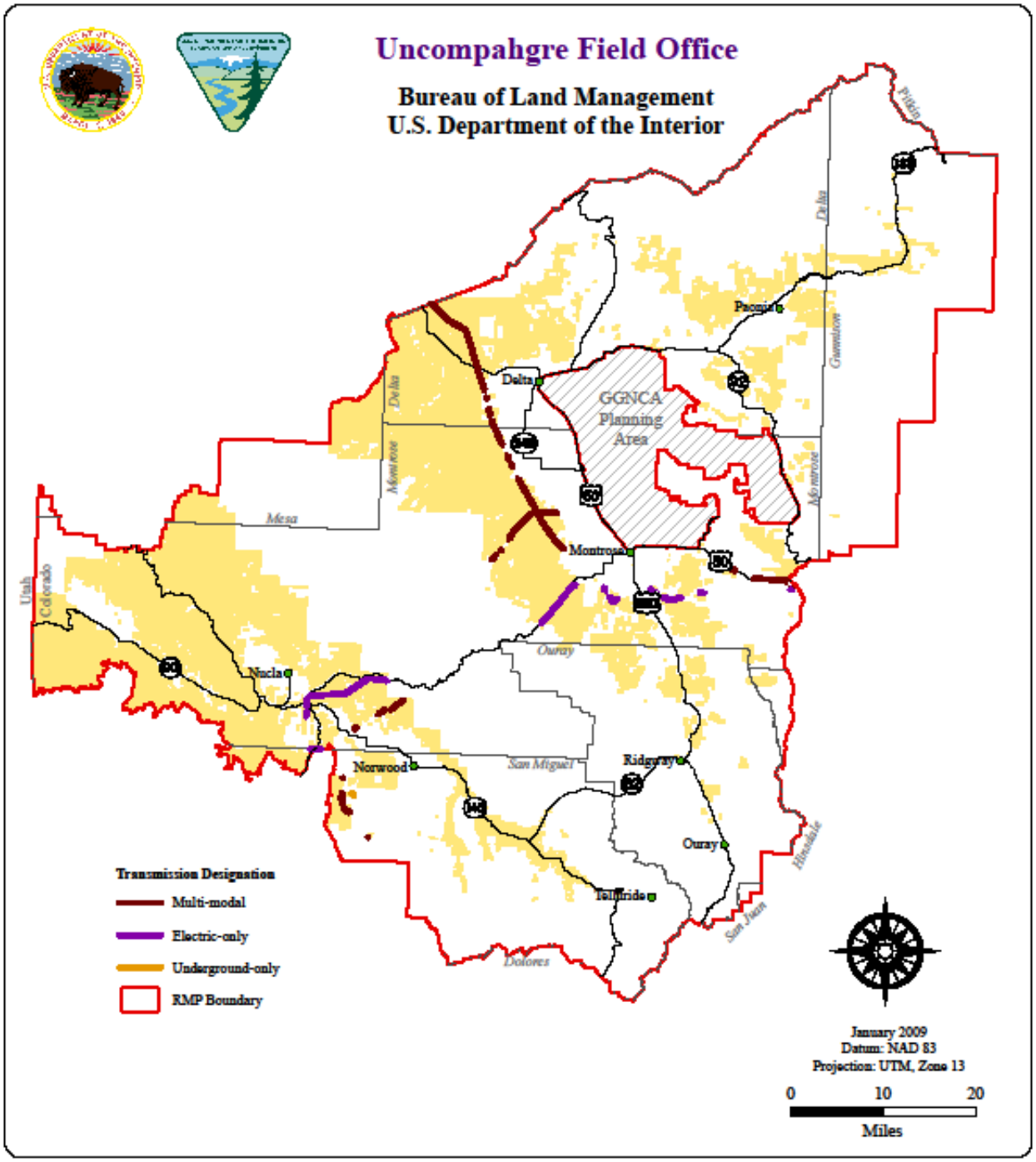


MAP 2-20 OIL AND GAS LEASES IN THE UNCOMPAHGRE PLANNING AREA

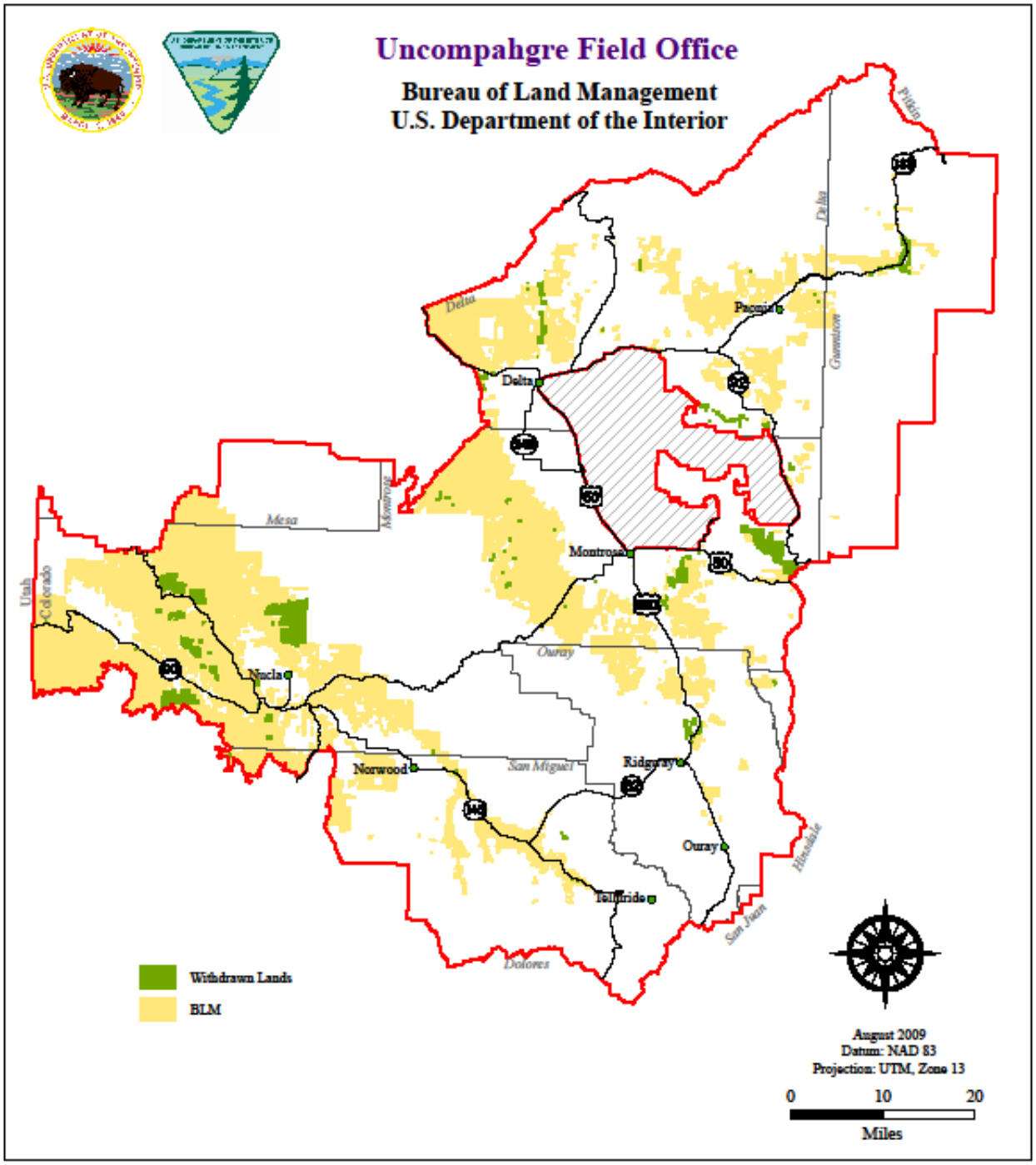
- **Blue = Unit Agreement Areas**
- **Green stippling = Non-producing Leases**
- **Red stippling = Producing Leases**



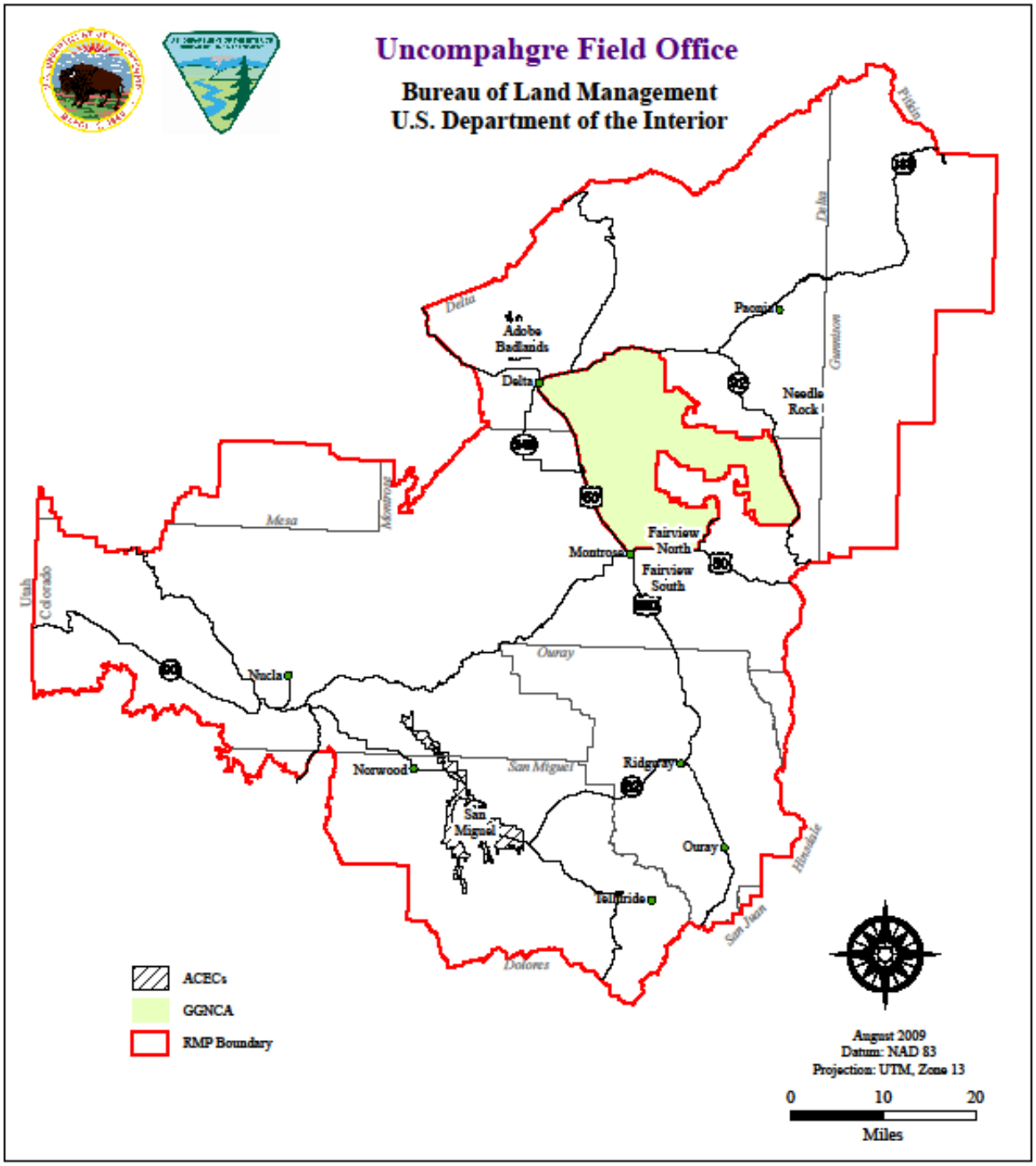
MAP 2-21 PLACER GOLD MINING CLAIM LOCATIONS ALONG THE SAN MIGUEL RIVER (Geocommunicator 2008)



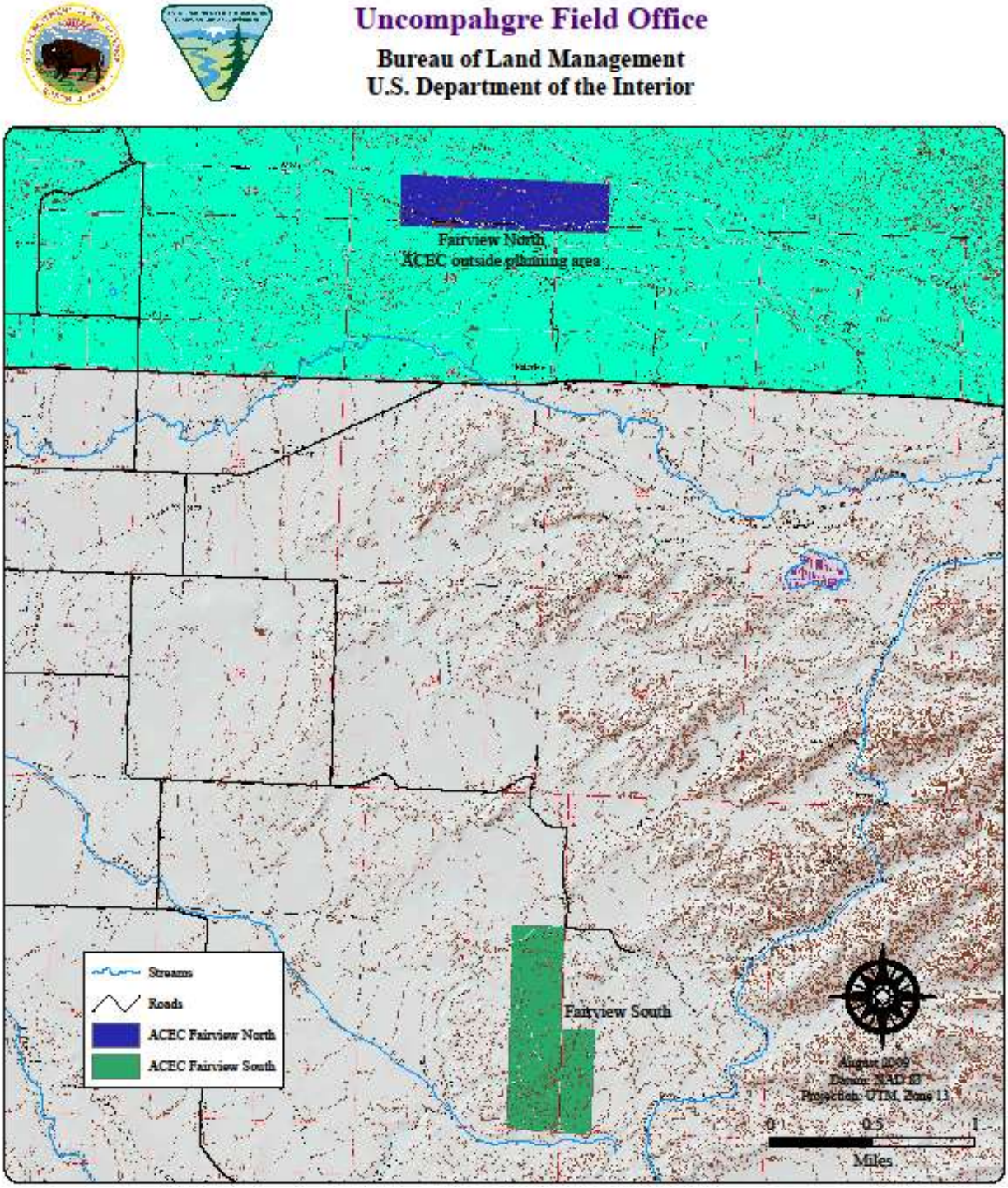
MAP 2-22 WEST-WIDE ENERGY CORRIDOR THROUGH THE PLANNING AREA



MAP 2-23 WITHDRAWN LANDS IN THE UNCOMPAHGRE PLANNING AREA



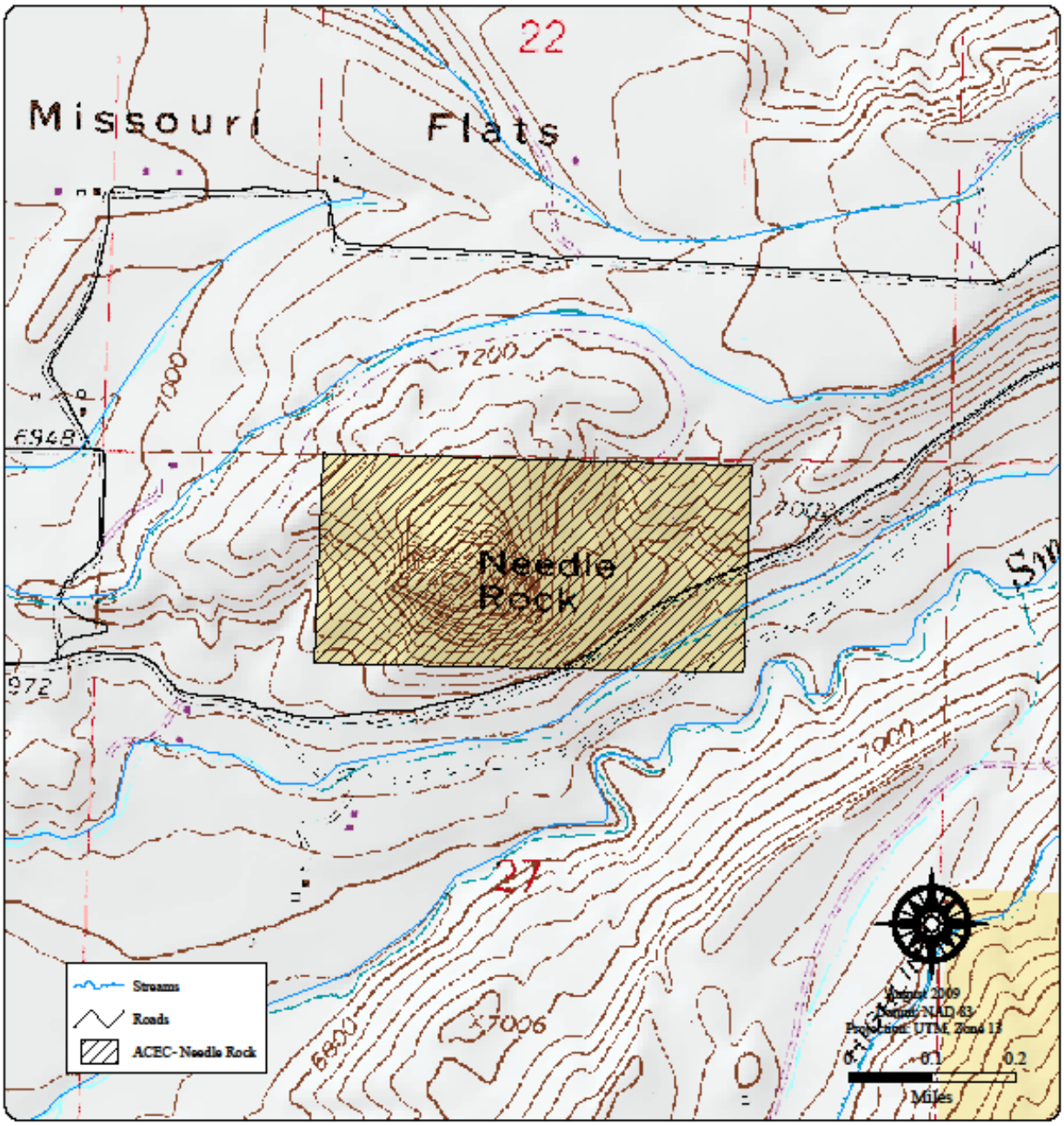
MAP 2-24 ACECS IN THE UNCOMPAHGRE PLANNING AREA



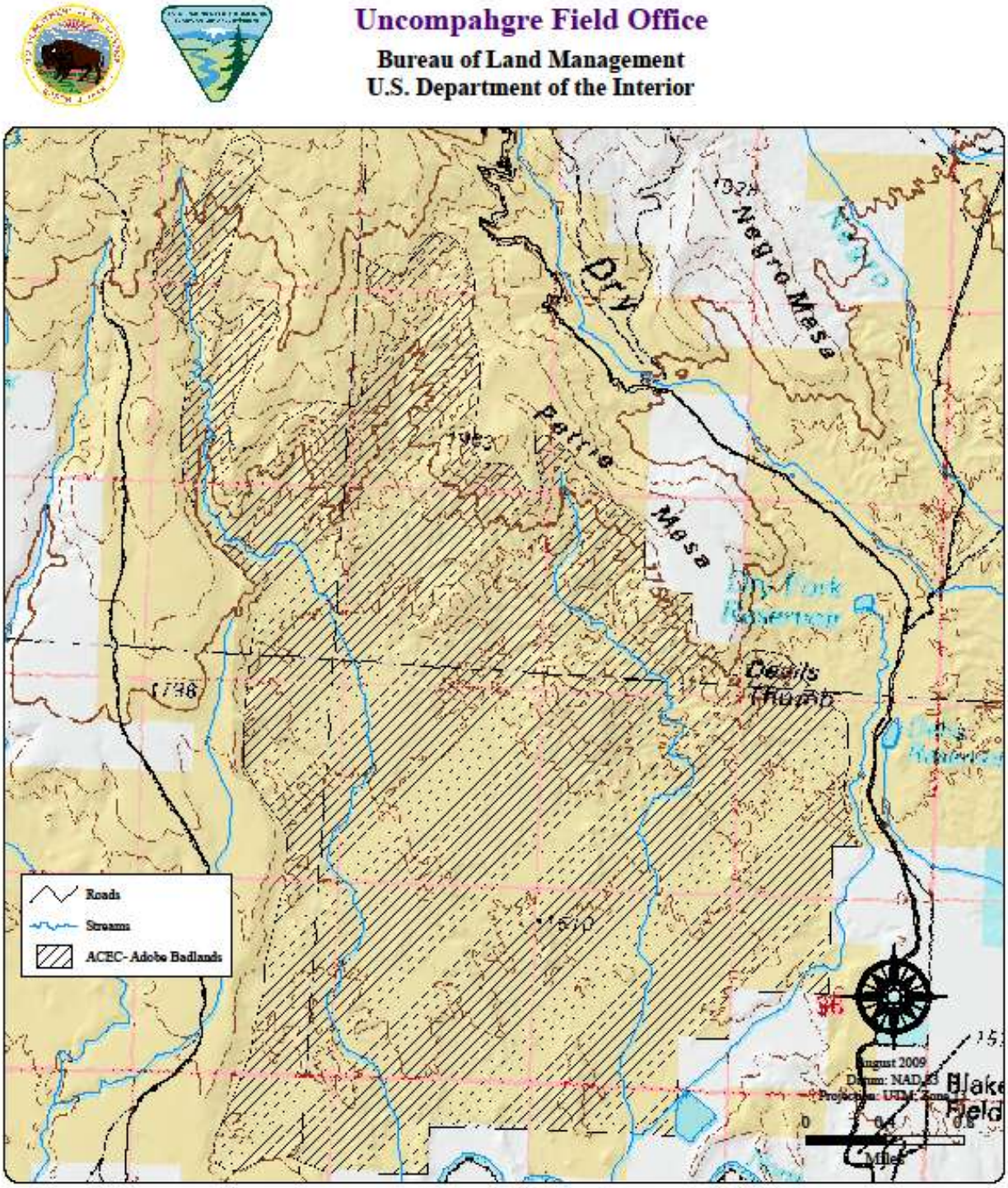
MAP 2-25 FAIRVIEW RESOURCE NATURAL AREA/ACEC

Uncompahgre Field Office

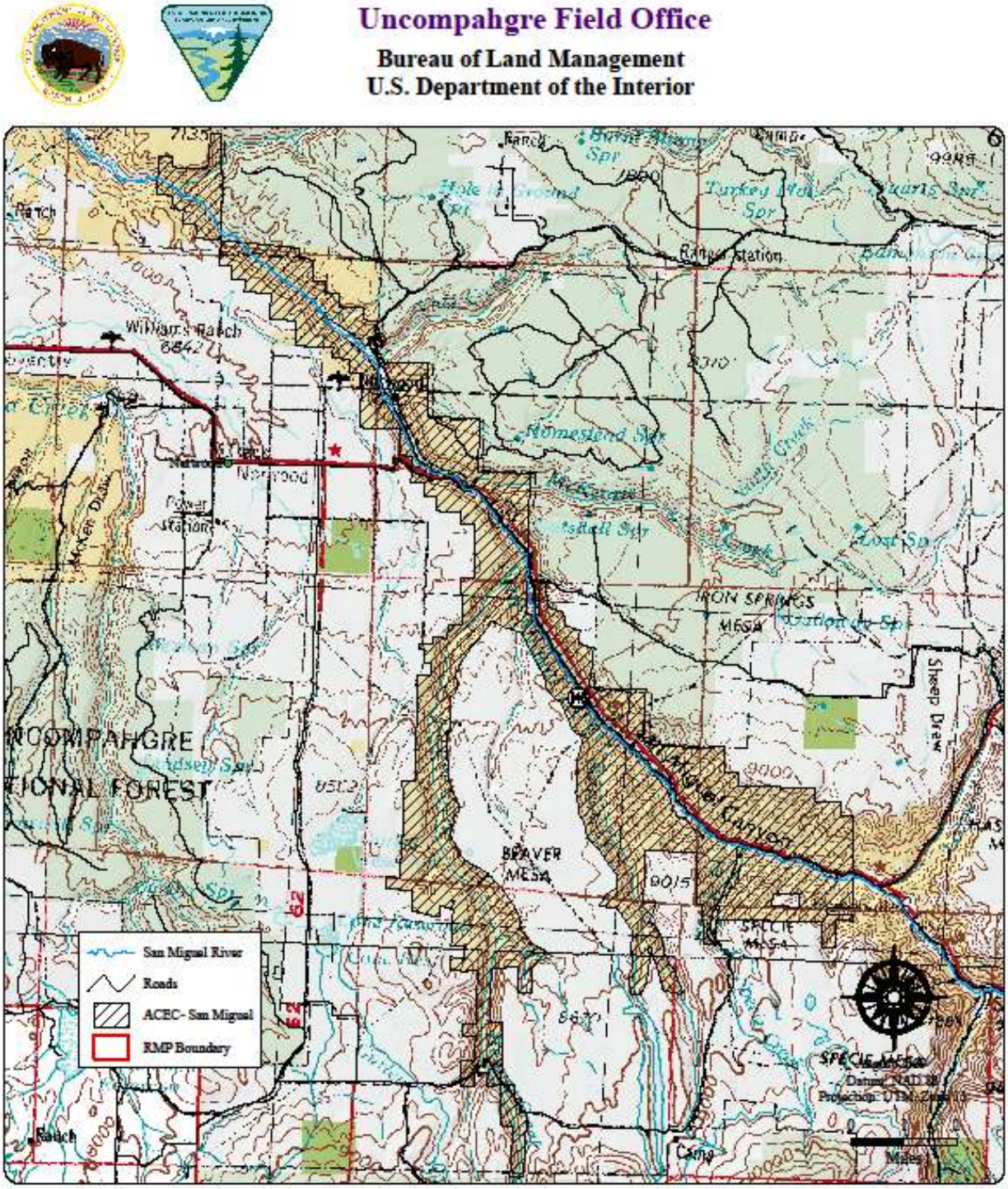
Bureau of Land Management
U.S. Department of the Interior



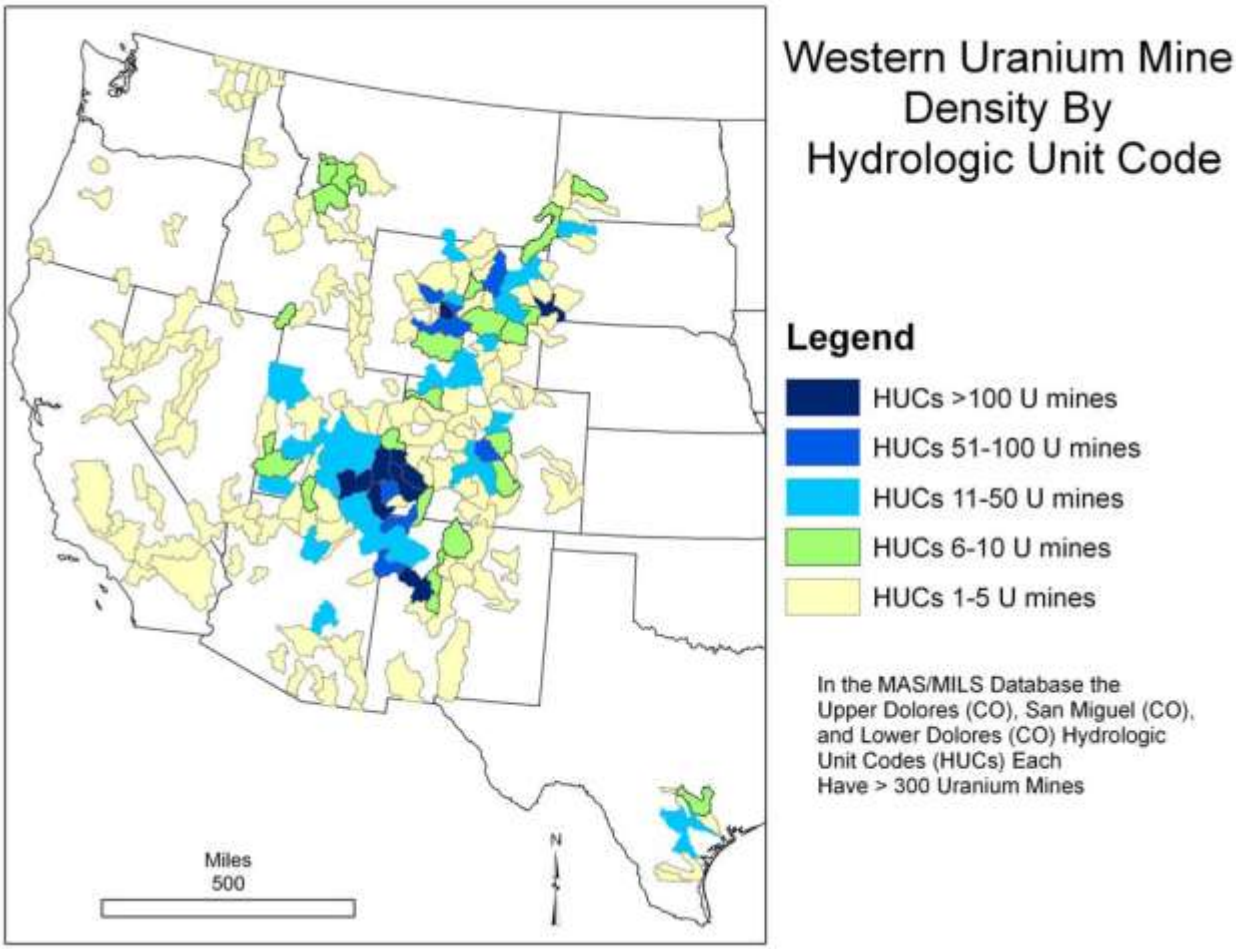
MAP 2-26 NEEDLE ROCK OUTSTANDING NATURAL AREA/ACEC



MAP 2-27 ADOBE BADLANDS OUTSTANDING NATURAL AREA/ACEC



MAP 2-28 SAN MIGUEL ACEC/SPECIAL RECREATION MANAGEMENT AREA



(EPA 2006)

MAP 2-29 DENSITY OF WESTERN URANIUM MINES
(Using MAS/MILS Database Portion of Uranium Location Database)

BLM Uncompahgre Field Office, Colorado

Analysis of the Management Situation for the Uncompahgre Planning Area

June 2010