RECORD OF DECISION AND APPROVED DILLON RESOURCE MANAGEMENT PLAN

February 2006

Dillon Field Office

BLM

The Bureau of Land Management is responsible for the stewardship of our public lands. It is committed to manage, protect, and improve these lands in a manner to serve the needs of the American people for all times. Management is based on the principles of multiple use and sustained yield of our nation's resources within a framework of environmental responsibility and scientific technology. These resources include recreation; rangelands; timber; minerals; watershed; fish and wildlife; wilderness; air; and scenic, scientific, and cultural values.

BLM/MT/PL-06/004

United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Dillon Field Office

1005 Selway Drive

Dillon, Montana 59725

<http://www.mt.blm.gov/dfo>

1610.RMP

February 2006

Dear Reader/Interested Party:

I am pleased to announce that, after several years of collaborative effort, the Dillon Resource Management Plan (RMP) is complete. This document will provide guidance for the management of over 900,000 acres of public land and 1.3 million acres of Federal mineral estate administered by the Bureau of Land Management (BLM) in southwest Montana.

The attached Record of Decision (ROD) and RMP has been prepared in accordance with the Federal Land Policy and Management Act and the National Environmental Policy Act. The document has been sent to members of the public who requested a copy and to pertinent local, State, Tribal and Federal government entities. The ROD links final land use plan decisions to the proposed decisions and analysis presented in the Proposed RMP/Final Environmental Impact Statement (FEIS) that was released in April 2005 and subject to a 30-day protest period that ended on May 31, 2005. Seven protest letters were received. The protests were reviewed by the BLM Assistant Director, Renewable Resources and Planning, in Washington, D.C. After careful consideration of all points raised in these protests, the Assistant Director concluded the responsible planning team and decision makers followed all applicable laws, regulations, policies, and pertinent resource considerations in developing the proposed plan. Minor adjustments or points of clarification incorporated into the RMP in response to issues raised in the protest process and final BLM review are discussed in the ROD under the sections titled *Notice of Modification* and *Clarifications*, but the protest review did not result in any significant changes to the proposed plan.

This ROD serves as the final decision for the land use planning decisions described in the attached Approved RMP. However, the ROD also contains route designations described and mapped as part of the travel management included in the RMP. Route designations are implementation level decisions. Therefore, an appeal opportunity under the Department of Interior's appeal regulations at 43 CFR Part 4 is being provided at this time for the route designations proposed within the RMP. The appeal period will close 30 days from the date the Notice of Availability of the ROD/RMP appears in the *Federal Register*. This date will also be announced via local news releases, on the Dillon RMP website (if operational), and by newsletter mailings. Please review the *Implementation Decisions* section in the ROD carefully for a more detailed discussion of the appeal process.

Additional hard copies and CD-ROM versions of the RMP/ROD may be obtained by contacting the Dillon Field Office at the address above. The document will also be available on the internet at <http://www.mt.blm.gov/dfo/rmp> if and when court orders allow public access to Department of Interior websites.

We are pleased to provide this copy of the Dillon RMP for your reference and extend our appreciation for your cooperation and assistance during this planning process. We look forward to your continued participation as the plan is implemented.

Sincerely,

Tim Bozorth
Dillon Field Manager

12.88063201
0H
76.5
177
D555
200

RECORD OF DECISION AND APPROVED DILLON RESOURCE MANAGEMENT PLAN

February 2006

BUREAU OF LAND MANAGEMENT LIBRARY
BLDG. 50, ST-136
DENVER FEDERAL CENTER
P.O. BOX 25047
DENVER, COLORADO 80225

Prepared by:
U.S. Department of the Interior
Bureau of Land Management
Dillon Field Office
Dillon, Montana

Cooperating Agencies:
Beaverhead County
Madison County

Approved by:

Howard Lemm
Acting State Director, Montana/Dakotas

2/7/06

Date

TABLE OF CONTENTS

Acronyms/Abbreviations	v
------------------------------	---

RECORD OF DECISION

Introduction	1
Results of Protest Review	3
Decision	3
What the Decision/RMP Provides	4
What the Decision/RMP Does Not Provide	4
Implementation Decisions	5
Notice of Modifications	5
Clarifications	6
Overview of the Alternatives	7
The Environmentally Preferred Alternative	8
Management Considerations in Selecting the Approved Plan	8
Mitigation Measures	10
Plan Monitoring	10
Public Involvement	11
Availability of the Plan	11
Recommendation and Approval	11

APPROVED RMP

Introduction	13
Vision	13
Consideration of Other BLM Plans and Policies	13
Plan Implementation	14
General Implementation Schedule of “One-Time” Actions	14
Implementation Updates	14
Maintaining the Plan	15
Changing the Plan	15
Plan Evaluation and Adaptive Management	15
Plan Evaluation	15
Adaptive Management	15
Management Decisions	17
Abandoned Mine Lands	17
Air Quality	17
Areas of Critical Environmental Concern (ACECs)	17
Beaverhead Rock ACEC	19
Block Mountain ACEC	20
Blue Lake ACEC	20
Centennial Mountains ACEC	22
Everson Creek ACEC	22
Muddy Creek/Big Sheep Creek ACEC	23
Virginia City Historic District ACEC	24
Back Country Byways	24
Cultural Resources	24
Economic Conditions	26
Environmental Justice	27
Fire and Fuels Management	27
Fish and Special Status Fish	29
Forest and Woodland Vegetation and Forest Products	31

Geologic Resources	35
Hazardous Materials	35
Indian Trust Resources	36
Lands and Realty	36
Land Use Authorizations	36
Land Ownership Adjustment	38
Access	40
Withdrawals	41
Livestock Grazing	41
Minerals	43
Leasable	43
Locatable	46
Saleable/Mineral Materials	48
National Trails	48
Noxious Weeds, Invasive, and Non-Native Species	49
Paleontological Resources	50
Rangeland Vegetation	50
Recreation	51
Renewable Energy	54
Riparian and Wetland Vegetation	55
Social Conditions	57
Soils	57
Special Status Plants	57
Transportation and Facilities	59
Travel Management and OHV Use	60
Tribal Treaty Rights	63
Utility and Communication Corridors	63
Vegetation (see Forest and Woodland, Invasive Species, Rangeland or Riparian and Wetland Vegetation sections)	
Visual Resources	65
Water	66
Wild and Scenic Rivers	67
Wild Horses and Burros	67
Wilderness	67
Wilderness Study Areas	67
Wildlife and Special Status Birds and Mammals	68
List of Preparers	75
References Cited	77
Glossary	79
List of Tables	
Table 1: Surface Ownership/Administration of Lands in Beaverhead and Madison Counties	1
Table 2: Federal Minerals within the Dillon Field Office included in RMP Decisions	3
Table 3: Summary of Management Constraints in ACECs	18
Table 4: Communication Sites, Locations and Designated Use Categories	36
Table 5: Oil and Gas Lease Terms and Stipulations	44
Table 6: Recreational Emphasis by Special Recreation Management Area	53
Table 7: Communication Sites, Locations and Designated Use Categories	64
Table 8: Visual Resource Management Class Objectives	65
List of Figures	
Figure 1: Four Step Implementation Process	16
Figure 2: Relationship of Wildfire, Prescribed Fire, and Wildland Fire Use as part of overall Wildland Fire	27
Figure 3: Forest Structure Distribution of Major Species Groups in the Planning Area	32

List of Appendices

Appendix A:	Western Montana Standards for Rangeland Health and Guidelines for Livestock Grazing	97
Appendix B:	Best Management Practice References	105
Appendix C:	Cultural Resource Use Categories	107
Appendix D:	Fire Management Zone Descriptions	109
Appendix E:	Emergency Stabilization and Rehabilitation Procedures after Wildland Fire	117
Appendix F:	Biological Evaluation Form	121
Appendix G:	Conservation Actions for Westslope Cutthroat Trout	127
Appendix H:	Acquisition Criteria	129
Appendix I:	Public Lands Available for Disposal (Category 3)	131
Appendix J:	Existing Withdrawal Descriptions	133
Appendix K:	Oil and Gas Stipulations and Lease Notices	137
Appendix L:	Bureau of Reclamation Lease Notice and Stipulations	151
Appendix M:	Procedures in Oil and Gas Recovery	155
Appendix N:	Standard Operating Procedures for Mineral Material Sites	169
Appendix O:	BLM Road and Trail Maintenance Levels	171
Appendix P:	Motorized Route Designation Principles	173
Appendix Q:	Management of Wilderness Study Areas if Released	175
Appendix R:	Migratory Bird Conservation	177
Appendix S:	Threatened or Endangered Species Screening Process	179
Appendix T:	Bald Eagle Project Screening Elements and Determinations	181
Appendix U:	Gray Wolf Project Screening Elements and Determinations	185
Appendix V:	Grizzly Bear Management	187
Appendix W:	Lynx Management	197
Appendix X:	Sage Grouse Management	207
Appendix Y:	Tentative Implementation Schedule	221
Appendix Z:	Plan Maintenance Roster	225
Appendix AA:	Plan Monitoring Roster	227

List of Maps

With the exception of Map 1 on page 2, all maps are included at the back of the document

Map 1:	General Location of the Planning Area
Map 2:	Land Status in the Planning Area (oversize)
Map 3:	Designated ACECs
Map 4:	Beaverhead Rock ACEC
Map 5:	Block Mountain ACEC
Map 6:	Blue Lake ACEC
Map 7:	Centennial Mountains ACEC
Map 8:	Centennial Sandhills ACEC
Map 9:	Everson Creek ACEC
Map 10:	Muddy Creek/Big Sheep Creek ACEC
Map 11:	Virginia City Historic District ACEC
Map 12:	Back Country Byways and National Trails
Map 13:	Fire Management Zones and Category Designations
Map 14:	Class I (Blue Ribbon), Westslope Cutthroat Trout, and Arctic Grayling Streams (oversize)
Map 15:	Priority Treatment Areas and Vegetation Habitat Types (oversize)
Map 16:	Existing and Proposed Withdrawal Areas (oversize)
Map 17:	Designated Utility Corridors and Use Areas, Existing Communication Sites, and Right-of-Way Avoidance and Exclusion Areas
Map 18:	Land Adjustment Category Designations (oversize)
Map 19:	Grazing Availability and Allotments (oversize)
Map 20:	Watershed Assessment Schedule
Map 21:	Oil and Gas Leasing Availability (oversize)
Map 22:	Mineral Material Areas
Map 23:	Special Recreation Management Areas (SRMAs)
Map 24:	Developed Recreation Sites

Map 25:	Outfitter Permit Areas (OPAs)
Map 26:	Motorized Route Designations—East Half (oversize)
Map 27:	Motorized Route Designations—West Half (oversize)
Map 28:	Areas Closed to Motorized Travel
Map 29:	Snowmobile Restrictions
Map 30:	Visual Resource Management (VRM) Designations
Map 31:	Designated Wilderness and Wilderness Study Areas
Map 32:	Raptor Management Areas
Map 33:	Wildlife Dispersal/Migration Corridors
Map 34:	Grizzly Bear Areas
Map 35:	Bighorn Sheep Occupied Habitat
Map 36:	Centennial Valley Wetland and Waterfowl Production Areas

ACRONYMS

ACEC	Area of Critical Environmental Concern	MCA	Montana Code Annotated
AML	Abandoned Mine Lands	MCC	Montana Consensus Council
AMP	Allotment Management Plan	MCF	Thousand Cubic Feet
ARS	Agricultural Research Service	MFP	Management Framework Plan
AUM	Animal Unit Month	MIST	Minimum Impact Suppression Tactics
BCR	Bird Conservation Region	MMBF	Million Board Feet
BDNF	Beaverhead-Deerlodge National Forest	MMCF	Million Cubic Feet
BFO	Butte Field Office	MOU	Memorandum of Understanding
BLM	Bureau of Land Management	MRWA	Montana Riparian-Wetland Association
BMP	Best Management Practice	NE	No Effect
BOR	Bureau of Reclamation	NEPA	National Environmental Policy Act
C&MU	Classification and Multiple Use	NF	Non Functional
CDT	Continental Divide Trail	NLAA	Not Likely to Adversely Affect
CEQ	Council on Environmental Quality	NOI	Notice of Intent
CFR	Code of Federal Regulations	NPS	National Park Service
CRMW	Center for the Rocky Mountain West	NRCS	Natural Resources and Conservation Service (formerly Soil Conservation Service)
DEQ	Department of Environmental Quality		
DFC	Desired Future Condition		
DFO	Dillon Field Office	NRHP	National Register of Historic Places
DNRC	Department of Natural Resources Conservation	NWR	National Wildlife Refuge
DOI	Department of the Interior	OHV	Off-highway vehicle
EE/CA	Engineering Evaluation/Cost Analysis	OPA	Outfitter Permit Area
EIS	Environmental Impact Statement	ORV	Outstandingly remarkable value
EO	Executive Order	PFC	Proper Functioning Condition
EPA	Environmental Protection Agency	PRP	Potentially Responsible Party
ESA	Endangered Species Act	PSQ	Probable Sale Quantity
ESR	Emergency Site Rehabilitation	R&PP	Recreation and Public Purposes
FACA	Federal Advisory Committee Act	RAC	Resource Advisory Council
FAR	Functioning-at-Risk	RMP	Resource Management Plan
FLPMA	Federal Land Management Policy Act	ROD	Record of Decision
FMZ	Fire Management Zone	ROW	Right-of-way
FO	Field Office	SHPO	State Historic Preservation Office
FORVIS	Forest Vegetation Inventory System	SMZ	Streamside Management Zone
FS	Forest Service	SO	State Office
FTE	Full Time Equivalent	SRMA	Special Recreation Management Area
FWP	Fish, Wildlife and Parks	SSS	Special Status Species
HMP	Habitat Management Plan	TMDL	Total Maximum Daily Load
IB	Information Bulletin	USDA	United States Department of Agriculture
IDT/ID Team	Interdisciplinary Team	USDI	United States Department of the Interior
IGBC	Interagency Grizzly Bear Committee	USFWS	United States Fish and Wildlife Service
IM	Instruction Memorandum	VRM	Visual Resource Management
IMP	Interim Management Policy (for WSAs)	WCT	Westslope Cutthroat Trout
KGRA	Known Geothermal Resource Area	WFSA	Wildland Fire Situation Analysis
LAA	Likely to Adversely Affect	WMZ	Western Montana Zone
LAU	Lynx Analysis Unit	WO	Washington Office
LWCF	Land and Water Conservation Fund	WSA	Wilderness Study Area
MBF	Thousand Board Feet	WUI	Wildland Urban Interface
MBMG	Montana Bureau of Mines and Geology	WQRP	Water Quality Restoration Plan

RECORD OF DECISION

INTRODUCTION

This Record of Decision (ROD) approves the Bureau of Land Management's (BLM's) proposal to manage the public lands within the Dillon Field Office as presented in the attached Resource Management Plan (RMP). This RMP was described as Alternative B in the April 2005 Proposed Dillon Resource Management Plan and Final Environmental Impact Statement (USDI-BLM 2005a). This ROD provides the background on development of the plan and rationale for approving the proposed decisions contained in Alternative B, and describes the clarifications and/or modifications made to address protests received on the plan. The attached RMP (referred to as the Approved Plan) describes the decisions themselves.

The planning area lies in the extreme southwest corner of Montana, bounded on the south and west by the State of Idaho and the Continental Divide (see Map 1). The area is rural in nature, with small communities scattered throughout Beaverhead and Madison Counties, and experiences a continental climate of cold, relatively dry winters and warm, dry summers. This type of cool, dry climate gives rise to sagebrush-grassland communities in the valleys and forests at higher elevations. Elevations range from 4,500 feet to 11,154 feet, with several distinct mountain ranges spanning

the area, including the Beaverhead Mountains, the Black-tails, the Centennials, the Tendoy, the Gravellys, the Pioneers, the Rubys, the Madison, the Tobacco Roots, and the Highlands. Most of the planning area receives 8 to 16 inches of precipitation annually, with most coming in May and June. Springs that form the uppermost reaches of the entire Missouri River drainage are located on BLM lands administered by the Dillon Field Office, and the renowned Beaverhead, Big Hole, and Madison Rivers drain the planning area.

Decisions in the Approved Plan apply to just over 900,000 acres of public land surface estate and about 1.3 million acres of federal subsurface mineral estate. This includes:

- all surface estate administered by the BLM's Dillon Field Office
- federal mineral resources managed by the BLM beneath private or State surface estate
- federal mineral estate lying beneath lands administered by the Bureau of Reclamation
- federal mineral estate lying beneath lands administered by the Agricultural Research Service

Tables 1 and 2 summarize the ownership and administration of surface and subsurface estate in the planning area. Map 2 (oversized) depicts the land status in the planning area.

Table 1
Surface Ownership/Administration of Lands in Beaverhead and Madison Counties

<i>Ownership/Administration</i>	<i>Beaverhead County</i>		<i>Madison County</i>	
	<i>Acres</i>	<i>Percent*</i>	<i>Acres</i>	<i>Percent*</i>
BLM Dillon Field Office	651,504	18%	249,846	11%
BLM Butte Field Office	12,380	<1%	0	0
U.S. Forest Service	1,373,748	39%	807,529	35%
U.S. Fish and Wildlife Service	39,231	1%	167	<1%
U.S. National Park Service	675	<1%	0	0
U.S. Agricultural Research Service	15,538	<1%	0	0
U.S. Bureau of Reclamation	4,749	<1%	0	0
State of Montana—FWP	29,918	<1%	23,916	1%
State of Montana—DNRC	325,374	9%	127,143	5%
Private	1,077,179	30%	1,085,733	47%
Other	16,479	<1%	8,611	<1%
GRAND TOTAL	3,546,775	100%	2,302,945	100%

*Percentages rounded to nearest one percent.

General Location of the Planning Area

US DEPARTMENT OF THE INTERIOR
Bureau of Land Management

**Dillon Field Office
Resource Management Plan**

Map shows the general location of the BLM's Dillon Field Office in relation to southwest Montana, Idaho and Wyoming.

Albers Equal Area, NAD83

This map is intended for display purposes. No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data, or for purposes not intended by BLM. This map may not meet National Map Accuracy Standards. This product was developed through digital means and information may be updated without notification.

February 2006

Map 1

Table 2
Federal Minerals within the Dillon Field Office included in RMP Decisions

<i>Type of Jurisdiction</i>	<i>Beaverhead County</i>	<i>Madison County</i>	<i>Total Acres</i>
BLM Surface and Federal Minerals	645,015	248,785	893,800
Private and State Surface and Federal Minerals	277,128	167,431	444,559
BOR Surface and Federal Minerals	1,305	0	1,305
ARS Surface and Federal Minerals	15,538	0	15,538
GRAND TOTAL	938,986	416,216	1,355,202

Development of this RMP was formally initiated with publication of a Notice of Intent in the *Federal Register* on August 9, 2001. Over the next four years, BLM conducted extensive public outreach, and initiated a number of collaborative efforts involving diverse interests as part of plan development (these opportunities are summarized in the *Public Involvement* section below and fully described on pages 373-377 of the Proposed RMP/Final EIS). BLM also provided standard public comment periods and an opportunity to protest the proposed decisions to the Director prior to approval of this ROD as required by the BLM planning regulations.

RESULTS OF PROTEST REVIEW

BLM received seven protest letters during the 30-day protest period provided for the proposed land use plan decisions contained in the Dillon Proposed RMP/Final EIS in accordance with 43 CFR Part 1610.5-2. Protesting parties included:

- Greater Yellowstone Coalition and American Wildlands
- Beaverhead County Board of Commissioners and Madison County Board of Commissioners
- Bob Briggs
- Larry Reuber
- Southwest Montana Stockman's Association
- The Wilderness Society
- Public Lands/Water Access Association, Skyline Sportsmen, and Coalition for State Public Lands

Main protest points pertained to ACEC issues and management, (including the Blacktail Wildlife Linkage ACEC nomination and appropriate management of designated ACECs), special status species management, the plan's adequacy in protecting wilderness values, consistency issues, adequacy of data used in development of the plan, monitoring requirements, road closures, previous Wilderness Study Area designations, application of sage grouse guidelines, Standards and Guidelines implementation, application of a residual

emergent wetland vegetation standard in the Centennial Valley, the range of alternatives considered in the EIS (especially regarding travel planning), whether the EIS adequately disclosed impacts to various programs and resources, disproportionate impacts to Madison and Beaverhead Counties, adequacy of public involvement, whether comments by the public were adequately considered, and compliance with the Federal Advisory Committee Act (FACA), the Federal Land Management and Policy Act, the Unlawful Inclosures Act, the Fraud and False Statements Act, the Federal Data Quality Act, the Administrative Procedures Act, and the National Environmental Policy Act.

The BLM Director addressed all protests without making significant changes to the Proposed Resource Management Plan, though minor adjustments and clarifications were made and have been explained in this ROD. The *Notice of Modification* and *Clarification* sections below describe these clarifications and adjustments.

DECISION

The decision is hereby made to approve the attached plan as the Approved Resource Management Plan (RMP) for public lands located in Beaverhead and Madison Counties that are administered by Montana's Dillon Field Office (see Map 2, oversized). The Approved Plan replaces the Dillon Management Framework Plan (MFP) approved in September 1979 (USDI-BLM 1979).

This plan was prepared under the regulations (43 CFR Part 1600) implementing the Federal Land Policy and Management Act (FLPMA) of 1976. An Environmental Impact Statement (EIS) was prepared for this RMP in compliance with the National Environmental Policy Act (NEPA) of 1969. Management decisions and guidance for public lands under the jurisdiction of the Dillon Field Office are presented in the Approved Plan attached to this ROD in the section titled *Management Decisions*.

All decisions covered by this ROD are land use planning decisions which were protestable under the land use planning regulations (43 CFR Part 1610) *with the exception of the route designations for motorized wheeled travel in the planning area*. The route designation decisions are implementation decisions which may be appealed under the Department of Interior's appeal regulations (43 CFR Part 4). Information on how to appeal the route designation decisions can be found in the *Implementation Decisions* section below.

What the Decision/RMP Provides

Land use plan decisions include:

- Goals
- Objectives (Desired Future Conditions)
- Land Use Allocations
- Management Actions

Goals are the broad statements of desired outcomes, and are usually not quantifiable. **Objectives** are specific desired conditions, usually quantifiable and measurable, and may have timeframes for achievement. **Land use allocations** specify locations within the planning area that are available or not for certain uses. These include decisions such as what lands are available for livestock grazing, mineral material use, oil and gas leasing, and locatable mineral development, what lands may be available for disposal via exchange and/or sale, and what lands are open, closed, or limited to motorized travel (please note that all acreages presented in the Approved Plan are estimations even when presented to the nearest acre). **Management actions** include those provisions that help in meeting the established goals and objectives and include measures that will be applied to guide day-to-day activities on public lands, including but not limited to stipulations, guidelines, best management practices (BMPs), and design features.

The primary management decisions in the Approved Plan are to:

- Manage resources to protect and enhance vegetative communities, fish and wildlife resources, natural, cultural, geological and paleontological resources, recreational opportunities, and wilderness resources.
- Manage uses to protect and prevent damage to public land resources, and to enhance those resources where feasible.
- Designate eight Areas of Critical Environmental Concern (ACECs) and manage according to the special management prescriptions identified for each area.
- Conduct proactive cultural resource inventories under Section 110 of the National Historic Preservation Act.
- Place BLM-administered lands in fire management categories.
- Designate 826,876 acres as limited to off-highway vehicle use and 74,350 acres as closed to off-highway

vehicle use. No areas in the planning area are designated as open.

- Make an estimated 852,778 acres of the 900,000 acre planning area available for livestock grazing as long as the *Western Montana Standards for Rangeland Health* can continue to be met.
- Make an estimated 1.2 million acres of the 1.3 million acres of federal mineral estate available for oil and gas leasing. Approximately 145,554 acres are unavailable for oil and gas leasing. An estimated 143,420 acres are available for oil and gas leasing under standard lease terms; an estimated 632,061 acres are available subject to Controlled Surface Use or Timing Limitation stipulations; and an estimated 433,797 acres are available subject to No Surface Occupancy (NSO) stipulations.
- Withdraw approximately 5,000 acres from locatable mineral entry.
- Designate nine Special Recreation Management Areas (SRMAs), with one additional SRMA designated if the Henneberry Ridge WSA is released.
- Highlight and interpret the Big Sheep Creek Back Country Byway.
- Continue to manage the Bear Trap Wilderness under the wilderness plan prepared for it, and manage the nine Wilderness Study Areas in accordance with the *Interim Management Policy for Lands Under Wilderness Review* unless released by Congress.
- Release the 860 acres of public land within the Tobacco Root Tack-on WSA studied under Section 202 from further consideration as wilderness because it is too small to be considered for wilderness on its own, and no longer complements management of adjacent lands managed by the Beaverhead-Deerlodge National Forest. Manage the area consistent with adjacent lands and in consideration of other land use plan provisions.
- Manage approximately 4,000 acres of the 900,000 acre planning area for potential disposal through land adjustment actions (Category 3), with the remainder managed for retention (Category 1) or retention with limited adjustment (Category 2).

This ROD serves as the final decision establishing the land use plan decisions outlined in the Approved Plan and is effective on the date it is signed. No further administrative remedies are available for these land use plan decisions.

What the Decision/RMP Does Not Provide

The Approved Plan does not contain decisions for the surface or mineral estates of land administered by the BLM Butte Field Office (but located in Beaverhead County), for USDA Forest Service lands located in Beaverhead and Madison Counties, for lands under the jurisdiction of the USDI Fish and Wildlife Service, or for private or State-owned lands and minerals.

In addition, many decisions are not appropriate at this level of planning and are not included in the ROD. Examples of these types of decisions include:

Statutory requirements. The decision will not change the BLM's responsibility to comply with application laws and regulations.

National policy. The decision will not change BLM's obligation to conform with current or future National policy.

Funding levels and budget allocations. These are determined annually at the National level and are beyond the control of the field office.

Implementation Decisions

While the designation of areas as open, closed, or limited to off-highway vehicle use is a land use planning decision, the proposed route designations for motorized wheeled travel in the planning area included in the Proposed RMP/Final EIS are implementation decisions which are now appealable under the Department of Interior's appeal regulations (43 CFR Part 4). These procedures are summarized below.

The route designations described in the *Travel Management and OHV Use* section of the Approved RMP and identified on Maps 26 and 27 are effective upon issuance of this Record of Decision, unless a stay of the decision is granted. In accordance with 43 CFR Part 8342.3(b) public notice was provided with publication of a *Federal Register* Notice of Availability of the Proposed RMP/Final on April 29, 2005, and with publication of the *Federal Register* notice announcing the availability of this Record of Decision and Approved Plan.

Appeal Procedures for Implementation Decisions

Any party adversely affected by the proposed route designations may appeal within 30 days of receipt of this decision in accordance with the provisions of 43 CFR Part 4.4. The publication of the Notice of Availability of the ROD/Approved Plan will be considered the date the decision is received. The appeal should state the specific route(s) by township, range and section on which the decision is being appealed. The appeal must be filed with the Field Manager, at the following address:

Bureau of Land Management
Dillon Field Office
1005 Selway Drive
Dillon, Montana 59725

You may include a statement of reasons when the notice of appeal is filed, or you may file the statement of reasons

within 30 days after filing the appeal. A copy of the appeal, statement of reasons, and all other supporting documents must also be sent to the Field Solicitor, U.S. Department of the Interior, P.O. Box 31394, Billings, Montana 59107-1394.

If the statement of reasons is filed separately, it must be sent to the Interior Board of Land Appeals, Office of Hearings and Appeals, 801 N. Quincy Street, Suite 300, Arlington, VA 22203. It is suggested that any appeal be sent certified mail, return receipt requested.

Request for Stay

If you wish to request a stay of the decision pending the outcome of the appeal, the motion for stay must be filed in the office of the authorized officer at the time the appeal is filed and must show sufficient justification based on the following standards under 43 CFR Part 4.21:

- (1) The relative harm to the parties if the stay is granted or denied.
- (2) The likelihood of the appellant's success on the merits.
- (3) The likelihood of immediate and irreparable harm if the stay is not granted.
- (4) Whether the public interest favors granting the stay.

Notice of Modifications

As a result of protests on the Proposed Plan and continued internal review, BLM made two modifications to the Proposed Plan. As described below, these modifications are not considered significant changes. The *Management Decisions* section of the attached Approved Plan includes these modifications.

Centennial Valley Wetland and Waterfowl Areas and Management

To resolve one protest point, BLM modified one management action designed to protect relevant and important waterfowl values in the Centennial Valley wetland and waterfowl area. The Proposed RMP/Final EIS stated that grazing would be managed to provide a minimum of 12-inch tall residual emergent wetland vegetation within wetland and waterfowl production areas in the Centennial Valley. After review, BLM found that this specific height requirement alone may not necessarily ensure the desired result of protecting relevant and important values and does not meet BLM policy guidance on the types of management included in land use plans. The adjusted management reads:

Manage the density and height of emergent wetland vegetation (cattails, rushes, etc.) to provide residual nesting cover and concealment for trumpeter swans and other waterfowl within the wetland and waterfowl production areas in the Centennial Valley (see Map 36).

This modification is reflected in the *Livestock Grazing, Riparian and Wetland Vegetation*, and *Wildlife* sections in the attached Approved Plan.

This adjustment is not considered a significant change since the area will still be managed to protect the relevant and important values in the area and the effects of managing these lands to protect these values were adequately projected in the Proposed RMP/Final EIS released in April 2005. In addition, watershed assessment work completed in the Centennial Valley in 2004 indicates that current conditions are providing adequate habitat for waterfowl in most areas in the valley (USDI-BLM 2005b, 2005c). Management has been revised in any areas where concerns with adequate waterfowl habitat were identified in the recently released Centennial Watershed Decision (USDI-BLM 2005c, 2005d). The Centennial Watershed Decision also contains a monitoring plan as well as a provision to create exclosures to protect wetland and waterfowl values if monitoring shows impacts are occurring to those values as a result of management in the area. Finally, additional consideration of the area is given in the Red Rock Waterfowl Habitat Management Plan which will be updated and revised as part of implementation actions identified in the Dillon RMP.

Use Levels for Outfitted Big Game Hunting

The Proposed RMP/Final EIS included specific use levels for outfitted big game hunting for seven Outfitter Permit Areas (OPAs). These use levels were derived from the average reported use between 1990 and 2001 for all outfitters operating within those areas (or the total annual average if use was less than the full 10-year period). Following publication of the Proposed RMP, further internal review revealed that wide year-to-year variations in use numbers may have resulted in 10-year averages that are below client use totals during "good" years. BLM is still committed to managing outfitted big game hunting use within historic levels, but intends to consult more closely with those who will be affected by the eventual allocation of maximum permitted use levels to more accurately understand historic use levels and trends. BLM will establish the use levels by OPA after consultation with outfitters operating in those areas within two years of issuance of this ROD. This adjustment is not considered a significant change since the approach of managing within historic levels will be maintained.

Clarifications

The following clarifications and minor corrections made to the information included in the Proposed RMP/Final EIS are reflected in the attached Approved Plan:

- Management in the Centennial Mountains ACEC was clarified to state that all proposed activities would be evaluated to ensure protection of relevant and important values, though winter recreation activities and the

potential for backcountry helicopter use were identified specifically as threats.

- Pale evening primrose was removed from the description of plants of concern in the Centennial Sandhills ACEC; the species is no longer included on the Montana/Dakotas list of special status plant species.
- Terminology in the *Fire Management* section was adjusted to be consistent with interagency federal wildland fire policy and related documents developed by the National Fire and Aviation Executive Board. As a result, the section is organized differently than in the Proposed RMP/Final EIS, but contains the same goals, objectives, allocations, and management actions.
- A management action in the *Fish* section was clarified; language was included to specify that any increase of large woody debris in deficient streams is for the purpose of improving pool and spawning habitat.
- A *Mineral Materials* decision that prohibited disposal of mineral materials from mining claims was adjusted to allow disposal of mineral material with the claimant's consent. BLM will not consider disposal without consent under this RMP, even though regulations now provide a process to allow it, since those impacts were not analyzed in the Proposed RMP/Final EIS.
- The *National Trails* section was clarified; a new agreement with appropriate agencies will be prepared to clearly define management responsibilities along the Continental Divide National Scenic Trail, rather than assuming that previous formal or informal commitments continue to be valid.
- An action in the *Rangeland Vegetation* and *Wildlife including Special Status Species* sections was clarified to focus management on preventing loss of Basin big sagebrush and Wyoming big sagebrush stringer habitat by mechanical damage or other actions.
- The *Recreation* section was clarified to indicate that the Centennial Mountain, East Fork Blacktail Creek and Ruby Mountain areas are all priorities for non-motorized trail work.
- Management in the *Riparian Vegetation* section was clarified to specify that use of chainsaws will be allowed where other mechanized equipment is restricted when conducting riparian restoration work.
- The Fire Management Zone boundaries shown on Map 13 were adjusted to show the correct boundaries between the Beaverhead Mountains, Pioneer Mountains, and Southeast Foothills/Pioneers Fire Management Zones. A description of the Pioneer Mountains FMZ

was also added to Appendix D, and acreage calculations were updated based on the most current information. However, none of the category designations were changed.

- The map depicting BLM lands unavailable for livestock grazing (Map 19) was updated. Corrections were made to allotment boundaries and the map now also depicts unleased lands that will be evaluated during watershed assessments, totaling approximately 13,759 acres. The acreage of unavailable lands was updated from an estimated 48,448 acres to an estimated 47,837 acres as a result of map corrections.
- Existing mineral material site locations shown on Map 22 were updated with the most current information.
- Special Recreation Management Area (SMRA) boundaries shown on Map 23 were corrected to include BLM lands inadvertently omitted in the Proposed RMP/Final EIS.
- The boundary of the Centennial Valley Wetland and Waterfowl Areas shown on Map 36 where management to provide for waterfowl nesting and concealment will be applied were corrected to include the Mud Lake area and follow a BLM ownership line inadvertently omitted.
- Two legal locations were corrected in Appendix I which describes potential disposal tracts.

OVERVIEW OF THE ALTERNATIVES

Four alternatives, including a No Action Alternative were analyzed in detail in the Draft RMP/EIS (USDI-BLM 2004a) and in the Proposed RMP/FEIS (USDI-BLM 2005a). The alternatives were developed to address major planning issues and to provide direction for resource programs influencing land management. All alternatives incorporated the *Western Montana Standards for Rangeland Health* developed in conjunction with the Western Montana Resource Advisory Council (RAC) as base standards for assessing land health. All management under any of the alternatives would comply with state and federal regulations, laws, standards, and policies.

Each alternative emphasizes a different combination of resource uses, allocations, and restoration measures to address issues and resolve conflicts among uses, so program goals are met in varying degrees across the alternatives. However, each alternative allows for some level of support of all resources present in the planning area. The alternatives dif-

fer in how fast the goal would be met, the degree to which it would be met, the emphasis placed on certain programs and activities, and whether active or passive management would occur. Management scenarios for programs not tied to major planning issues and/or mandated by law often contain few or no differences in management between alternatives.

Alternative A is the continuation of present management, also called the No Action Alternative. This alternative would continue present management practices based on existing land use plans and other management decision documents. Valid decisions contained in the Dillon Management Framework Plan would be implemented if not already completed. Direction contained in existing laws, regulation and policy would also continue to be implemented, sometimes superseding provisions of the Dillon MFP. The current levels, methods and mix of multiple use management of public land in the planning area would continue, and resource values would receive attention at present levels. In general, most activities would be analyzed on a case-by-case basis and few uses would be limited or excluded as long as land health standards could be met.

Alternative B emphasizes a moderate level of protection, use, restoration, and enhancement of resources and services. Constraints to protect resources would be implemented, but would be less restrictive than under Alternative C. Alternative B would accommodate a higher level of production of food, fiber, minerals and services through the use of public land than Alternative C, though to a lesser degree than Alternative D. Resource values and fish and wildlife habitats would be restored and enhanced using a variety of tools, but to a lesser extent than Alternative C. Certain geographic areas containing sensitive resources would receive focused management.

Alternative B was selected as the BLM's Preferred Alternative in the Draft RMP/EIS. This alternative represents the mix and variety of actions that, in the opinion of BLM, best resolve the issues and management concerns in consideration of all values and programs. This alternative includes recommendations made to the BLM by the Western Montana RAC. As a result of public comment received on the Draft RMP/EIS, Alternative B was adjusted but remained the BLM's preferred alternative and proposed plan.

Alternative C emphasizes active measures to enhance fish and wildlife habitats. Production of products from vegetation management in all habitats would be secondary to restoring healthy forest, upland and riparian areas. Production of food, fiber, minerals and services would be more constrained than in Alternatives B or D and in some cases and in some areas, uses would be excluded to protect sensitive resources. Under this alternative, constraints would more often be applied to broad habitats rather than focusing on specific sensitive resources in particular geographic areas.

Alternative D emphasizes active management to produce food, fiber, minerals and services, and includes the highest level of forest and woodland treatments. In this alternative, constraints to protect sensitive resources would tend to be implemented in specified geographic areas rather than across the planning area. This alternative maintains current levels of fish and wildlife habitats but does not seek to increase those habitats. Developed recreation activities would be emphasized in Alternative D. Land health restoration activities would focus on areas that would also provide tangible products.

Public input received throughout the planning process was considered in the development of the alternatives. Alternative A, continuation of current management, is based on existing planning decisions that remain valid and current direction and policy. The remaining alternatives were developed with input received during scoping and focus question workshops, from work completed by subgroups of the Western Montana Resource Advisory Council (RAC), with expertise from the interdisciplinary planning team, and with input from local, State, federal and tribal governments. Alternative B was identified as the agency preferred alternative in the Draft RMP/EIS and incorporated recommendations made by the Western Montana RAC. This same alternative became the proposed alternative in the Proposed RMP/Final EIS, but as modified based on the consideration of public comment received on the Draft.

During the early stages of the planning process a number of alternatives were considered, but dropped from detailed analysis for a variety of reasons. The following alternatives were eliminated from detailed study because they did not meet the purpose and need of the proposal or were outside of the technical or legal constraints of developing a land use plan for public lands and resources.

- *Exclusive Use or Protection of certain or all resources*
- *Designation of all routes for Yearlong Travel*
- *Adaptive Management as an alternative*
- *Contracting/Stewardship Management as an alternative*
- *Deferment of all grazing turnout until July 1*

Additional information can be found in Chapter 2, *Alternatives*, of both the Draft RMP/EIS, released in March 2004, and Proposed RMP/Final EIS, released in April 2005.

The Environmentally Preferred Alternative

Alternative B, the agency Preferred Alternative and Proposed Action is considered the environmentally preferable alternative when taking into consideration the human (social and economic) environment as well as the natural environment. The Council on Environmental Quality (CEQ) has defined the environmentally preferable alternative as the alternative that will promote the national environmental

policy as expressed in Section 101 of the NEPA. This section lists six broad policy goals for all Federal plans, programs, and policies:

1. Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
2. Assure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings;
3. Attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences;
4. Preserve important historic, cultural, and natural aspects of our national heritage, and maintain, wherever possible, an environment which supports diversity and variety of individual choice;
5. Achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life's amenities; and
6. Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

Based on these criteria, identification of the environmentally preferable alternative(s) involves balancing current and potential resource uses with the need to protect resources, as well as consideration of the human environment. Alternative D could be viewed the least environmentally preferable alternative, as it offers the most intensive, active management for use of the area, which may negatively impact other resource values the most or limit the rate of ecosystem recovery. However, this alternative would provide the most economic benefit to the economy in the short term. Alternative B would be less environmentally preferable than Alternative C, but more preferable than Alternatives A or D. This alternative would provide a balance between sustainable economic benefits and resource protection. Alternative C would be more protective of natural and biological values than Alternatives A, B, or D, but would provide for fewer or restricted uses.

MANAGEMENT CONSIDERATIONS IN SELECTING THE APPROVED PLAN

The BLM is tasked with the job of multiple use management, as mandated under the Federal Land Policy and Management Act and numerous other laws and regulations that govern the management of public lands for various purposes and values. Due to the diversity of community needs and

stakeholders affected by management of BLM lands, there has been both support and opposition to certain components of Alternative B. BLM's objective in choosing Alternative B as the preferred alternative and proposed plan was to address these diverse needs and concerns in a fair manner and provide a practical and workable framework for management of public lands. The BLM is ultimately responsible for preparing a plan consistent with its legal mandates that reflects its collective professional judgement, incorporating the best from competing viewpoints and ideas. The Approved Plan (Alternative B as modified in consideration of public and agency comments and internal review) provides a balance between those reasonable measures necessary to protect the existing resource values and the continued public need for use of the public lands within the planning area.

The quickness with which resource objectives are met was a factor in comparing the alternatives, as was the flexibility the management options provided. Consensus recommendations received from the Western Montana Resource Advisory Council (BLM's official advisory council) also played a major role as proposed management alternatives were considered. Approval of a plan that provides a balance to meet both resource concerns and social and economic concerns in the planning area was also a major factor. Alternative B was selected because it proposed management that will improve and sustain properly functioning resource conditions while considering needs and demands for existing or potential resource commodities and values. In the end, resource use is managed by integrating ecological, economic, and social principles in a manner that safeguards the long term sustainability, diversity and productivity of the land.

The Approved Plan responds to issues related to managing for healthy rangelands and riparian and upland vegetation while still providing for livestock grazing and fish and wildlife habitat by making most of the planning area available for livestock grazing, as long as Standards for Rangeland Health continue to be met, and restricting grazing where it is incompatible with resource values (for example, the Eli Springs and Blue Lake areas). The Approved Plan also gives sensitive habitats such as westslope cutthroat trout spawning areas in streams containing 99 to 100 percent genetically pure populations, special status plant habitats, grizzly bear habitat, and emergent wetland vegetation for waterfowl for heightened consideration when making site-specific grazing management decisions.

Issues regarding management of forest and woodland resources to provide fish and wildlife habitat, reduce fuel loads, and provide commercial wood products are addressed in the Approved Plan by focusing management in three geographic areas where treatments/harvest will assist in restoring habitats, allowing treatment/harvest in Cool/Moist habitat types (in consideration of other resource values), and using all tools in aspen restoration efforts.

The Approved Plan specifies conditions for permitted activities such as fluid mineral leasing, communication uses, and other commercial uses as appropriate at the land use plan level to resolve concerns regarding impacts of commercial uses. Impacts on uses as a result of protective management were disclosed in the Proposed RMP/Final EIS, and considered in conjunction with impacts to resource values, with Alternative B providing the best balance in allowing for uses to occur while providing for protection of resource values and public health and safety. The Approved Plan responds to issues regarding noxious weeds and invasive species by maintaining BLM's integrated management approach as well as emphasizing the reestablishment and restoration of native plants during project activities and as a part of the watershed assessment process.

Concerns about specific resource values are addressed throughout the Approved Plan, and eliminated the need to designate some areas as Areas of Critical Environmental Concern (ACECs) since the proposed management provides adequate protection. Since standard management contained in the Approved Plan protects many of the relevant and important values in the planning area, only eight areas were designated as ACECs where additional special management is necessary.

The Approved Plan responds to travel management and access issues by providing a network of transportation routes that tie into roads administered by the counties, the Forest Service, and State of Montana agencies. Users who value nonmotorized areas for hunting, hiking, solitude, etc. are accommodated by areas that are closed, or along existing routes are not designated for motorized use. Natural and cultural resource protection is also accomplished by the limitation of motorized travel to the routes designated in Alternative B. Concerns with open road densities expressed by the Fish and Wildlife Service and FWP played a factor in selection of Alternative B along with management of routes on adjacent State lands (both DNRC and FWP) and Forest service lands and the recommendation of Alternative B to BLM by the Western Montana Resource Advisory Council.

Consistency of the Approved Plan with other local, State, Tribal and federal plans and policies (which sometimes conflict amongst themselves) was also considered as a factor in alternative selection. The Approved Plan is consistent with plans and policies of the Department of the Interior and Bureau of Land Management, other federal agencies, state government, and local governments to the extent that the guidance and local plans are also consistent with the purposes, policies, and programs of federal law and regulation applicable to public lands. As Cooperating Agencies in development of the Dillon RMP, Beaverhead and Madison counties have determined that Alternative B is consistent with pertinent county planning documents, though both counties maintain some concerns in terms of alternative preference, especially regarding travel management. Both

Beaverhead and Madison Counties filed identical protests on the plan. Commissioners in both counties have indicated that their interest in protesting was specifically to maintain "standing" in the protest resolution process and in any future litigation filed in regard to the Dillon RMP, rather than based on any particular objection to specific management provisions.

The Governor's Office did not identify any inconsistencies between the Draft RMP/EIS and state or local plans, policies, and programs; nor were any inconsistencies noted following the 60-day Governor's Consistency Review of the Proposed RMP/Final EIS (initiated April 25, 2005, in accordance with planning regulations at 43 CFR Part 1610.3-2(e)).

MITIGATION MEASURES

Measures to avoid or minimize environmental harm were built into the Approved Plan where practicable. Many of the standard management provisions will minimize impacts when applied to activities proposed in the planning area. The *Western Montana Standards for Rangeland Health* (see Appendix A) will be used as the base standards to assess the health of BLM lands in the planning area. The *Guidelines for Livestock Grazing* will be applied as appropriate. Best management practices (BMPs) will be used (when applicable) for a number of uses including livestock grazing, forest activities, placer mining, oil and gas development, and wind energy (see Appendix B). Additional measures to mitigate environmental impacts may also be developed during subsequent NEPA analysis at the activity level planning and project stages.

PLAN MONITORING

Monitoring is the repeated measurement of activities and conditions over time. BLM planning regulations (43 CFR Part 1610.4-9) call for monitoring resource management plans on a continual basis and establishing intervals and standards based on the sensitivity of the resource to the decisions involved. CEQ regulations implementing NEPA state that agencies may provide for monitoring to assure that their decisions are carried out and should do so in important cases (40 CFR Part 1505.2(c)).

There are three types of monitoring. These include implementation, effectiveness, and validation monitoring, described below.

Implementation Monitoring

Implementation monitoring is the most basic type of monitoring and simply determines whether planned

activities have been implemented in the manner prescribed by the plan. Some agencies call this compliance monitoring. This monitoring documents BLM's progress toward full implementation of the land use plan decision. There are no specific thresholds or indicators required for this type of monitoring.

Effectiveness Monitoring

Effectiveness monitoring is aimed at determining if the implementation of activities has achieved the desired goals and objectives. Effectiveness monitoring asks the question: Was the specified activity successful in achieving the objective? This requires knowledge of the objectives established in the RMP as well as indicators that can be measured. Indicators are established by technical specialists in order to address specific questions, and thus avoid collection of unnecessary data. Success is measured against the benchmark of achieving the objectives (desired future conditions) established by the plan.

Validation Monitoring

Validation monitoring is intended to ascertain whether a cause-and-effect relationship exists among management activities or resources being managed. It confirms whether the predicted results occurred and if assumptions and models used to develop the plan are correct. This type of monitoring is often done by contract with another agency, academic institution, or other entity, and is usually expensive and time consuming since results are not known for many years.

Since land use plan monitoring is the process of (1) tracking the implementation of land use planning decisions and (2) collecting and assessing data/information necessary to evaluate the effectiveness of land use planning decisions, monitoring related to the RMP will consist of implementation and effectiveness monitoring.

The BLM will monitor the Approved Plan to determine whether the objectives set forth in this document are being met and if applying the land use plan direction is effective (see Appendix AA for a Plan Monitoring Roster). Monitoring for each program area is outlined in the *Management Decision* section of the Approved Plan. If monitoring shows land use plan actions or best management practices are not effective, BLM may modify or adjust management without amending or revising the plan as long as assumptions and impacts disclosed in the analysis remain valid and broad-scale goals and objectives are not changed (see the discussion on *Maintaining the Plan*). Where the BLM considers taking or approving actions which will alter or not conform to overall direction of the plan, the BLM will prepare a plan amendment or revision and environmental analysis of appropriate scope (see the discussion on *Changing the Plan*).

PUBLIC INVOLVEMENT

One of BLM's primary objectives during development of the Dillon RMP was to understand the views of various publics by providing opportunities for meaningful participation in the resource management planning process. To achieve this, BLM, along with Beaverhead and Madison Counties, worked with the Montana Consensus Council to develop techniques and opportunities that went beyond the standard public involvement process required during preparation of an RMP and EIS.

These techniques included asking citizens prior to scoping how they would like to participate in the development of the RMP and what strategies might encourage their involvement. Efforts continued with scoping meetings to identify issues and comment on proposed planning criteria, an Information Fair to share baseline data to be used in the development of the RMP, opportunity to review the Wild and Scenic River eligibility findings, the use of issue-based subgroups established by the Western Montana RAC, opportunity to review the *RMP Digest* released in January 2003 and submit additional information, focus question workshops designed to allow the public to provide alternative suggestions, briefings for and discussions with government agency representatives and tribal representatives, and open houses and comment meetings convened after release of the Draft RMP/EIS in April 2004. BLM also used planning *Update* newsletters, media news releases, a toll-free information number, and website postings to offer up-to-date

information to groups, individuals and agencies. In-depth information on these efforts is included in both the Draft Dillon RMP/EIS and Proposed Dillon RMP/Final EIS in Chapter 5, *Consultation and Coordination*.

BLM will continue to actively seek the views of the public, using techniques such as news releases and mass mailings to ask for participation and inform the public of new and ongoing project proposals, site-specific planning, and opportunities and timeframes for comment. Annual land use plan updates prepared to track and monitor progress of plan implementation will be made available to the public upon request. BLM will also continue to coordinate, both formally and informally, with the numerous state, federal, tribal and local agencies and officials interested and involved in the management of public lands in southwest Montana.

AVAILABILITY OF THE PLAN

Copies of the Record of Decision and the Dillon Resource Management Plan are available by request from the following locations: BLM Dillon Field Office, 1005 Selway Drive, Dillon Montana 59725 (406) 683-2337, and on the Dillon Field Office website at www.mt.blm.gov/dfo (subject to change based on court orders regarding access to Department of Interior websites).

FIELD MANAGER RECOMMENDATION

Having considered a full range of reasonable alternatives, associated effects, and public input, I recommend adoption and implementation of the attached Dillon Resource Management Plan.

Tim Bozorth
Dillon Field Manager

Date

APPROVAL

In consideration of the foregoing, I approve the Dillon Resource Management Plan.

Howard Lemm
Acting State Director, Montana/Dakotas

Date

APPROVED RESOURCE MANAGEMENT PLAN

INTRODUCTION

This Approved Plan replaces the Dillon Management Framework Plan approved in 1979 and is now the base land use plan for public lands administered by the BLM's Dillon Field Office. The Approved Plan adopts the management described in Alternative B and the Management Common to All Alternatives section presented in the Proposed Dillon RMP/Final EIS (USDI-BLM 2005a), with adjustments as described in the *Notice of Modification* and *Clarification* sections of the ROD.

Vision

The vision identified for the planning area as a result of this planning process provides overall direction for the public lands administered by the BLM's Dillon Field Office. The vision states:

Within the capability of the resources:

- *Sustain and where necessary restore the health and diversity of forest, rangeland, aquatic, and riparian ecosystems;*
- *Support a sustainable flow of benefits in consideration of the social and economic systems of southwest Montana; and*
- *Provide diverse recreational and education opportunities.*

Consideration of Other BLM Plans and Policies

This plan incorporates decisions contained in the following documents unless or until amended or replaced:

- Axolotl Lakes Habitat Management Plan (USDI-BLM 1976a)
- Blacktail Habitat Management Plan (USDI-BLM 1976b)
- Mountain-Foothills Grazing EIS (USDI-BLM 1980a)
- Hidden Pasture Bighorn Habitat Management Plan (USDI-BLM 1980b)
- Sheep Creek Aquatic Habitat Management Plan (USDI-BLM 1981)
- Red Rock Waterfowl Habitat Management Plan (USDI-BLM 1983a)

- Wall Creek Allotment Habitat Management Plan (USDI-BLM 1983b)
- Bear Trap Canyon Wilderness Management Plan (USDI-BLM 1984a)
- Lower Big Hole River Recreation Area Management Plan (USDI-BLM 1987a)
- Vegetation Treatment of BLM Lands in Thirteen Western States (USDI-BLM 1991a)
- Montana Statewide Wilderness Study Report, Record of Decision and Statewide Overview (USDI-BLM 1991b)
- Standards for Rangeland Health and Guidelines for Livestock Grazing Management for Montana, North Dakota and South Dakota (USDI-BLM 1996a)
- Lee Metcalf Wilderness Fire Management Guidebook (USDA-FS and USDI-BLM 1997)
- Centennial Mountains Travel Management Plan (USDI-BLM 2001a)
- Lower Madison River Recreation Area Management Plan (USDI-BLM 2003a)
- Final Off-Highway Vehicle Environmental Impact Statement and Plan Amendment for Montana, North Dakota and Portions of South Dakota (USDI-BLM and USDA-FS 2001a, BLM Record of Decision, June 2003)
- Fire/Fuels Management Plan Environmental Assessment/Plan Amendment for Montana and the Dakotas (USDI-BLM 2003b)
- Bureau of Land Management National Sage-Grouse Habitat Conservation Strategy (USDI-BLM 2004b)
- Partners Against Weeds (USDI-BLM 1996b)
- Montana Weed Management Plan (Duncan 2001)

In the event there are inconsistencies or discrepancies between previously approved plans and this Approved Plan, the decisions contained in the Approved Plan will be followed.

The Dillon Field Office will continue to tier to statewide, national, and programmatic EISs and other NEPA and planning documents, as well as consider and apply Best Management Practices or other management protocols contained in other planning documents after appropriate site-specific analysis.

All future resource authorizations and actions will conform to, or be consistent with the decisions contained in this Approved Plan. All existing operations and activities authorized under permits, contracts, cooperative agreements or other authorizations will be modified, as necessary, to conform with this plan within a reasonable timeframe. How-

ever, this plan does not repeal valid existing rights on public lands. A valid existing right is a claim or authorization that takes precedence over the decisions developed in this plan. If such authorizations come up for review and can be modified, they will also be brought into conformance with the plan.

While the Final EIS for the Dillon RMP constitutes compliance with NEPA for the broad-scale decisions made in this Approved Plan, BLM will continue to prepare Environmental Assessments (EAs) and Environmental Impacts Statements (EISs) where appropriate as part of implementation level planning and decision-making.

PLAN IMPLEMENTATION

Plan implementation is a continuous and active process. Decisions presented in the *Management Decisions* section of this Approved Plan are of three types: Immediate, One-Time, and Long-Term.

- *Immediate Decisions*

These decisions go into effect upon signature of the Record of Decision and Approved Plan. These include decisions such as the allocation of lands as available or unavailable for oil and gas leasing, ACEC designations, and OHV designations. Immediate decisions require no additional analysis and provide the framework for any subsequent activities proposed in the planning area. Proposals for actions such as oil and gas leasing, land adjustments, and other allocation-based actions will be reviewed against these decisions/allocations to determine if the proposal is in conformance with the plan.

- *One-Time Decisions*

These types of decisions include those that are implemented after additional site-specific analysis is completed. Examples are implementation of the recommendations to withdraw lands from locatable mineral entry or development of a conservation strategy or habitat management plan. One-time decisions usually require additional analysis and are prioritized as part of the BLM budget process.

- *Long-Term Guidance/Life of Plan Direction*

These decisions include the goals, objectives, and management actions established by the plan that are applied during site-specific analyses and activity planning. This guidance is applied whether the action is initiated by the BLM or by a non-BLM project proponent. Long-term guidance and plan direction is incorporated into BLM management as implementation level planning and project analysis occurs (for example, as a result of the watershed assessment process or receipt of a land use application). The watershed assessment schedule

(see Map 20) establishes the order in which land health evaluations will occur.

Priorities for implementation of "one-time" RMP decisions will be based on several criteria, including:

- current and projected resource needs and demands;
- National and Statewide BLM management direction and program emphasis, and
- funding

General Implementation Schedule of "One-Time" Actions

Decisions in this plan will be implemented over a period of years depending on budget and staff availability. The schedule outlined in Appendix Y establishes tentative timeframes for completion of the "one-time" actions identified in the Approved Plan. Most of these actions require additional analysis and site specific activity planning. This schedule does not include the decisions which are effective immediately upon approval of the plan (usually allocations), or the actions which describe the ongoing management that will be incorporated and applied as site-specific proposals are analyzed and watershed assessments are completed on an ongoing basis.

This schedule will assist BLM managers and staff in preparing budget requests and in scheduling work. However, the proposed schedule must be considered tentative and will be affected by future funding, changing program priorities, non-discretionary workloads, and cooperation by partners and external publics.

Implementation Updates

BLM will prepare an annual update report on the implementation of the RMP. This report will be released in January of the year following the fiscal year reviewed (for example, January 2007 for Fiscal Year 2006) and will be available to the public on the internet, with hard copies available upon request. Annual review of the plan will provide consistent tracking of accomplishments and provide information that can be used to develop annual budget requests to continue implementation.

Maintaining the Plan

Land use plan decisions and supporting information can be maintained to reflect minor changes in data, but maintenance is limited to refining, documenting, and/or clarifying previously approved decisions. Some examples of maintenance actions include:

- Correcting minor data, typographical, mapping, or tabular data errors

- Refining baseline information as a result of new inventory data (e.g., changing the boundary of an archaeological district, refining the known habitat of special status species, or adjusting the boundary of a fire management unit based on updated fire regime condition class inventory, fire occurrence, monitoring data, and/or demographic changes)
- Applying an existing oil and gas lease stipulation to a new area prior to the lease sale based on new inventory data (e.g., apply an existing protective stipulation for sage-grouse to a newly discovered sage-grouse lek).

The BLM expects that new information gathered from field inventories and assessments, research, other agency studies, and other sources will update baseline data and/or support new management techniques, best management practices, and scientific principles. Adaptive management strategies may be used when monitoring data is available as long as the goals and objectives of the plan are met (see the *Adaptive Management* section). Where monitoring shows land use plan actions or best management practices are not effective, modifications or adjustments may occur without amendment or revision of the plan as long as assumptions and impacts disclosed in the analysis remain valid and broad-scale goals and objectives are not changed.

Plan maintenance will be documented in supporting records (see Appendix Z for an example of a Plan Maintenance Roster) and reported in annual planning updates. Plan maintenance does not require formal public involvement, inter-agency coordination, or the NEPA analysis required for making new land use plan decisions.

Changing the Plan

The Approved Plan may be changed, should conditions warrant, through a plan amendment or plan revision process. A plan amendment may become necessary if major changes are needed or to consider a proposal or action that is not in conformance with the plan. The results of monitoring, evaluation of new data, or policy changes and changing public needs might also provide the impetus for an amendment. Generally, an amendment is issue-specific. If several areas of the plan become outdated or otherwise obsolete, a plan revision may become necessary. Plan amendments and revisions are accomplished with public input and the appropriate level of environmental analysis.

PLAN EVALUATION AND ADAPTIVE MANAGEMENT

Plan Evaluation

Evaluation is a process in which the plan and monitoring data are reviewed to see if management goals and objectives are being met and if management direction is sound. Land use plan evaluations determine if decisions are being implemented, whether mitigation measures are satisfactory, whether there are significant changes in the related plans of other entities, whether there is new data of significance to the plan, and if decisions should be changed through amendment or revision. Monitoring data gathered over time is examined and used to draw conclusions on whether management actions are meeting stated objectives, and if not, why. Conclusions are then used to make recommendations on whether to continue current management or to identify what changes need to be made in management practices to meet objectives.

BLM will use land use plan evaluations to determine if the decisions in the RMP, supported by the accompanying NEPA analysis, are still valid in light of new information and monitoring data. Evaluation of the RMP will generally be conducted every five years, unless unexpected actions, new information, or significant changes in other plans, legislation, or litigation triggers an evaluation.

The following estimated evaluation schedule will be followed for the Dillon RMP:

- January 2011
- January 2016
- January 2021
- January 2026

Evaluations will follow the protocols established by the BLM Land Use Planning Handbook (H-1601-1) or other appropriate guidance in effect at the time the evaluation is initiated.

Adaptive Management

As defined by the Office of Environmental Policy and Compliance, adaptive management is a system of management practices based on clearly identified outcomes, monitoring to determine if management actions are meeting outcomes, and, if not, facilitating management changes that will best ensure that outcomes are met or re-evaluated.

As described in the Draft RMP/EIS and the Proposed RMP/Final EIS, the Dillon RMP fosters "adaptiveness" by the presentation of goals and objectives that focus on reaching outcomes rather than identifying inflexible standards and prescriptions that may not be applicable in certain situations.

When land use plan actions or best management practices are found to be ineffective, modifications may occur without amendment or revision of the plan as long as assumptions and impacts disclosed in the analysis remain valid and broad-scale goals and objectives are not changed. This approach, as depicted on Figure 1, uses on-the-ground monitoring, review of scientific information, and consideration of practical experience and common sense to adjust management and modify implementation of the plan to reach the desired outcome.

Figure 1

Four Step Implementation Process

MANAGEMENT DECISIONS

This section of the Approved Plan presents the goals and objectives, land use allocations, and management actions established for public lands managed by the BLM's Dillon Field Office. These management decisions are presented by program area. Not all types of decisions were identified for each program. For instance, only *Goals* and *Actions* were identified in the *Air Quality* section, and thus only *Goals* and *Actions* are described in that section. A *Monitoring* section is also included for each program to describe how the program decisions will be tracked to ensure implementation.

The Draft RMP/EIS and Proposed RMP/Final EIS identified *Desired Future Conditions* for several programs, which are included in this Approved Plan as *Objectives*. Most of the identified objectives (desired future conditions) are long-range in nature and will not be achieved immediately, but rather are assumed to require a period of 20 to 50 years to achieve. Some of the sections from the Draft and Proposed RMPs have been combined or reorganized for ease in reference, but the content remains as contained in the Proposed RMP, except as described in the *Notice of Modifications* and *Clarifications* sections of the ROD.

Data used in development of the Approved Plan are dynamic. The data and maps used throughout the Approved Plan are for land use planning purposes and will be refined as site-specific planning and on-the-ground implementation occurs. Updating data is considered plan maintenance which will occur over time as the RMP is implemented (see the section on *Plan Implementation*). Please note that all acreages presented in the Approved Plan are estimations, even when presented to the nearest acre.

This section is organized alphabetically by program area with the following titles:

Abandoned Mine Lands
Air Quality
Areas of Critical Environmental Concern (ACECs)
Back Country Byways
Cultural Resources
Economic Conditions
Environmental Justice
Fire and Fuels Management
Fish and Special Status Fish
Forest and Woodland Vegetation and Forest Products
Geologic Resources
Hazardous Materials
Indian Trust Resources
Lands and Realty
Livestock Grazing
Minerals (Leasable)
Minerals (Locatable)
Minerals (Saleable/Mineral Materials)
National Trails
Noxious Weeds, Invasive, and Non-Native Species
Paleontological Resources
Rangeland Vegetation
Riparian and Wetland Vegetation
Recreation
Renewable Energy
Social Conditions
Soils
Special Status Plants
Transportation and Facilities
Travel Management and OHV Use
Tribal Treaty Rights

Utility and Communication Corridors
 Vegetation (see Forest and Woodland, Invasive Species,
 Rangeland or Riparian and Wetland Vegetation sections)
 Visual Resources
 Water
 Wild and Scenic Rivers
 Wild Horses and Burros
 Wilderness
 Wilderness Study Areas
 Wildlife and Special Status Birds and Mammals

Maps depicting the management decisions are provided at the back of the document for easy reference.

ABANDONED MINE LANDS

Goal

Protect humans and the environment from exposure to abandoned mine lands while considering associated resource values such as historic resources.

Actions

- 1 Continue to update and refine the inventory of abandoned mine sites on public lands in the planning area.
- 2 Prioritize reclamation of abandoned mine lands based on the degree of threat to human health, the environment, and public safety. Place emphasis on those areas that present serious threats to the environment, especially to water quality, and those that pose safety risks to the public. Conduct any reclamation in accordance with the National Oil and Hazardous Substances Pollution Contingency Plan, following project level planning and analysis under NEPA and other pertinent laws.

Monitoring

Reclamation and mitigation work done on abandoned mine sites will be monitored to ensure compliance with laws and regulations and with the terms of the work order or contract.

Clean-up sites will be monitored to protect and safeguard human health, prevent/restore environmental damage and to limit the BLM's liability. This monitoring includes such things as conducting periodic water and soil sampling, monitoring for revegetation of reclaimed areas, dust control, erosion and other signs of potential danger to human health and harm to the environment.

The number of clean-up efforts in progress on BLM lands in the planning area will be reported in the Annual Program Summary and Planning Update, as well as the number of acres inventoried to identify AML issues.

AIR QUALITY

Goal

Meet the National Ambient Air Quality Standards under the Clean Air Act (as amended in 1977), and prevent significant deterioration of air quality within the Dillon Field Office Resource Area with all authorized actions.

Actions

- 1 Implement the *Western Montana Standards for Rangeland Health* to ensure that air quality meets Montana standards.
- 2 Minimize or prevent air quality degradation throughout the planning area by applying mitigation measures on a project-by-project basis.
- 3 Coordinate with the Montana/Idaho Airshed Group and Montana Department of Environmental Quality.
- 4 Participate in state and tribal smoke management programs in accordance with the EPA Interim Air Quality Policy for Wildland and Prescribed Fires (EPA 1998).
- 5 Develop burn plans for all prescribed burn treatments that include incident and cumulative air quality considerations.
- 6 Require permits where necessary for stationary facilities.

Monitoring

Monitoring of air quality and other conditions conducted by the Smoke Monitoring Unit of the Montana/Idaho Airshed Group, in coordination with Montana DEQ, will be used to determine whether BLM actions that may contribute to air quality concerns (mainly prescribed fire or slash burning) may proceed or be deferred until conditions improve.

The number of BLM actions contributing to any violation of national air quality standards will be tracked annually (expected to generally be none given BLM's participation in the Montana/Idaho Airshed Group). The number of areas/acres that meet the Air Quality standard in the *Western Montana Standards for Rangeland Health* and the total number of areas/acres assessed will also be reported in the Annual Program Summary and Planning Update.

AREAS OF CRITICAL ENVIRONMENTAL CONCERN

Goal

Protect relevant and important values and apply special management where standard or routine management is not

adequate to protect the values from risks or threats of damage/degradation or to provide for public safety from natural hazards.

Allocations

Designate approximately 73,184 acres in the following areas in the Dillon Field Office as Areas of Critical Environmental Concern (see Map 3) due to the need to apply the special management to prevent degradation of the relevant and important values:

- Beaverhead Rock ACEC (120 acres)
- Block Mountain ACEC (8,661 acres)
- Blue Lake ACEC (430 acres)
- Centennial Mountains ACEC (40,715 acres)
- Centennial Sandhills ACEC (1,040 acres)
- Everson Creek ACEC (8,608 acres)
- Muddy Creek/Big Sheep Creek ACEC (13,097 acres)
- Virginia City Historic District ACEC (513 acres)

Actions

1. Review proposed actions within designated ACECs during activity level planning to ensure relevant and important values are protected.
2. Require plans of operation in all ACECs when mineral activities are proposed under 43 CFR Part 3809.
3. Apply the special management identified for each designated ACEC (see Actions 5-12 in each respective ACEC section), as well as standard management provisions that will protect relevant and important values. See Table 3 for a summary of both special and standard management provisions to be applied within the designated ACECs.
4. Monitor relevant and important values within the designated ACECs (see each specific ACEC section for monitoring information).

Table 3
Summary of Management Constraints in ACECs
(including Special Management and Standard RMP Provisions)

	Grazing ¹	Timber ²	Mineral Materials ³	Oil & Gas ⁴	Locatables ⁵	ROWS ⁶	Motorized Travel ⁷
Beaverhead Rock	O	N/A	L	L	W	P	L
Block Mountain	O	N/A	L	L	L	O	L
Blue Lake*	P	P	L	P	L	O	L
Centennial Mountains*	O/L	L/P	L	L/P	L	O/L	L
Centennial Sandhills	O	N/A	L	L	L	O	L
Everson Creek	O	O	L	L	L/W	O	L
Muddy/Big Sheep Creek*	O	N/A	L/P	L	L	O	L
Virginia City	O	O	L	P	W	O	L

O=Open L=Limited or Restricted N/A=Not Applicable P=Prohibited W=Withdraw from Locatable Mineral Entry

*Lands in the Centennial Mountains ACEC that also lie within the Centennial Mountains WSA boundary, lands in the Blue Lake ACEC that lie within the Axolotl Lakes WSA, and lands in the Muddy/Big Sheep Creek ACEC that also lie within the Hidden Pasture WSA will be managed under the *Interim Management Policy for Lands Under Wilderness Review*, unless more restrictive provisions are outlined in the plan or in ACEC special management.

¹Lands that are available for grazing in ACECs will be managed to meet the *Western Montana Standards for Rangeland Health*, with the exception of the Centennial Sandhills ACEC which may need to deviate from some of the standards in order to protect and enhance the relevant and important values.

²Where commercial timber is available, treatment/harvest within the ACEC will need to be conducted in a manner that protects the relevant and important values

³When considering the authorization of mineral materials sites within ACECs, activities must not degrade relevant and important values, or the activity will not be authorized.

⁴Oil and gas leasing stipulations to protect the relevant and important values in the ACEC will be applied to areas available for lease, and will generally limit oil and gas activity at least in portions of the ACEC boundaries.

⁵Relevant and important values in ACECs not withdrawn from mineral entry will still be protected under standard provisions that allow protective measures to be placed on locatable mineral activities conducted under 43 CFR Part 3809.

⁶Authorization of rights-of-ways is discretionary, and measures to protect relevant and important values in ACECs that are not closed to rights-of-ways may be required, or the authorization may be denied.

⁷Motorized travel in all ACECs is restricted to routes designated as open in the Approved Plan.

BEAVERHEAD ROCK ACEC

The Beaverhead Rock ACEC (see Map 4) is located fifteen miles northeast of Dillon, Montana. There are approximately 120 acres of public land in this area. This includes the N1/2 of the NW1/4 and the SW1/4 of the NW1/4 of Section 22, Township 5 South, Range 7 West. Approximately 70 acres of land adjacent to, and south of, this parcel of public land are owned by the State of Montana and managed by the Department of Fish, Wildlife and Parks as a primitive state park.

Beaverhead Rock is one of a few physiographic features mentioned specifically in the journals of Lewis and Clark and is a prominent and important feature of the Lewis and Clark National Historic Trail. While traveling with Lewis and Clark and the Corps of Discovery on August 8, 1805, Sacajawea recognized the point of a high plain. Sacajawea's people knew this prominent landscape feature as "the beavers' head". Recognition of this feature was important to the Corps of Discovery because it informed the company that the land of the Shoshone was not far and they might obtain horses for faster cross country travel. It also told them that the Continental Divide was close at hand where they would encounter rivers that flow into the Pacific.

- 5 Apply the following special management in the ACEC boundary (see Map 4) to protect the historic values associated with Beaverhead Rock itself, a prominent and important feature of the Lewis and Clark National Historic Trail.

- a. Prohibit new right-of-ways.
- b. Withdraw the 120 acres from locatable mineral entry.
- c. Consider transfer of lands within the ACEC from federal ownership only if the State of Montana applies for a conveyance under the Recreation and Public Purposes Act in order to manage these lands in concert with the adjacent primitive park administered by Montana Fish, Wildlife and Parks. Otherwise, retain lands in federal ownership.
- d. Evaluate any other proposals against the need to protect this recognizable landmark along the Lewis and Clark National Historic Trail.

Under standard management, No Surface Occupancy stipulations would be applied to any oil and gas leases in the ACEC.

Monitoring

A long term monitoring program will be established for the Beaverhead Rock ACEC and will include visitation of the designated ACEC to establish baseline information on the current condition of cultural resource values. Once the baseline condition assessment information has been compiled, the ACEC will be monitored at least once every four years to identify any potential adverse impacts that might occur and identify trends in resource condition and/or deterioration, and to determine whether any actions taking place in the area are causing detrimental changes to the cultural values deemed relevant and important. Any changes will be noted and recorded in the cultural resource data base and reported to the Field Manager.

BLOCK MOUNTAIN ACEC

The Block Mountain ACEC (see Map 5) is located fifteen miles northeast of Dillon, Montana. There are approximately 8,661 acres of public land in this area. These lands lie in portions of Sections 14, 15, 21, 22, 23, 24, 25, 26, 27, 28, 33, 34, and 35 of Township 4 South, Range 8 West, and portions of Sections 2, 3, 4, 9, 10, and 11 in Township 5 South, Range 8 West. This area exhibits low topographic relief which provides for easy access. The area contains exceptional fold and thrust belt structure that is easily visible, making it a premier location to teach geologic field mapping. Each year a number of geology field camps from around the world visit this site. If major disturbances were to occur, these values could be lost.

- 6 Apply the following special management in the ACEC boundary (see Map 5) to protect the exceptional fold and thrust belt structure and to ensure continued access to the area:
 - a. Evaluate the density and placement of any facilities or land use authorizations proposed in the area and require measures to protect the integrity of the geologic features.
 - b. Require permits for educational uses within the area.
 - c. Develop educational materials describing access to the area and the features within and appropriate use protocols.
 - d. Evaluate all mineral use proposals within the area and identify and mitigate impacts to important features in the area.

Monitoring

On-site monitoring of the Block Mountain ACEC area will be done on a periodic basis. Monitoring will include checking the access routes to the area for road conditions, locked gates and other obstructions. It will also note the condition of signs, check for litter, weeds and for any destruction of geologic features. Conflicts between visitors to the area and the adjacent land owners will also be noted.

The density and placement of facilities or land use authorizations proposed in the area will also be reviewed to insure the integrity of the geologic features is protected. Any significant problems will be reported to the Field Manager.

BLUE LAKE ACEC

The Blue Lake ACEC (see Map 6) is located twelve miles southwest of Ennis, Montana, and supports the only known population of axolotl in southwest Montana and possible anywhere else in Montana. There are approximately 430 acres of public lands in this area. These lands lie in portions of Sections 7, 18, and 19 in Township 7 South, Range 2 West. This ACEC lies entirely within the Axolotl Wilderness Study Area (WSA).

The axolotl is a neotenic form of tiger salamander that retains gills and an aquatic lifestyle from living in a cold, relatively sterile environment, with no fish. Research has shown that these animals metamorphose into normal terrestrial adult salamanders when water temperatures exceed approximately 72 degrees F. for more than 30-45 days. No other suitable habitat is present in the Axolotl Lakes area or in the general vicinity where other axolotl populations could be transplanted. The area is sensitive because any activity that contributes to the organic enrichment of Blue Lake or increased water temperatures could decimate the axolotl.

- 7 Apply the following special management in the ACEC boundary (see Map 6) to protect the only known population of axolotl in southwest Montana (possibly in Montana):
 - a. Do not authorize activities contributing to nutrient enrichment or increased water temperature in Blue Lake (e.g., livestock grazing, timber harvest, wheeled vehicle use, etc).
 - b. Place or construct barriers to prevent unauthorized motorized travel into the area
 - c. Require no surface occupancy for mineral leasing (under standard management the area is already unavailable for oil and gas leasing since it lies within the Axolotl WSA).
 - d. Develop interpretive materials about the axolotl to inform the public of this special value

Under standard management, the ACEC is subject to the *Interim Management Policy for Lands Under Wilderness Review*, unless more restrictive provisions are outlined. The lands are also not available for long-term grazing under standard management.

Monitoring

Water temperature in Blue Lake will be monitored periodically between mid-June and September. Fences will be maintained periodically to ensure exclusion livestock and wheeled vehicles. The axolotl population in Blue Lake will be sampled in coordination with Montana Fish, Wildlife and Parks at least every five years to identify population structure and ensure that all age class cohorts are represented.

CENTENNIAL MOUNTAINS ACEC

The Centennial Mountains ACEC (see Map 7) includes the public lands lying south of the Centennial Valley road from Red Rock Pass to the West Fork of Corral Creek. There are approximately 40,715 acres of public land in this area. About 55 percent of the area is included in the Centennial Mountains Wilderness Study Area and is provided protection under the BLM's *Interim Management Policy for Lands Under Wilderness Review*.

The area is an ACEC based on the habitat it contains for grizzly bear, lynx and wolf, its use as a wildlife migration corridor, its outstanding scenic value, and for the only known occurrence in Montana of Whipple's beardtongue. The area provides relatively intact habitat with limited evidence of human-caused impacts, and provides an important route for wildlife migration and movement between high security habitats. The Continental Divide Trail traverses this area and passes through some of the highest quality scenic values in southwest Montana. The dramatic 3,000 foot rise of the northern face of the Centennial Mountains is a well-known landmark in the region. The Taylor Mountain area located between Tom Creek and Odell Creek contains the only known habitat in Montana for Whipple's beardtongue.

- 8 Apply the following special management in the ACEC boundary (see Map 7) to protect the habitat it contains for grizzly bear, lynx, and wolf, its use as a wildlife migration corridor, its outstanding scenic value, and the only known occurrence in Montana of Whipple's beardtongue (in the Taylor Mountain area).
 - a. Incorporate landscape design principles into vegetation treatments to maintain scenic values
 - b. Do not authorize new permanent roads within the ACEC to maintain unfragmented habitat for wildlife migration
 - c. Evaluate proposed activities, including backcountry helicopter operations and winter recreational use, for their potential to affect important and relevant values in the area and do not permit any activities that interfere with protection of those values.
 - d. Allow livestock use as currently authorized. Evaluate any proposed changes in grazing, including time and intensity of use, for impacts on relevant and important values and allow if relevant and important values in the ACEC are maintained or enhanced.
 - e. Do not allow conversion of grazing permits from cattle to sheep to avoid potential conflicts with grizzly bear.

Under standard management, the eastern portion of the ACEC is subject to the *Interim Management Policy for Lands Under Wilderness Review*, unless more restrictive provisions are outlined either as standard provisions in the plan, or as special management.

Monitoring

Scenic quality in the Centennial Mountains ACEC will be monitored as described in the *Visual Resources* monitoring section. The amount and extent of surface-disturbing activities that result in habitat fragmentation in the Centennial Mountains ACEC will be tracked on an annual basis and reported to the USFWS, focusing on road density changes and potential effects on grizzly bear, and changes in forest habitat suitability for lynx. Monitoring of the Whipple's Beardtongue will be carried out as described under the *Special Status Plants* monitoring section.

CENTENNIAL SANDHILLS ACEC

The Centennial Sandhills ACEC (see Map 8) is located six miles north of Lakeview, Montana. There are approximately 1040 acres of public land in this area within portions of Sections 21, 22, and 23 of Township 13 South, Range 2 West. The area contains one of only two sand dune complexes in Montana, and provides habitat provides for special status plant species.

The area supports ecological processes related to sand dune migration, which provides habitat for several special status plant species including sand wildrye, Fendler cat's-eye, and painted milkvetch. Loss of sand dune activity and other disturbances could put these values at risk.

- 9 Apply the following special management within the ACEC boundary (see Map 8) to protect special status plant habitat associated with the sand dunes in the area:
 - a. Implement management strategies to destabilize sand dunes and maintain the unique habitat within the sandhills area and create early seral habitat for special status plant species (for example, treat with prescribed fire followed by short-term high intensity grazing). Non-mechanical disturbances are preferred, but mechanical disturbances may be employed if non-mechanical methods are not effective at maintaining habitat.
 - b. Continue inventory, monitoring and research studies of special status plant species and habitats.
 - c. Prohibit aerial application of herbicides and pesticides within the ACEC boundary. Other weed control methods may be used within the ACEC boundary but must be designed to protect special status plants within the area.

Other standard management provisions that will assist in protection of the relevant and important values include:

- No authorization of mineral material sites within the ACEC boundary
- No Surface Occupancy stipulations on oil and gas leasing within 0 mile of special status plants.
- Limiting vehicular travel to roads and trails designated as "open"

Monitoring

The Centennial Sandhills ACEC will be monitored to determine the effectiveness of special management and the condition of the area's values, such as the plant communities and populations. Allotments within the Centennial Sandhills ACEC will be evaluated on a regular basis and at that time ACEC monitoring will be part of the process. Species-specific monitoring of plants will be carried out as described under the *Special Status Plants* monitoring section.

EVERSON CREEK ACEC

This Everson Creek ACEC (see Map 9) is located fifteen miles southwest of Grant, Montana, containing approximately 8,608 acres of public land. The Everson Creek area contains perhaps the oldest archaeological site in Montana as well as several chert quarry and workshop sites. The extensive cultural resources are important both to archaeologists and to Native Americans, and comprise an archaeological district. These resources are extremely fragile and susceptible to damage.

- 10 Apply the following special management within the ACEC boundary (see Map 9) to protect the cultural resources/archaeological district that are important to both archaeologists and to Native Americans:
 - a. Withdraw 2,160 acres of the 8,608 acre area from locatable mineral entry to limit new exploration and development
 - b. Prohibit new road construction in the area unless it avoids all cultural resources and would be reclaimed to original contour.
 - c. Evaluate any new, proposed projects or land use authorizations and require mitigation, or possible abandonment, to prevent surface disturbance and visual intrusions into the area.

Standard management also provides for continued coordination with tribal representatives, as well as standard procedures for dealing with properties and districts eligible to the National Register of Historic Places (NRHP). No Surface Occupancy stipulations would also be applied to any oil and gas leases under standard management.

Monitoring

A long term monitoring program will be established for the Everson Creek ACEC and will include the visitation of a representative sample of cultural resource values within the designated ACEC to establish baseline information on the current condition of cultural resource values. Once the baseline condition assessment information has been compiled, the ACEC will be monitored at least once every four years to identify any potential adverse impacts that might occur and identify trends in resource condition and/or deterioration, and to determine whether any actions taking place in the area are causing detrimental changes to the cultural values deemed relevant and important. Any changes will be noted and recorded in the cultural resource data base and reported to the Field Manager.

MUDDY CREEK/BIG SHEEP CREEK ACEC

The Muddy Creek/Big Sheep Creek ACEC (see Map 10) lies four miles southwest of Dell, Montana, including portions of the Muddy Creek drainage and continuing upstream along the Big Sheep Creek drainage to its confluence with Deadman Creek. The area contains approximately 22,829 acres of public land with relevant and important scenic values along Big Sheep Creek and the cultural resource values throughout. Portions of the ACEC fall within the Hidden Pasture Wilderness Study Area.

The geomorphology along Muddy Creek proper has resulted in deeply stratified buried cultural deposits located on public lands. There is also a high concentration of rock art pictograph sites. The geomorphological regime and highly erodible soils coupled with the density of known archaeological sites in the area results in circumstances that make the area vulnerable to adverse change. The area provides spectacular scenery, characterized by high palisades and timbered peaks that rise dramatically from the canyon floor. Big Sheep Creek passes through three narrow canyons with intervening open valleys and contains scenic values not typically found in the planning area.

- 11 Apply the following special management within the ACEC boundary (see Map 10) to protect the scenic values along Big Sheep Creek and the cultural values throughout the area:
 - a. Require Plans of Operation for locatable mineral proposals
 - b. Apply special provisions as necessary to protect cultural resources during any project activities (including but not limited to locatable mineral proposals)
 - c. Apply special provisions if necessary to protect scenic values during any project activities (including but not limited to locatable mineral proposals)

Under standard management, portions of the ACEC are not available for mineral material authorizations. Standard management also provides procedures for dealing with properties and districts eligible to the National Register of Historic Places (NRHP). No Surface Occupancy stipulations would be applied to any oil and gas leases under standard management, except for those portions within the Hidden Pasture WSA, which would be unavailable for lease. Any lands in the ACEC that fall within the Hidden Pasture WSA boundary are subject to the *Interim Management Policy for Lands Under Wilderness Review*, unless more restrictive provisions are outlined under other standard or special management.

Monitoring

A long term monitoring program will be established for the Muddy Creek/Big Sheep Creek ACEC and will include the visitation of a representative sample of cultural resource values within the designated ACEC to establish baseline information on the current condition of cultural resource values. Once the baseline condition assessment information has been compiled, the ACEC will be monitored at least once every four years to identify any potential adverse impacts that might occur and identify trends in resource condition and/or deterioration, and to determine whether any actions taking place in the area are causing detrimental changes to the cultural values deemed relevant and important. Any changes will be noted and recorded in the cultural resource data base and reported to the Field Manager.

VIRGINIA CITY HISTORIC DISTRICT ACEC

The Virginia City Historic District ACEC (see Map 11) is located in Madison County, Montana and includes the public lands in and near Virginia City that lie within the National Historic Landmark boundary. There are approximately 513 acres of public land in portions of Sections 21, 22, 23, 24, 26, 27, 34, and 35, Township 6 South, Range 3 West. The public lands and the landscape they contain, along with recorded historic properties relating to the mining history and settlement of Virginia City add value to the Virginia City experience. Activities on public lands surrounding Virginia City especially make the area vulnerable to adverse change should the character of the viewshed be impacted.

- 12 Apply the following special management within the ACEC boundary (see Map 11) to protect the historic resources and associated landscape within the Virginia City Historic landmark boundary.
 - a. Withdraw 513 acres from locatable mineral entry to limit new exploration and development
 - b. Examine current claims to determine validity when mining proposals may impact historic resources or the landscape
 - c. Consider transfer of the lands only if the State of Montana applies for conveyance under the Recreation and Public Purposes Act to facilitate management in concert with other historic properties in Virginia City

Standard management also provides procedures for dealing with properties and districts eligible to the National Register of Historic Places (NRHP). Other existing protocols for considering impacts to National Historic Landmarks will help protect the relevant and important values. The area would be unavailable for oil and gas leasing under standard provisions as well.

Monitoring

A long term monitoring program will be established for the Virginia City Historic District ACEC and will include the visitation of a representative sample of cultural resource values within the designated ACEC to establish baseline information on the current condition of cultural resource values. Once the baseline condition assessment information has been compiled, the ACEC will be monitored at least once every four years to identify any potential adverse impacts that might occur and identify trends in resource condition and/or deterioration, and to determine whether any actions taking place in the area are causing detrimental changes to the cultural values deemed relevant and important. Any changes will be noted and recorded in the cultural resource data base and reported to the Field Manager.

BACK COUNTRY BYWAYS

Goal

Highlight and interpret scenic, historic, archaeological or other interest values associated with Back Country Byways in partnership with communities, interest groups, and state and federal agencies.

Allocation

Maintain the Back Country Byway designation along the current route traversing the Medicine Lodge and Big Sheep Creek areas (approximately 50 miles). See Map 12.

Action

- 1 Implement the plan for the Big Sheep Creek National Back Country Byway, with additional emphasis placed on coordinating with local residents in that area to develop information and interpretive materials for visitors to the byway that highlight multiple uses of public lands and land stewardship in the area.

Monitoring

The Big Sheep Creek Back Country Byway will continue to be monitored as part of the overall recreation monitoring efforts. See the *Recreation* section.

CULTURAL RESOURCES

Goal 1

Preserve and protect significant cultural resources and ensure that they are available for appropriate uses by present and future generations.

Allocations

Assign identified/recorded cultural resources to cultural resource use categories in accordance with BLM Manual 8110. Use categories are described in Appendix C.

Actions

- 1 Prepare and implement cultural resource management plans on a case-by-case basis as needed.
- 2 Monitor a minimum of 10 previously recorded cultural resources (allocated to the *Conservation for Future Use* and/or *Traditional Use* categories) per year to update the site form to current professional standards and to assess the current condition and trend of significant resource values.
- 3 Prepare nomination packages for Everson Creek and Muddy Creek archaeological districts to formally list on the National Register of Historic Places.

- 4 Protect the relevant and important cultural resource values in the Beaverhead Rock ACEC (see Map 4) with the following special management:
 - a. Prohibit new right-of-ways
 - b. Withdraw 120 acres from locatable mineral entry to limit new exploration and development
 - c. Consider transfer of the lands within the ACEC from federal ownership only if the State of Montana applies for conveyance under the Recreation and Public Purposes Act in order to manage these lands in concert with the adjacent primitive park administered by Montana Fish, Wildlife and Parks. Otherwise, retain lands in federal ownership.
 - d. Evaluate any other proposals against the need to protect this recognizable landmark along the Lewis and Clark National Historic Trail
- 5 Protect the relevant and important cultural resource values in the Everson Creek ACEC (see Map 9) with the following special management:
 - a. Withdraw 2,160 acres of the 8,608 acre area from locatable mineral entry to limit new exploration and development
 - b. Prohibit new road construction in the area unless it avoids all cultural resources and would be reclaimed to original contour
 - c. Evaluate any new, proposed projects or land use authorizations and require mitigation, or possible abandonment, to prevent surface disturbance and visual intrusions into the area
- 6 Protect the relevant and important cultural resource values in the Muddy Creek/Big Sheep Creek (see Map 10) with the following special management:
 - a. Require Plans of Operation for locatable mineral proposals
 - b. Apply special provisions as necessary to protect cultural resources during any project activities (including but not limited to locatable mineral proposals)
- 7 Protect the relevant and important cultural values in the Virginia City Historic District ACEC (see Map 11) with the following special management:
 - a. Withdraw 513 acres from locatable mineral entry to limit new exploration and development
 - b. Examine current claims to determine validity when mining proposals may impact historic resources or the landscape
 - c. Consider transfer of the lands only if the State of Montana applies for conveyance under the Recreation and Public Purposes Act to facilitate management in concert with other historic properties in Virginia City

Goal 2

Reduce imminent threats from natural or human-caused deterioration, or potential conflict with other resource uses, by identifying priority geographic areas for new field inventory, based upon a probability for unrecorded significant resources.

Action

- 1 Coordinate proactive cultural resource inventory under Section 110 of the National Historic Preservation Act with BLM watershed assessment efforts in the planning area. Conduct inventory on a watershed basis using a stratified random nonaligned sample of 40 acre quadrats. Base the stratification of the sample on suitability factors including distance from water, slope and aspect. Inventory an estimated 400 acres in high site probability areas and 100 acres in low site probability areas each year.

Goal 3

Ensure that all authorizations for land and resource use avoid inadvertent damage to federal and nonfederal cultural resource in compliance with Section 106 of the National Historic Preservation Act.

Actions

- 1 Comply with Section 106 of the National Historic Preservation Act for all federal undertakings.
- 2 Avoid impacts to significant cultural resources (resources considered eligible for the National Register) by project redesign, project abandonment, and/or mitigation of adverse impacts through data recovery/alternative means as a last resort.
- 3 Manage historic mining properties in accordance with the programmatic agreement between BLM, Forest Service and the Montana SHPO or with procedures as amended to BLM-SHPO Protocol Agreement.

Goal 4

Promote stewardship, conservation, and appreciation of cultural resources through educational and public outreach programs in accordance with the BLM Heritage Education program.

Actions

- 1 Design cultural resource awareness programs to enhance the public appreciation of cultural resource values. These programs include educational lectures/presentations as well as interpretive displays.
- 2 Encourage archaeological research and education programs only at sites designated for *Experimental and Scientific Use* that are in imminent peril of damage or destruction by natural or man-caused events.

- 3 Conduct monitoring, site stabilization, and outreach as appropriate opportunities arise.
- 4 Conduct building preservation and stabilization activities as opportunities arise, depending upon the formation of outside partnerships.

Goal 5

Consult with Native Americans to identify any of their cultural values or religious beliefs that may be affected by BLM authorizations or actions.

Actions

- 1 Conduct required consultations with federally recognized Indian tribes as sovereign nations in a government-to-government relationship with the United States.
- 2 Consult with tribal groups to identify and protect Traditional Cultural Properties.

Monitoring

Goals 1 and 3

A minimum of 10 previously recorded cultural resource properties that are listed on the National Register of Historic Places or determined eligible for listing, and allocated to the Conservation for Future Use and/or Traditional Cultural Use categories will be visited on an annual basis to update the site form to current professional standards, and to assess the current condition and trend of significant resource values.

Visitation of the previously recorded cultural properties or designated ACEC's will be made by the cultural resource specialist or designated representative. The purpose of the visits will be to monitor the condition of the site(s) and document any disturbance or deterioration noted. The condition of the site and other data collected will be entered into the cultural data base. If the sites are listed on the National Register of Historic Places, or have been determined eligible for listing, consultation with the Deputy Preservation Officer and State Historic Preservation Officer will be conducted, when necessary, to determine the appropriate action to stop the deterioration of the site, provide mitigation, or, in the case of criminal removal or damage to site materials, determine the appropriate legal action to be taken.

A long term monitoring program will be established for the four designated Areas of Critical Environmental Concern containing cultural resources values: 1) Beaverhead Rock; 2) Everson Creek; 3) Muddy Creek/Big Sheep Creek; and 4) Virginia City. The long term monitoring program will include the visitation of a representative sample of cultural resource values within each of the designated ACECs to establish baseline information on the current condition of cultural resource values. Once the baseline condition as-

essment information has been compiled, a minimum of one of each of the four ACEC's will be monitored on an annual basis to identify any potential adverse impacts that might occur and identify trends in resource condition and/or deterioration, and to determine whether any actions taking place in the area are causing detrimental changes to the cultural values deemed relevant and important. Any changes will be noted and recorded in the cultural resource data base and reported to the Field Manager.

Goal 2

A periodic review of the cultural resource program will be conducted to ensure that the program is meeting established parameters for proactive cultural resources inventory under Section 110 of the National Historic Preservation Act.

The number of acres inventoried by BLM under Section 110 will be reported in the Annual Program Summary and Planning Update.

Goal 4

The number of outreach programs and partnership projects conducted on an annual basis will be reported in the Annual Program Summary and Planning Update.

Goal 5

A minimum of one "face-to-face" project coordination and general consultation meeting will be held on an annual basis with the appropriate representatives of the both the Confederated Salish and Kootenai Tribes of the Flathead Reservation, and the Shoshone-Bannock Tribes of the Fort Hall Reservations. Consultation meetings will be held with the appropriate representatives of other tribes as requested or as deemed necessary. Additional project specific coordination will be conducted as necessary, particularly for projects involving timber sales, land exchanges, oil and gas development, etc., which will also involve notification by mail and telephone conversation. The appropriate tribal representatives will also be maintained on the Field Office NEPA and project notification mailing lists.

ECONOMICS

Goal

Provide for a diverse array of stable economic opportunities in an environmentally sound manner.

Action

- 1 Evaluate and disclose impacts of project proposals on a case-by-case basis when it appears actions taken by the BLM Dillon Field Office have the potential to affect economic conditions.

Monitoring

BLM records will be used to determine the amounts of commodities generated from BLM lands providing economic

benefit (AUMs, board feet, etc.). The recreation management information system and other site-specific information will be used to estimate visitor use levels. Employment levels in the Dillon Field Office will be tracked using BLM payroll records. These numbers will be reported in the Annual Program Summary and Planning Update.

ENVIRONMENTAL JUSTICE

Goal

Identify and remediate to the extent possible disproportionate negative effects to minority or low income populations per Executive Order 12898 titled "*Federal Action to Address Environmental Justice in Minority Populations and Low-Income Populations.*"

Action

- 1 Evaluate and disclose impacts of project proposals on a case-by-case basis and where practical, avoid consequences that place a disproportionate share of negative environmental consequences on any particular populations covered by EO 12898.

Monitoring

The number and type of actions projected to result in disproportionate negative effects to minority or low income populations will be reported in the Annual Program Summary and Planning Update. This information will be identified from environmental documents completed for actions in the planning area.

FIRE AND FUELS MANAGEMENT

The terminology used in this section has been adjusted from the terminology in the Draft and Proposed RMPs to be consistent with common language developed by the National Fire and Aviation Executive Board. This terminology provides consistency with interagency federal wildland fire policy and related documents. As a result, the section is organized differently than presented in the Proposed RMP/Final EIS, but contains the same goals, objectives, allocations, and management actions.

There are three distinct types of wildland fire, including wildfire, wildland fire use, and prescribed fire. Figure 2 depicts the relationship between these terms, which are defined as follows:

Wildland Fire. Any non-structure fire that occurs in the wildland.

Wildfire. An unplanned, unwanted wildland fire, including unauthorized human-caused fires, escaped wildland fire use events, escaped prescribed fire projects, and all other wildland fires where the objective is to put the fire out.

Wildland Fire Use. The application of the appropriate management response to naturally ignited wildland fires to accomplish specific resource management objectives in pre-defined designated areas outlines in Fire Management Plans.

Prescribed Fire. Any fire ignited by management actions to meet specific objectives. A written, approved prescribed fire plan must exist, and NEPA requirements must be met, prior to ignition.

Figure 2
Relationship of Wildfire, Prescribed Fire, and
Wildland Fire Use
as part of overall Wildland Fire

Wildland Fire

Goal 1

Provide the appropriate management response on all wildland fires, with an emphasis on firefighter and public safety. When assigning priorities, decisions will be based on relative values to be protected commensurate with fire management costs.

Allocations

Manage wildland fire in the following areas/FMZs covering approximately 37,573 acres of public land according to Category A provisions:

- Beaverhead/Jefferson Valleys
- Madison Valley

Wildfire is not desired in these areas. The fire management emphasis should be placed on prevention, detection, rapid response, use of appropriate suppression techniques and tools, and non-fire fuels treatment. Fire suppression may be required to prevent unacceptable resource damage or to prevent loss of life and property. Emphasis should be focused on those actions that will reduce unwanted ignitions and reduce losses from unwanted wildfires.

Manage wildland fire in the following areas/FMZs covering approximately 72,867 acres of public land according to Category B provisions:

- Beaverhead Mountains
- Big Sheep/Medicine Lodge Back Country Byway

Unplanned fire is likely to cause negative effects, but these effects can be mitigated or avoided through fuels management (e.g., prescribed fire), prevention of human caused fire, or other strategies. Emphasize prevention/mitigation programs that reduce unwanted fire ignitions and resource threats. For unplanned wildfire, suppression is the objective for this category. Fire and non-fire fuels treatments are utilized to reduce the effects of unplanned wildfire. Restorative treatments may consist of multiple non-fire treatments before the use of fire will be considered.

Manage wildland fire in the following areas/FMZs covering approximately 776,925 acres of public land according to Category C provisions:

- Big Hole River Corridor
- Blacktail Mountains
- Blacktail/Horse Prairie
- Centennial
- East Madison
- Gravelly Mountains
- McCartney/Rochester
- SE Foothills/Pioneers
- Sweetwater/Ruby
- Tendoy Mountains
- Tobacco Root Mountains

Fire is desired to manage ecosystems but there are significant constraints that must be considered for its use. These constraints could include critical wildlife habitat, air quality or T&E species. Resource considerations could be described in terms of maximum acreage, time of year or as burned acres per decade from all types of fire. These areas receive lower suppression priority in multiple wildfire situations. Fire and non-fire fuels treatments may be utilized to ensure constraints are met or to reduce any hazardous effects of unplanned wildfire.

Manage wildland fire in the following area/FMZ covering approximately 13,665 acres of public land according to Category D provisions:

- North Rubys

Fire is desired, and there are no constraints associated with resource conditions or social, economic, or political considerations (e.g., where natural and management-ignited fire may be used to achieve desired objectives, such as to improve vegetation or watershed condition). These areas offer the greatest opportunity to take advantage of the full range of options available for managing wildfire under the appropriate management response.

Map 13 depicts the Fire Management Zones (FMZs) and shows the locations of public land by category. FMZ descriptions are found in Appendix D.

Actions

- 1 Implement fire preparedness, prevention, and suppression on BLM land through the interagency offset and six party fire protection agreement giving responsibility to the Beaverhead-Deerlodge National Forest and the DNRC.
- 2 Continue to implement an aerial detection plan in cooperation with other fire management agencies in the area.
- 3 Use of retardant in Wilderness Areas or Wilderness Study Areas (WSA) would be avoided and would require line officer approval.
- 4 Use of heavy equipment would be restricted to areas outside of Wilderness or WSAs.
- 5 Minimum Impact Suppression Tactics would be used when working in WSAs or Wilderness areas, following the *Interim Management Policy and Guidelines for Lands Under Wilderness Review* (H-8550-1).
- 6 Manage naturally ignited wildland fires in the Bear Trap Unit of the Lee Metcalf Wilderness Area under the prescription guidelines established in the Bear Trap Unit of the Lee Metcalf Wilderness Area Fire Management Plan.
- 7 Prioritize fire management activities by their risk to life and property across the planning area. Fires that are adjacent or near wildland urban interface will have the highest priority for fire suppression.
- 8 Maintain the direction for fire management to protect other resource values provided in the BLM Statewide Fire Management Plan/ Environmental Assessment Plan Amendment for Montana and the Dakotas (USDI-BLM 2003b).

Goal 2

Restore and maintain desired ecological conditions and fuel loadings through use of prescribed fire, wildland fire use, and other treatment methods.

Actions

- 1 Place priority on fuels reduction in wildland urban interface areas. Prioritize treatments by comparing historical fire regimes and current fire severity. Focus management on maintaining fire dependent ecosystems and restoring those outside their natural balance through mechanical, chemical, and prescribed fire treatments.
- 2 Use both prescribed fire and mechanical treatments to treat conifer encroachment in the non-forest habitat types, for aspen restoration and as a post-harvest treat-

ment in timber harvest areas. See the *Rangeland Vegetation* and *Forest and Woodland Vegetation* sections for treatment proposals and acres.

- 3 Allow the use of prescribed fire and associated tools (including mechanical treatments if necessary) in warm and dry forested habitat types and conifer encroachment within Wilderness Study Areas where it is determined wilderness values would be enhanced. Use of prescribed fire and associated tools in WSAs would be limited to areas where fire history evidence correlates to historically frequent fire events. An additional condition would be that treatment result in fuel configurations that would allow the potential to effectively manage the movement of fire if it were to move out of the WSA. Subsequent fire suppression activities would then be limited to locations outside the WSA except where emergencies threaten life or adjacent private lands.
- 4 Follow the *Interim Management Policy for Lands Under Wilderness Review* (H-8550-1), and restrict equipment use in Wilderness and Wilderness Study Areas in accordance with minimum impact suppression tactics.
- 5 Coordinate all vegetation treatment projects using prescribed fire with FWP and adjacent landowners.
- 6 Develop burn plans for all prescribed burn treatments and include incident and cumulative air quality considerations, as well as other resource considerations.

Goal 3

Use rehabilitation to mitigate the adverse effects of fire on the soil, vegetation, and water resources in a cost effective manner.

Actions

- 1 Consider if emergency fire rehabilitation is necessary following a wildland fire, depending on the situation.
- 2 If necessary, pursue funding and follow the process outlined in BLM's Emergency Fire Rehabilitation Handbook (H-1742-1) and Appendix E. Separate environmental analysis will only be completed for emergency fire rehabilitation projects that are outside the scope of activities described in **Appendix E**.

Monitoring

Goal 1

Monitoring will determine whether fire management strategies, practices, and activities are meeting resource management objectives and concerns. Fire management plans and policies will be updated as needed to keep current with national and state fire management direction. Scheduled program reviews (post-season fire review) will be conducted

to evaluate fire management effectiveness in meeting goals and to re-assess program direction.

Goal 2

Pre-fire condition and post-fire effects will be determined by monitoring vegetative response to treatments and progress towards meeting objectives. Monitoring methods may include fuels and vegetation transects, photo points, density, cover and frequency plots, and ocular estimates. As available, applicable remote sensing data will also be incorporated into ecological condition monitoring. The number of acres in Condition Class 1, 2, and 3 will be re-evaluated during the watershed assessment process, and tracked and reported in the Annual Program Summary and Planning Update.

Goal 3

Wildfire rehabilitation effectiveness monitoring studies will be encouraged to determine whether emergency rehabilitation objectives are met. Monitoring requirements and methods will be project specific.

FISH and SPECIAL STATUS FISH

Goal 1

Manage habitat for resident coldwater species that are of high economic, social, or scientific values.

Goal 2

Ensure that aquatic habitat is of suitable quality to support a diversity of plant and animal communities.

Objectives (Desired Future Conditions, apply to all Goals)

Streams have sufficient flows, provide habitat diversity, and exhibit conditions that support coldwater fisheries, including:

- A diversity of instream habitat structure is present
- Composition and quantity of streambed materials are appropriate for site potential
- Riparian vegetation and stream channel morphology contribute to maintaining appropriate water temperatures (generally <70 degrees F).
- Macroinvertebrate diversity and abundance reflect high water quality.

Actions

- 1 Continue or initiate fish habitat inventory, survey and monitoring to document and monitor trends in fishery habitat.
- 2 Use the format developed in conjunction with the Beaverhead-Deerlodge National Forest (see Appendix F) to complete biological evaluations for projects to determine effects on special status species.

- 3 Coordinate with appropriate entities and agencies, especially FWP and adjoining landowners, as opportunities to enhance fish habitat are identified.
- 4 Coordinate with FWP on fisheries introduction proposals and concerns over fishing regulations.
- 5 Manage fish habitat to achieve the *Western Montana Standards for Rangeland Health*. In addition, manage habitats along streams designated as Class 1 (blue ribbon) fisheries and those containing special status species to achieve potential channel types and dimension or show an upward trend within 15 years with the intent of enhancing fish habitat (see Map 14, oversized)
- 6 Initiate habitat restoration on fishery streams that are not in proper functioning condition. Place top priority for habitat restoration and improvement of habitats supporting arctic grayling and habitats containing 99 percent and above genetically pure westslope cutthroat trout. Place next priority on habitats that support from 90 up to 99 percent genetically pure westslope cutthroat trout, Class 1 (blue ribbon) streams, and other fisheries, respectively.
- 7 Implement habitat improvement projects where site-specific assessments have identified habitat concerns on fishery streams. Focus on projects to increase large woody debris in deficient streams to improve pool and spawning habitat components, but also consider other types of projects to improve habitat.
- 8 Encourage compatible maintenance work on irrigation diversion structures to reduce fish loss.
- 9 Coordinate with private entities to modify dams or outlets on Axolotl Lake, Reservoir Lake, and Twin Lakes that will maintain a residual pool and prevent complete drainage.
- 10 Coordinate with FWP to manage beaver where site-specific assessments have identified concerns with beaver presence or absence in relation to fish habitat. No active beaver dam removal or beaver introductions would occur without coordination with FWP.
- 11 Pursue water leasing and improved water management to benefit fisheries values in coordination with FWP on Class 1 (blue ribbon) streams with a priority placed on westslope cutthroat trout and fluvial arctic grayling streams (see Map 14, oversized).
- 12 Improve the habitat quality in Sheep Creek for production of game fisheries resulting in improved fish condition and increased numbers. Revise the Sheep Creek Aquatic Habitat Management Plan as necessary and implement the remaining habitat objectives within five years.
- 13 Ensure that habitat is provided for special status species, and that proposed actions do not jeopardize the continued existence of a threatened or endangered species, or cause its habitat to be adversely modified or destroyed.
- 14 Consult with USFWS when impacts are anticipated to threatened or endangered species or designated habitat.
- 15 Cooperate in implementation and monitoring of recovery plans, State of Montana management plans, and conservation strategies for all listed, recently delisted, and candidate species.
- 16 Implement management plans prepared for species not yet delisted in coordination with the State of Montana and other appropriate agencies once the species is delisted by the USFWS.
- 17 Enhance, restore and maintain habitat conditions and availability for special status species and prevent all avoidable loss of habitat.
- 18 Manage special status species habitats and populations using multi-scale assessments to identify current conditions, risks and opportunities.
- 19 Use individual species conservation strategies to design habitat strategies that will promote conservation of as many other wildlife species as possible.
- 20 Treat sensitive species as candidate species for project impact analysis.
- 21 Complete biological evaluations for projects for all special status plant and animal species using the joint format developed in conjunction with the Beaverhead-Deerlodge National Forest (see Appendix F).
- 22 Consider conservation strategies for sensitive species not listed under the Endangered Species Act when issuing land use authorizations.

Goal 3

Ensure the long-term, self-sustaining persistence and maintain the genetic diversity of the individual populations of westslope cutthroat trout in the Dillon Field Office.

Actions

- 1 Participate in implementation of the MOU and Conservation Agreement for WCT in Montana and in the

cost share agreement for WCT inventories and genetic testing. See Appendix G for additional information.

- 2 Manage habitats along streams containing westslope cutthroat trout (90 percent genetic purity and above) to achieve potential channel types and dimension or show an upward trend within 15 years with the intent of enhancing fish habitat.
- 3 Use any and all management tools available to protect concentrated westslope cutthroat trout spawning areas in streams with 99 percent and above genetically pure populations.
- 4 Initiate habitat restoration on fishery streams that are not in proper functioning condition. Place top priority for habitat restoration and improvement of habitats supporting arctic grayling and habitats containing 99 percent and above genetically pure westslope cutthroat trout. Place next priority on habitats that support from 90 up to 99 percent genetically pure westslope cutthroat trout, Class 1 (blue ribbon) streams, and other fisheries, respectively.
- 5 Encourage compatible maintenance work on diversion structures to reduce WCT loss in irrigation ditches.
- 6 Pursue water leasing and improved water management to benefit fisheries values in coordination with FWP with a priority placed on westslope cutthroat trout and fluvial arctic grayling streams.
- 7 Require bonding and full restoration of disturbed habitat to proper functioning condition where surface disturbing mineral exploration or development takes place within 100 feet of the centerline of any stream containing westslope cutthroat trout with a genetic purity of 90 percent or greater. Require a Plan of Operation before mineral production activities are initiated in these same areas.

Goal 4

Ensure the long term self-sustaining persistence of fluvial and adfluvial arctic grayling in the Dillon Field Office area.

Actions

- 1 Participate in implementation of the Restoration Plan for fluvial arctic grayling.
- 2 Manage habitats along streams containing arctic fluvial grayling to achieve potential channel types and dimension or show an upward trend within 15 years with the intent of enhancing fish habitat.
- 3 Initiate habitat restoration on fishery streams that are not in proper functioning condition. Place top priority

for habitat restoration and improvement of habitats supporting arctic grayling and habitats containing 99 percent and above genetically pure westslope cutthroat trout. Place next priority on habitats that support from 90 up to 99 percent genetically pure westslope cutthroat trout, Class 1 (blue ribbon) streams, and other fisheries, respectively.

- 4 Develop a cooperative agreement with FWP for adequate protection and access to the fluvial arctic grayling brood pond within the Axolotl Lakes area.
- 5 Encourage compatible maintenance work on diversion structures to reduce fluvial arctic grayling loss in irrigation ditches.
- 6 Pursue water leasing and improved water management to benefit fisheries values in coordination with FWP with a priority placed on westslope cutthroat trout and fluvial arctic grayling streams.

Monitoring

Greenlines, cover board studies, and fish habitat assessments will be conducted at least every 10 years on westslope cutthroat trout and other fishery streams to track changes in streamside vegetation composition. This monitoring will be supplemented with data collected for riparian and wetland monitoring to determine if goals and objectives are being met.

BLM will continue to cooperate with Montana FWP and the Forest Service to sample westslope cutthroat trout streams under BLM administration at least once every 10 years to monitor populations. The westslope cutthroat trout streams visited each year will be tracked and reported in the Annual Program Summary and Planning Update, as will the number of habitat restoration or improvement projects initiated.

FOREST AND WOODLAND VEGETATION, AND FOREST PRODUCTS

Goal 1

Manage forests and woodlands to sustain their vitality, health and diversity.

Objectives (Desired Future Conditions, after 20-50 years of management)

Curl leaf mountain mahogany occupy historic range and are in stable or improving condition.

Douglas-fir/sagebrush interface represents an open savannah aspect. Rocky Mountain juniper and limber pine are restricted to historic sites where wildland fire frequency is

limited by lower site productivity and sparse fuels. Both species occur in low densities in association with vigorous shrubs, grasses, and forbs (where site potential permits).

Douglas-fir forests contain healthy stands of site-appropriate species. Stands are relatively open, with tree density within site capacity. Low intensity fires can be accommodated without excessive loss of trees, and insect and disease occurrence are at endemic levels. Late successional characteristics will be maintained or restored through management.

Lodgepole pine and spruce/fir forests are represented by a diversity of age classes and structure.

White bark pine forests occupy historic range and are in stable or improving condition.

Quaking aspen groves occupy historic range and are in stable or improving condition. Aspen stands contain multi-aged stems and adequate regeneration to perpetuate the stand. Age classes are mostly less than 100 years old with good understory diversity.

Figure 3 shows the approximate structure distribution of the major species groups in the Dillon Field Office. The largest proportion is sawlog (mature) or "Gold" size classes. The "Gold" size class includes some younger, more uniform stands, but is predominantly composed of stands with late successional characteristics. Late successional characteristics will vary considerably by forest type, but generally include: large trees for species and site; wide variation in tree sizes and spacing; accumulations of large, dead, standing and fallen trees (except in forest types characterized by frequent, low intensity fires); decadence in the form of broken or deformed tops or bole and some root decay; multiple canopy layers (in some forest types); and canopy gaps and understory patchiness. The large amount of land area in the "Gold" size class reflects a lack of major fire or human generated disturbances in the past 80 to 100 years. The smaller proportion of pole size or "Juvenile" structures reflects the influx of in-growth that began with the advent of fire suppression from the late 1800s. "Juvenile" size classes generally consist of younger age-class trees in a single canopy layer, have more uniform spacing, less down woody debris from the existing stand (may have some residual woody debris on the forest floor from the pre-existing stand), and fewer canopy gaps than "Gold" size class stands. The smallest size class, seedling/sapling or "Infant" indicates the relatively small proportion of lands in the planning area that have been treated by either single age class harvest activity or have been subjected to stand replacing wildland fire events or other disturbances. "Infant" size classes have little to no down woody debris from the existing stand, but may have some residual woody debris on the forest floor from preexisting stands.

Figure 3
Forest Structure Distribution of Major Species Groups in the Planning Area

Allocations

Manage 35,000 acres of forest and woodland vegetation to improve forest health and enhance habitat.

- Manage 23,000 acres of non-aspen forest and woodland vegetation to meet objectives, initially focusing on three geographic areas: the southern Tobacco Roots, southern Ruby Mountains, and Barton/Idaho Gulch (see Map 15, oversized).
- Manage 12,000 acres with aspen (primarily in but not limited to, the southern portions of the field office) to meet objectives in restoring aspen communities.

Actions

- 1 Conduct inventory efforts with a target completion date of 2020. Convert existing data into FORVIS as current policy directs, or other systems as necessary throughout the life of the plan.
- 2 Coordinate vegetation planning with managers of lands adjacent to site-specific proposals for a collaborative approach and coordinate all proposed vegetation treatment projects with FWP in consideration of wildlife habitat concerns.
- 3 Conduct no mechanical treatments on slopes of 70 percent or greater.
- 4 Treat up to 4,000 acres of the 23,000 acres in the Cool and Moist habitat type in the following geographic areas (see Map 15, oversized):
 - southern Tobacco Roots
 - southern Ruby Mountains
 - Barton/Idaho Gulch areas

Cool and Moist habitat types will be managed through clearcutting, clearcutting with reserve trees, patch clearcutting, and/or thinning in lodgepole pine stands or mixed lodgepole pine conifer stands. Partial cutting techniques will be emphasized when possible over clearcutting in lodgepole pine stands. The prescription

emphasis in Cool and Moist habitat types will be on reintroducing a diversity of age classes where this is lacking. Selection cutting, individual selection, group selection, thinning and/or seed tree cutting will be used in mid to higher elevation Douglas Fir and some other conifer stands such as mixed Douglas Fir, sub-alpine fir and Engelmann spruce stands.

- 5 Treat up to 10,000 acres of the 23,000 acres in the Warm and Dry and Warm and Very Dry habitat types in the following geographic areas, and emphasize whitebark pine treatment:

- southern Tobacco Roots
- southern Ruby Mountains
- Barton/Idaho Gulch areas

Warm and Dry, Warm and Very Dry (including woodlands), and Warm and Moist habitat types will generally be thinned from below to remove smaller diameter trees and or receive a commercial thinning to remove both small and intermediate size trees. Some removal of the larger diameter classes will be allowed but not emphasized via individual tree selection prescription.

- 6 Once treatments in focus areas have been implemented, treat up to 9,000 acres of the 23,000 acres in Warm and Dry, Warm and Very Dry, and Warm and Moist habitat types outside of the three geographic focus areas. Place priority on treatment of urban interface areas. Emphasize the treatment of stands that have missed two or more fire cycles (Condition Class 3) and use post-activity prescribed fire to reduce fuel levels.

Warm and Dry, Warm and Very Dry (including woodlands), and Warm and Moist habitat types will generally be thinned from below to remove smaller diameter trees and or receive a commercial thinning to remove both small and intermediate size trees. Some removal of the larger diameter classes will be allowed but not emphasized via individual tree selection prescription.

- 7 Continue long-term conifer management on the 23,000 treated acres outside of aspen areas. Manage conifer regeneration in lodgepole pine stands primarily by natural means unless the seed source is lost to unanticipated complications in harvest operations or intense long-duration wildfire that consumes the seed source. Where natural regeneration is lacking in other conifer types such as Douglas-fir, implement planting in accordance with bureau policy. Replant to reflect historic stocking rates. Monitor regeneration for stand re-establishment and protect it as necessary from grazing pressure.

- 8 Treat an estimated 12,000 acres to restore aspen in areas primarily located in, but not limited to, the southern portions of the field office. Follow up with a variety of methods including mechanical treatments, fire, and other appropriate tools.

- a. Exclude grazing on aspen restoration treatments of 100 acres or less until aspen regeneration is a minimum of five feet tall on average.

- b. Incorporate prescribed fire into all management activities where possible to maximize aspen regeneration.

- c. Conduct future analysis to remove reinvading conifers from aspen restoration areas in order to maintain treated stands.

- 9 Implement sanitation cutting in all areas except where prohibited (e.g. WSAs) where insect infestations such as pine beetle and spruce budworm have the potential to go from endemic to epidemic proportions. Consider treatment of other insect infestations in forest and woodland areas on a case-by-case basis.

- 10 Consider salvage harvest on a case-by-case basis in all areas except where it is prohibited (e.g., Wilderness Study Areas) and conduct in a manner commensurate with forest health guidance and in consideration of other resource values. Analyze the salvage of forest products resulting from wildfire, prescribed fire, forest insect/disease, or weather induced events.

- 11 Implement conservation measures from the Lynx Conservation Assessment and Strategy, including the requirement not to change more than 15 percent of lynx habitat within an LAU to unsuitable condition within a 10-year period. See additional conservation measures in Appendix W.

- 12 Provide wood products as a benefit of forest and woodland treatments when feasible and in consideration of other resource concerns.

- 13 Consider stewardship opportunities on a case-by-case basis.

- 14 Allow the use of prescribed fire and associated tools (including mechanical treatments if necessary) in warm and dry forested habitat types and conifer encroachment within Wilderness Study Areas where it is determined wilderness values would be enhanced. Use of prescribed fire and associated tools in WSAs would be limited to areas where fire history evidence correlates to historically frequent fire events. An additional condition would be that treatment result in fuel configurations that would allow the potential to effectively manage the movement of fire if it were to move out of the WSA. Subsequent fire suppression activities would then be limited to locations outside the WSA except where emergencies threaten life or adjacent private lands.

- 15 Maintain or restore late successional characteristics where large trees exist and the stand exhibits some late successional characteristics. (See Figure 2 for the approximate current structure distribution of the major species groups in the Dillon Field Office and associated definitions).

Meadow with aspen and Douglas-fir

Goal 2

Provide opportunities for traditional and nontraditional uses of forest products by incorporating sound ecological principles while contributing to the economic stability of the community.

Allocations

Manage for a Probable Sale Quantity (PSQ) of an estimated at 3.6 million board feet of wood products per year within the 23,000 acres of non-aspen forest and woodland vegetation being treated to improve forest health and enhance habitat (see *Allocation* under Goal 1 in this section).

Manage for a Probable Sale Quantity (PSQ) of an estimated additional 3.0 million board feet of conifer wood products from, in, and around aspen stands (12,000 acres) until the stands are restored. Conduct analysis in out-years to maintain treated aspen stands through removal of reinventing conifers.

Note: A PSQ is *not* a commitment to cut a specific level of volume every year, but is an estimate of the allowable harvest level that could be maintained if a schedule is followed without full consideration of all environmental factors at this level of planning.

Actions

- 1 Conduct inventory efforts with a target completion date of 2020. Convert existing data into FORVIS as current policy directs, or other systems as necessary throughout the life of the plan.

- 2 Coordinate with appropriate entities (e.g., adjacent land managers, FWP, private property owners, etc.) in consideration of forest health and/or other administrative concerns.
- 3 Conduct no mechanical treatments on slopes of 70 percent or greater.
- 4 Continue long-term conifer management on the 23,000 treated acres outside of aspen areas. Manage conifer regeneration in lodgepole pine stands primarily by natural means unless the seed source is lost by unanticipated complications in harvest operations or intense long-duration wildfire that consumes the seed source. Where natural regeneration is lacking in other conifer types such as Douglas-fir, implement planting in accordance with bureau policy. Replant to reflect historic stocking rates. Monitor regeneration for stand re-establishment and protect it as necessary from grazing pressure.
- 5 Implement sanitation cutting in all areas except where prohibited (e.g. WSAs) where insect infestations such as pine beetle and spruce budworm have the potential to go from endemic to epidemic proportions. Consider treatment of other insect infestations in forest and woodland areas on a case-by-case basis.
- 6 Consider salvage harvest on a case-by-case basis in all areas where it is not prohibited (e.g., Wilderness Study Areas) and conduct in a manner commensurate with forest health guidance and in consideration of other resource values. Analyze the salvage of forest products resulting from wildfire, prescribed fire, forest insect/disease, or weather induced events.
- 7 Implement conservation measures from the Lynx Conservation Assessment and Strategy, especially during pre-commercial thinning operations, including the requirement not to change more than 15 percent of lynx habitat within an LAU to unsuitable condition within a 10-year period. See additional conservation measures in Appendix W.
- 8 Consider stewardship opportunities on a case-by-case basis.
- 9 Provide wood products as a benefit of forest and woodland treatments when feasible and in consideration of other resource concerns.
- 10 Provide for sales of small quantities of forest products, but especially encourage these small quantity sales in the same geographic areas as commercial sales. However, timing of these opportunities will have to be such that contractor/public user conflicts are kept to a minimum.

- 11 Provide the opportunity for both traditional and non-traditional use of forests and woodlands.
- 12 Consider removal of suitable biomass (non-commercial size products) on a case-by-case basis.

Monitoring

Pre-Treatment: Data will be collected within forest stand(s) or woodlands using the FORVIS data collection format. In commercial treatment units, the pre-treatment basal area of the live and dead component, the average stand diameter-at-breast height, the average stand total height, and fuel loading information will be collected. Estimated volume per acre or biomass tons per acre will be obtained, if applicable, in stands that will be treated. In commercial and non-commercial treatment units, photo point(s) will be established to show approximate percent cover, habitat types, and occurrence of insect infestations/diseases

Post-Treatment: Measurements as described above will be obtained within two years after project implementation on any given unit to evaluate if stand objectives were reached. Representative sample(s) of established photo points will be revisited on a 10 year cycle to document longer term trends.

The number of acres treated and number of small sale/public use permits issued each fiscal year will be reported in the Annual Program Summary and Planning Update.

GEOLOGIC RESOURCES

Goal

Provide opportunities for use of the geology of the area while protecting resource values.

Allocations

Manage the following geologic features and associated lands (see Map 16, oversized, for locations) as unavailable for locatable mineral entry once formal withdrawal is processed and approved:

- Wedding Ring Rock (also known as Lime Kiln Arch) (10 acres)
- Squirrel Rock (10 acres)
- Road Agents Rock (10 acres)

Actions

- 1 Post signs at the following geologic features:
 - a. Wedding Ring Rock (also known as Lime Kiln Arch)
 - b. Squirrel Rock
 - c. Road Agents Rock

- 2 Withdraw from mineral entry the following lands:
 - a. Wedding Ring Rock (also known as Lime Kiln Arch)
 - b. Squirrel Rock
 - c. Road Agents Rock.
- 3 Identify additional protective measures on a case-by-case basis as necessary or when reviewing project proposals to protect Wedding Ring Rock (Lime Kiln Arch), Squirrel Rock, and Road Agents Rock.
- 4 Manage the geologic features formed by Nemesis Mountain and Sheep Mountain as part of the Centennial Mountains WSA.
- 5 Protect the relevant and important geological values and associated educational values in the Block Mountain ACEC (see Map 5) with the following special management:
 - a. Evaluate the density and placement of any facilities or land use authorizations proposed in the area and require measures to protect the integrity of the geologic features.
 - b. Require permits for educational uses within the area.
 - c. Develop educational materials describing access to the area and the features within and appropriate use protocols.
 - d. Evaluate all mineral use proposals within the area and identify and mitigate impacts to important features in the area.

Monitoring

Monitoring of the geologic resources will be done on a periodic basis. Inspections will include checking for destruction of geologic features, the condition of posted signs, for litter, and for any other problems. Monitoring will also include checking access routes (where applicable) to the site for road conditions, locked gates and other obstructions. Any significant problems will be reported to the Field Manager.

Visitation of geologic resources will be reported in the Annual Program Summary and Planning Update.

HAZARDOUS MATERIALS

Goal 1

Protect humans and the environment from exposure to hazardous materials.

Actions

- 1 Comply with all appropriate laws and regulations regarding hazardous materials.
- 2 Do not permit unauthorized storage, treatment, or disposal of hazardous waste on public lands

- 3 Apply special stipulations to comply with appropriate law, regulation, and policy when the use or storage of hazardous materials is authorized (i.e., in mining operations or other types of commercial activities).
- 4 Use standard operating procedures to respond to hazardous materials incidents on public land.
- 5 Conduct cleanup and reclamation in accordance with the National Oil and Hazardous Substances Pollution Contingency Plan and the National Environmental Policy Act.

Monitoring

Site clean-ups will be monitored to protect and safeguard human health, prevent/restore environmental damage and to limit the BLM's liability. The performance of the clean-up contractor for all release on public lands will be monitored to ensure full compliance and damaged land restoration. HAZMAT monitoring data will be kept in monitoring files and in the BLM's site cleanup data base. All data will be collected at the time and place of the incident or until the cleanup is completed and there is no future threat to human health or environment.

The number of site cleanups (if any) will be reported in the Annual Program Summary and Planning Update.

INDIAN TRUST RESOURCES

There are no formal Indian Trust Resources in the planning area. Refer to the *Cultural Resources* and *Tribal Treaty Rights* sections for discussions on those issues.

LANDS AND REALTY

Land Use Authorizations

Land use authorizations include various authorizations and agreements to use BLM lands such as right-of-way grants, road use agreements and associated temporary use permits under several different authorities; leases, permits, and easements under section 302 of the Federal Land Policy and Management Act of 1976 (FLPMA); airport leases under the Act of May 24, 1928; and Recreation and Public Purposes (R&PP) leases. R&PP transfers are handled below under the *Land Ownership Adjustment* section.

Goal 1

Meet public needs for use authorizations such as rights-of-way, leases, and permits while minimizing adverse impacts to other resource values.

Table 4
Communication Sites, Locations, and Designated Use Categories

<i>Communication Site</i>	<i>Legal Description ** (Principal Meridian, Montana)</i>	<i>Designated Use</i>
Armstead Mountain	SE1/4 NE1/4, Sec.34., T.10S, R.11W	Low Power; Non-Broadcast
Pipe Organ	SW1/4 NE1/4, Sec.4, T.9S, R.10W	Low Power; Non-Broadcast
Maurer Mountain	NE1/4 NW1/4, Sec.29, T.10S, R.9W	Low Power; Broadcast and Non-Broadcast
Bear Trap	SE1/4 NE1/4, Sec.18, T.4S, R.1E	Low Power; Non-Broadcast
Baldy Ridge	NE1/4 SE1/4, Sec.26, T.7S, R.3W	Government Use Only
Badger Pass (Bannack)	NE1/4 NW1/4, Sec.22, T.7S, R.11W	Low Power; Non-Broadcast, (Existing Facility Only)
Barton Gulch	SE1/4 SW1/4, Sec.12, T.7S, R.4W	Resource Monitoring
Lakeview Ridge	Lot 4 of Sec.26 and Lot 1 of Sec.27, T.14S, R.2W	Resource Monitoring
Monida Pass	NE1/4 NE1/4, Sec.25, T.14S, R.7W	Resource Monitoring
VC Hill	NE1/4 SW1/4, Sec.32, T.6S, R.2W	Low Power; Non-Broadcast

**** These legal descriptions do not delineate the boundaries of the right-of-way use areas, but give approximate locations. Boundaries of the use areas are/will be defined in individual site plans.**

Allocations

Manage five (5) areas as designated right-of-way use areas for communication sites (see Map 17):

- Armstead Mountain
- Maurer Mountain
- Pipe Organ
- Bear Trap
- Virginia City Hill.

Encourage (but do not require) applicants to locate within these five designated right-of-way use areas. Require new facilities locating within existing communication site areas (see Map 17) to conform with the designated uses for each respective site (see Table 4).

Manage two of the existing right-of-way corridors delineated in the 1992 "Western Regional Corridor Study" as designated right-of-way corridors where they cross public lands (see Map 17). These corridors are each currently occupied by an electrical transmission line. Nominal corridor width will be 1,320 feet (1/4 mile) on each side of centerline of the existing facilities, except where the alignment forms the boundary of a Special Management Area, where the width will be 2,640 feet (1/2 mile) on the side opposite that boundary. Applicants for electrical transmission lines 69 kV and larger and pipelines 10 inches in diameter and greater will be encouraged to locate such facilities within these two designated corridors.

Manage the Bear Trap Unit of the Lee Metcalf Wilderness and the Beaverhead Rock ACEC as designated right-of-way exclusion areas (see Map 17). No new rights-of-way will be granted in these areas. However, any valid existing rights-of-way will be recognized and holders of such authorizations will be allowed to maintain their facilities.

Manage approximately 123,286 acres within the nine Wilderness Study Areas and the BLM lands along the Lewis and Clark Trail as designated right-of-way avoidance areas where the issuance of new rights-of-way will be avoided unless there are no other options and authorization in any WSA will be consistent with the *Interim Management Policy for Lands Under Wilderness Review* (see Map 17). Valid existing rights-of-way in right-of-way avoidance areas will be recognized and holders of such authorizations will be allowed to maintain their facilities.

Actions

- 1 Do not require rights-of-way, leases, permits, or easements for those activities that are considered casual use of public lands.
- 2 Analyze requests for land use authorizations on a case-by-case basis and apply mitigation measures as necessary in compliance with the NEPA process.
- 3 Locate new right-of-way facilities within or adjacent to existing rights-of-way, to the extent practical, in or

der to minimize adverse environmental impacts and the proliferation of separate rights-of-way.

- 4 Follow the *Interim Management Policy and Guidelines for Lands Under Wilderness Review* for land use authorizations requested in Wilderness Study Areas.
- 5 Do not issue land use authorizations for uses which would involve the disposal or storage of materials which could contaminate the land (hazardous waste disposal sites, landfills, rifle ranges, etc.).
- 6 Implement provisions in the latest version of *Suggested Practices for Raptor Protection on Power Lines* (APLIC 1996) and "USFWS Interim Guidance to Avoid and Minimize Wildlife Impacts from Wind Turbines" (USDI-FWS 2003) in the construction and operation of right-of-way facilities.
- 7 Require electric distribution lines to be buried on public lands when feasible when located within one-quarter mile each side of the Madison River in order to preserve scenic quality.
- 8 Allow owners of non-Federal land surrounded by public land managed under FLPMA a degree of access across public land which provides for the reasonable use and enjoyment of the non-Federal land.
- 9 Allow motorized cross-country or route travel on a case-by-case basis with prior written permission of the Field Manager (including casual use letters) in areas closed to motorized travel for travel by entities requiring access to private lands, resources, or legal improvements within or adjacent to closed or limited areas. Access will be allowed to the degree necessary to provide for reasonable use and enjoyment of that property where no reasonable alternatives exist.
- 10 Recognize the use of certain rights-of-way constructed on public lands prior to FLPMA as valid existing rights, even though there are no grant documents of record and the authorities authorizing those uses have since been repealed (e.g., ditches and canals under the Act of July 26, 1866; highways, roads, and trails under R.S. 2477, etc.). However, the processing of R.S. 2477 assertions or claims is deferred pending further direction from the Secretary of the Interior.
- 11 Allow motorized cross-country or route travel without prior permission by lessees and permittees performing administrative functions on public lands within the scope of a permit or lease, including, but not limited to gas or electric utilities monitoring a utility corridor for safety conditions or normal maintenance, accessing a remote communication site for normal maintenance or repair, etc. This provision does not preclude modifying

permits or leases to limit motorized cross-country travel during further site-specific analysis to meet resource management objectives or standards and guidelines.

- 12 Develop site plans for each of the designated communication site use areas and update periodically as necessary. Boundaries of the use areas will be defined by these site plans.
- 13 Group new communication site users into suitable existing sites to reduce impacts and expedite application processing. Encourage applicants for communication site facilities to locate within the five designated use areas. Map 17 shows existing authorized communication sites and designated use areas.
- 14 Require site plans to be completed prior to authorizing any new areas for communication sites. Consider the use of alternative energy sources where electric power is not available.
- 15 Where avoidance areas and designated corridors overlap (e.g., the Lewis and Clark Trail and the designated corridor through the Beaverhead River Canyon), issuance of new rights-of-way and upgrade/expansion of existing rights-of-way will be allowed if mitigative measures can reduce impacts to resources of concern to an appropriate level.
- 16 Provide access across public lands to and along right-of-way corridors and use areas necessary to construct new facilities, except in avoidance areas where access would be considered on a case-by-case basis.
- 17 Permit other uses of right-of-way corridors and use areas to the extent they do not interfere with or preclude the use of these locations for their intended purpose and are consistent with other portions of the plan.
- 18 Abate realty-related unauthorized use through preventing, detecting, and resolving such uses. Upon settlement of trespass liabilities, resolution of the unauthorized use of public lands will be accomplished through termination, authorization, or sale or exchange, as appropriate. Rehabilitate BLM lands affected by unauthorized uses as determined necessary.

Monitoring

Land use authorizations will be monitored both through field examinations to ensure compliance with the terms and conditions of the authorizing document and through the BLM accomplishment tracking process. On-the-ground monitoring will occur immediately upon issuance of the authorization and periodically throughout the life of the authorization. Management, realty personnel, and other key staff members in the Dillon Field Office will meet periodically to review program status and compliance with Goal 1.

The number of use authorizations monitored annually and the number of those in compliance with terms and conditions of the authorization in any given fiscal year will be reported in the Annual Program Summary and Planning Update.

Land Ownership Adjustment

Section 102(a)(1) of FLPMA provides that "...the public lands be retained in Federal ownership, unless as a result of the land use planning procedure provided for in this Act, it is determined that disposal of a particular tract will serve the national interest...". Mineral patents are not considered a land ownership adjustment for the purposes of this plan. Land adjustments often result through land exchanges or sales.

Land exchanges are typically processed under the authority of FLPMA and involve the discretionary, voluntary exchange of lands or interest in lands between the Federal government and a non-Federal party. It is required that:

- the Federal and non-Federal lands involved be located in the same state
- the Federal and non-Federal lands be of equal value, or in certain circumstances, approximately equal in value
- exchanges be completed only after a finding that the public interest would be well served

In considering whether an exchange is in the public interest, consideration is given to the opportunity to:

- achieve better management of Federal lands,
- meet the needs of state and local residents and their economies,
- secure important objectives, including but not limited to, protection of fish and wildlife habitats, cultural resources, watersheds, wilderness and aesthetic values; enhancement of recreation opportunities and public access; consolidation of lands and/or interests in lands; consolidation of split estate; expansion of communities; accommodation of land use authorizations; promotion of multiple-use values; and fulfillment of public needs.

In making the public interest determination, there needs to be a finding that:

- the resource values and the public objectives that the Federal lands or interests to be conveyed may serve if retained in Federal ownership are not more than the resource values of the non-Federal lands or interests and the public objectives they could serve if acquired, and
- the intended use of the conveyed Federal lands will not significantly conflict with established management objectives on adjacent Federal lands and Indian trust lands.

Sales of public lands are authorized under section 203 of FLPMA and made at not less than fair market value. Public

lands determined suitable for sale are offered only on the initiative of the BLM. Such sales have to meet at least one of the following FLPMA sales criteria:

- Sec. 203(a)(1) – such tract because of its location or other characteristics is difficult and uneconomic to manage as part of the public lands, and is not suitable for management by another Federal department or agency; or
- Sec. 203(a)(2) – such tract was acquired for a specific purpose and the tract is no longer required for that or any other Federal purpose; or
- Sec. 203(a)(3) – disposal of such tract will serve important public objectives, including but not limited to, expansion of communities and economic development, which cannot be achieved prudently or feasibly on land other than public land and which outweigh other public objectives and values, including, but not limited to, recreation and scenic values, which would be served by maintaining such tract in Federal ownership.

The preferred method of sale of public lands is by competitive bidding at public auction. However, modified competitive bidding may be used to protect on-going uses, to assure compatibility of the possible uses with adjacent lands, or to avoid dislocation of existing users. Direct sale may be used when the public lands offered for sale are completely surrounded by lands with one owner and no public access, or where the lands are needed by state or local governments or non-profit corporations, or where necessary to protect existing equities in the lands or resolve inadvertent unauthorized use or occupancy.

Goal 2

Retain public lands with high resource values in public ownership. Adjust land ownership to consolidate public land holdings, acquire lands with high public resource values, and meet public and community needs.

Allocations

Make no public lands in the planning area available for disposal under agricultural entries, Indian allotments, or state selections.

Manage approximately 142,000 acres as **Category 1 retention lands** (see Map 18, oversized).

Public lands in Category 1 (Congressionally designated wilderness, WSAs, certain developed and dispersed recreation areas, lands acquired using LWCF monies, and certain wildlife sites with substantial capital investment) will not be transferred from BLM management by any method during the life of the plan. Acquisition of lands or interests in lands from willing owners will receive priority if located in or adjacent to public lands in Category 1, providing they meet one or more of the acquisition criteria found in Appendix H.

Manage approximately 756,000 acres as **Category 2 retention lands, with limited adjustment** (see Map 18, oversized).

These lands are not available for sale under section 203 of FLPMA, but limited disposal actions may occur. Lands within this category can be exchanged for lands or interests in lands located anywhere within the State of Montana. These lands can also be considered for transfer under the R&PP Act for recreation or public purpose needs on a case-by-case basis as identified by state, local, or other qualifying entities. Grants of public lands to public agencies for airport purposes under the Airport and Airway Improvement Act can be considered on a case-by-case basis. They can also be considered for public agency jurisdictional transfer.

Some public lands in Category 2 may contain significant resource values protected by law or policy. If actions cannot be taken to adequately mitigate impacts from disposal of those lands, those parcels would be retained. Acquisition from willing owners of lands or interests in lands located in or adjacent to Category 2 would be considered in accordance with the Acquisition Criteria found in Appendix H.

Manage approximately 4,000 acres as **Category 3 disposal lands** (see Map 18, oversized).

Appendix I identifies the specific parcels available for potential disposal under Category 3. These lands are available for disposal through exchange for lands or interests in lands located anywhere within the Dillon Field Office as well as elsewhere in Montana. These parcels also have been found to potentially meet the sale criteria of section 203(a)(1) of FLPMA and can be made available for sale. However, disposal of Category 3 lands by exchange will have priority over disposal by FLPMA sale. Transfers under the R&PP Act and grants of public lands to public agencies for airport purposes under the Airport and Airway Improvement Act can also be considered on a case-by-case basis. Additionally, public lands within Category 3 can be considered for disposal by public agency jurisdictional transfer.

Some of the Category 3 lands may contain significant resource values protected by law or policy. If impacts from disposal of these lands cannot be adequately mitigated, those parcels must be retained.

Actions

- 1 Analyze all proposed land ownership adjustment actions in project specific environmental reviews.
- 2 Maintain or improve public access through all land ownership adjustment transactions.
- 3 Consider lands for acquisition only if one or more of the Acquisition Criteria presented in Appendix H applies.

- 4 Acquisitions would only be made on a willing seller basis (with the exception of instances where the acquisition of access to public lands would require the exercise of the right of eminent domain—see Action 13).
- 5 Limit direct purchase of lands to cases where no practical alternatives exist and high public values would be acquired. Such actions must meet the acquisition criteria in Appendix H.
- 6 Consider the need to protect newly acquired lands as part of the analysis prior to acquisition. If withdrawn, manage acquired lands under the terms and conditions of the withdrawal.
- 7 Manage newly acquired lands for the highest potential purpose for which they were acquired. Lands acquired within special management areas with specific Congressional mandates (such as National Trails and Wilderness Areas) will be managed in conformance with established guidelines for those areas. Manage lands acquired within administratively designated special management areas that have fragile or unique resources (such as ACECs and SRMAs) the same as the special management area. Lands acquired without special values or management goals will be managed in the same manner as comparable surrounding public lands.
- 8 Newly acquired lands or interests in lands obtained with LWCF funding or lands acquired within or adjacent to special management areas will become Category 1 lands and managed accordingly. All other newly acquired lands will become Category 2 lands and managed accordingly.
- 9 Parcels of land administered by BLM and discovered through land status updates and corrections will be managed in the same manner as parcels adjacent to or in the vicinity of them in regard to retention or disposal.
- 10 Make land exchange the first priority for both acquisition and for the conveyance into non-Federal ownership of those parcels identified for disposal, except under the following circumstances, when alternative methods could be considered:
 - a. where there is a competitive market situation and multiple entities are interested in a parcel of land
 - b. when resolving inadvertent unauthorized use or occupancy
 - c. when providing for community expansion and development
 - d. when creating facilities or service for public health, safety and welfare
- 11 Generally retain federal minerals underlying non-Federal surface in federal ownership. However, an exchange of this type of mineral estate may be considered on a case-by-case basis if found to be in the public interest. The sale of this type of mineral interest under section 209(b) of FLPMA could be considered if the requirements of this same section were met. There must be a finding that: 1) there are no known mineral values in the land, or 2) that the reservation of the mineral rights in the United States is interfering with or precluding appropriate non-mineral development of the land and that such development is a more beneficial use of the land than mineral development. Such conveyance of mineral interests can only be made to the existing or proposed record owner of the surface upon payment of administrative costs and the fair market value of the interests being conveyed.
- 12 Maintain existing access in conveyance documents associated with land ownership adjustments using appropriate covenant language.
- 13 Consider the exercise of the right of eminent domain for securing access to public lands as an option of last resort in instances where a landowner is unwilling to allow the acquisition of lands or interests-in lands necessary to secure access to public lands.

Monitoring

Land ownership adjustment actions will be monitored through the BLM accomplishment tracking process. Management, realty personnel, and other key staff members in the Dillon Field Office will meet periodically to review program status and compliance with Goal 2. Changes in land ownership affecting BLM lands or interests in lands will be posted to the DFO's official land ownership coverage in a timely manner.

The number of acres acquired and/or disposed of through land exchanges, acquisitions, sales, and Recreation and Public Purpose Act patents will be reported in the Annual Program Summary and Planning Update.

Access

Goal 3

Acquire and maintain access to public lands where needed to improve management efficiency and facilitate multiple use and the public's enjoyment of these lands in coordination with other federal agencies, state and local governments, and private landowners.

Actions

- 1 Obtain legal public or administrative access on a case-by-case basis as the need or opportunity arises.

- 2 Use all available methods to obtain legal public or administrative access from willing landowners over non-Federal lands to reach public lands lacking adequate access (e.g., easements acquired through purchase, exchange, or donation; land exchanges; fee title purchases or donations; or long-term land use agreements). Easement acquisition is anticipated to be the predominant method of obtaining legal access.
 - 3 Focus acquisition efforts on those routes designated as "open" under travel management that lack legal public access. Place higher priority on acquiring access to BLM lands identified for permanent retention in Category 1 than on acquiring access to BLM lands in Category 2.
 - 4 Maintain existing access in conveyance documents associated with land ownership adjustments using appropriate covenant language.
 - 5 Consider the exercise of the right of eminent domain for securing access to public lands as an option of last resort in instances where a landowner is unwilling to allow the acquisition of lands or interests in lands necessary to secure access to public lands.
- 2 Consider other agency requests for withdrawal relinquishments, extensions or modifications on a case-by-case basis.
 - 3 Consider new withdrawal proposals on a case-by-case basis where the public land would transfer from one federal agency to another or where resource values or agency investments are best protected by withdrawal. Lands proposed to be withdrawn should be the minimum area required for the intended use and where applicable alternative prescriptions such as the use of rights-of-way, leases, permits, or cooperative agreements are inadequate to protect the resource values.
 - 4 Terminate the C&MU classification in the planning area involving a five-acre site at Road Agent's Rock in Section 29, T7S, R11W, PMM.
 - 5 Review any additional existing land classifications on a case-by-case basis to determine if they should be continued or terminated.
 - 6 Assist in processing proposed withdrawals from operation of the mining law (see Map 16, oversized) to support other program goals and objectives in the following areas (all acreages are approximate):
 - a. Beaverhead Rock (120 acres)
 - b. Christnot Mill (20 acres)
 - c. Developed Recreation Sites (797 acres)
 - d. Everson Creek (2,160 acres)
 - e. Lewis's Lookout (160 acres)
 - f. Land along the Madison River between Warm Springs and the planning area boundary to the north (1,609 acres)
 - g. Road Agent Rock (10 acres)
 - h. Squirrel Rock (10 acres)
 - i. Virginia City Historic District (513 acres)
 - j. Wedding Ring Rock (10 acres)

Monitoring

Access acquisition will be monitored through the BLM accomplishment tracking process. Management, realty personnel, and other key staff members in the Dillon Field Office will meet periodically to review program status and compliance with Goal 3. Existing easements and other acquisition documents will be reviewed periodically to ensure that both the landowner and the BLM are complying with the terms of the documents.

The number of easements acquired or renewed will be reported in the Annual Program Summary and Planning Update.

Withdrawals

Goal 4

Utilize withdrawal actions with the least restrictive measures and minimum size necessary to accomplish the required purposes.

Actions

- 1 Review existing withdrawals on a case-by-case basis prior to the end of the withdrawal period or as otherwise required by law to determine whether the withdrawals should be extended, revoked, or modified. Withdrawals no longer needed, in whole or in part, for the purpose for which they were withdrawn will be revoked or modified. Appendix J describes the existing withdrawals in the planning area as shown on Map 16 (oversized).

Monitoring

Withdrawal actions will be monitored through the BLM accomplishment tracking process. Management, realty personnel, and other key staff members in the Dillon Field Office will meet periodically to review program status and compliance with Goal 4.

Any new withdrawals from operation of the public land laws and/or mineral laws will be reported in the Annual Program Summary and Planning Update, as will any withdrawal revocations.

LIVESTOCK GRAZING

Goal

Manage the public rangelands to provide for a sustainable level of livestock grazing consistent with multiple use and sustained yield.

Allocations

Manage approximately 852,778 acres of public land as available for livestock grazing (see Map 19, oversized).

Manage approximately 47,837 acres of public land as unavailable for livestock grazing (see Map 19, oversized). No term grazing permits or leases would be issued for these areas. These areas could be grazed with livestock on a temporary nonrenewable basis to meet resource objectives of the area. Lands that are not available include:

- Unallotted areas
- Blue Lake
- Eli Springs area

Maintain the Cross and Exchange Allotments as Resource Reserve Allotments. (A Resource Reserve Allotment is a unit of public land that will not have term grazing permits issued. Such an allotment will only be grazed on a temporary nonrenewable basis. The use of these allotments will be to provide temporary grazing to rest other areas following wildfire, habitat treatments, or to allow for more rapid attainment of rangeland health. The allotment must be of sufficient size to be managed as a discrete unit. Resource Reserve Allotments should be distributed throughout the planning area).

Designate Resource Reserve Allotments on a case-by-case basis following watershed evaluations as described in *Livestock Grazing Actions* 20, 21, and 22.

Maintain all current riparian exclosures as unleased for livestock grazing.

Actions

- 1 Authorize an average of between 101,183 and 113,219 Animal Unit Months (AUMs) on about 425 allotments, subject to lands meeting the *Western Montana Standards for Rangeland Health* and make adjustments to allotments for management efficiency.
- 2 Use watershed evaluations (see Map 20 for watershed areas) when authorizing livestock grazing to assess whether the *Western Montana Standards for Rangeland Health* (Appendix A) are being met or if changes in livestock grazing are necessary.
- 3 Incorporate the *Guidelines for Livestock Grazing* as described in Appendix A into livestock grazing permits, as well as strategies outlined in *Best Management Practices for Grazing* (MT DNRC 1999), when applicable.
- 4 Follow the procedures outlined in the *Rangeland Health Standards Handbook* (H-4180) for areas that do not meet the *Western Montana Standards for Rangeland Health* due to livestock grazing.
- 5 Continue to implement existing Allotment Management Plans (AMPs), including the associated range improvement projects.
- 6 Develop and implement new Allotment Management Plans to direct site-specific management of livestock grazing after completion of rangeland health assessments conducted on a watershed basis.
- 7 Modify grazing schedules and livestock management practices as necessary during drought conditions.
- 8 Establish allowable use levels for grazing allotments during the watershed evaluation process. Make any adjustments to livestock numbers, including increases or decreases, following watershed evaluations, standards for rangeland health assessments, and interdisciplinary review. Use monitoring data to adjust livestock grazing by allotment in order to meet the *Western Montana Standards for Rangeland Health*. Impose any reductions in graduated steps. Allocate increases, if appropriate, after interdisciplinary review.
- 9 Set livestock utilization levels on key forage species on a case-by-case basis during the watershed assessment process and in the development of individual allotment management plans. The most common key forage species for southwest Montana are: bluebunch wheatgrass, Idaho fescue, basin wildrye, needle-and-thread, and western wheatgrass.
- 10 Conduct use supervision of authorized grazing within staffing capabilities.
- 11 Jointly manage FS-BLM allotments as agreed to under the Beaverhead-Deerlodge NF and Butte District BLM MOU for cooperative management.
- 12 Implement the "Revised Guidelines for Management of Domestic Sheep and Goats in Native Wild Sheep Habitats" when allowing grazing in bighorn sheep habitat.

- 13 Manage grazing to protect concentrated westslope cutthroat trout spawning areas in streams containing 99 to 100 percent genetically pure populations.
- 14 Adjust management on a case-by-case basis to protect BLM special status plant species when the *Western Montana Standards for Rangeland Health* are not being met, or when monitoring of special status plants indicates unacceptable impacts from livestock grazing.
- 15 Manage the density and height of emergent wetland vegetation (cattails, rushes, etc.) to provide residual nesting cover and concealment of trumpeter swans and other waterfowl within the wetland and waterfowl production areas in the Centennial Valley (see Map 36).
- 16 Rest vegetation treatment areas (e.g., prescribed burns) from livestock grazing up to one year prior to treatment (if necessary) to maintain fine fuels for burning, and for a minimum of two growing seasons following treatment to promote recovery of vegetation. Livestock rest for less than two growing seasons could be justified on a case-by-case basis.
- 17 Incorporate design features into small and isolated aspen restoration treatments to reduce or eliminate browsing impacts until the aspen regeneration has reached a minimum of five feet tall on average.
- 18 Maintain cattle as the primary class of livestock on mountain mahogany habitat. Sheep grazing on mountain mahogany habitat will be mitigated through site specific management treatments, changed to cattle use, or eliminated where monitoring data indicates it is necessary.
- 19 Authorize no new domestic sheep permits or conversion of cattle permits to sheep within areas depicted on Map 33 that contain suitable grizzly bear and wolf habitat (also known as the wildlife dispersal/migration corridors in the Centennial Mountains, Snowcrest Mountains, Gravelly Range, Greenhorn Mountains, Axolotl Lakes area, and along the Continental Divide from Monida to Lemhi Pass).
- 20 Evaluate currently unleased/unpermitted lands during the watershed assessment process to determine if they should remain unavailable for grazing, be reallocated, or be designated as Resource Reserve allotments. Priority will be given to designating Resource Reserve Allotments where the need exists. Designate allotments that are meeting the *Western Montana Standards for Rangeland Health*, are manageable as distinct grazing units, and are in a location where a resource reserve allotment is needed, as Resource Reserve allotments. If the allotment meets the *Western Montana Standards for Rangeland Health* but is not manageable as a distinct grazing unit or is not in a location where a resource reserve allotment is needed, the allotment will either be reallocated in accordance with the grazing regulations (43 CFR Part 4130.1-2) or classified as unavailable for livestock grazing.
- 21 Evaluate allotments that are relinquished or cancelled to determine if they should be designated as Resource Reserve allotments, reallocated, or designated as unavailable for livestock grazing. Designate allotments that are meeting the *Western Montana Standards for Rangeland Health*, are manageable as distinct grazing units, and are in a location where a resource reserve allotment is needed, as Resource Reserve allotments. If the allotment meets the *Western Montana Standards for Rangeland Health* but is not manageable as a distinct grazing unit or is not in a location where a resource reserve allotment is needed, the allotment will either be reallocated in accordance with the grazing regulations (43 CFR Part 4130.1-2) or classified as unavailable for livestock grazing.
- 22 Evaluate acquired lands to determine if they should be designated as Resource Reserve allotments, allocated for grazing, or designated as unavailable for livestock grazing. Designate allotments that are meeting the standards for rangeland health, are manageable as distinct grazing units, and are in a location where a resource reserve allotment is needed, as Resource Reserve allotments IF the anticipated grazing use is compatible with the values for which the lands were acquired. If the lands/allotment meet the *Western Montana Standards for Rangeland Health* but are not manageable as a distinct grazing unit or is not in a location where a resource reserve allotment is needed, the lands/allotment will either be reallocated in accordance with the grazing regulations (43 CFR Part 4130.1-2) or classified as unavailable for livestock grazing, again in consideration as to whether grazing use is compatible with the values for which the lands were acquired.

Monitoring

The number of allotments/acres that meet the *Western Montana Standards for Rangeland Health* and the total number of allotments/acres assessed will be reported in the Annual Program Summary and Planning Update.

MINERALS

Leasables, including Oil and Gas, Coal, Oil Shale, and Phosphate

Goal 1

Advance dependable, affordable, and environmentally responsible production and distribution of leasable minerals

by identifying lands appropriate for lease and development.

Allocations

Make approximately 145,554 acres unavailable for oil and gas leasing (see Map 21, oversized) in the following areas:

- Bear Trap Wilderness Area
- All nine Wilderness Study Areas
- Federal minerals under lands administered by the Agricultural Research Service
- Lands within the boundaries of National Historic Landmarks

Make the remainder of federal mineral estate in the planning area (approximately 1,209,278 acres) available for leasing, subject to the stipulations specified in Table 5 or under Standard Lease Terms.

- Approximately 433,797 acres are available for oil and gas leasing, subject to No Surface Occupancy stipulations.
- Approximately 632,061 acres are available for oil and gas leasing, subject to Timing Limitations and/or Controlled Surface Use stipulations.
- Approximately 143,420 acres are available and subject to standard lease terms (and to the CSUs listed on Table 5 that apply to the entire planning area)

Map 21 (oversized) depicts lands subject to No Lease, No Surface Occupancy, Timing Limitations, and/or Controlled Surface Use stipulations, subject to change based on new and updated inventory information over time. Table 5 summarizes the stipulation requirements by resource. Appendix K provides the stipulation language and identified waivers, exceptions, and modifications.

Make all lands in the planning area available for exploration and development of leasable solid minerals (phosphate, etc.) except for approximately 124,235 acres in the Bear Trap Wilderness area and the nine Wilderness Study Areas which are unavailable for new leases. (The one existing phosphate lease in the Centennial Mountains WSA issued prior to October 21, 1976 will be managed in accordance with the *Interim Management Policy for Lands Under Wilderness Review*).

Make lands in the planning area available for geothermal leasing, unless located within wilderness or WSAs, or in instances where it is determined that issuing the lease would cause unnecessary or undue degradation to public lands or resources.

Table 5
Oil and Gas Lease Terms and Stipulations

Key

CSU	Controlled Surface Use Stipulation
LN	Lease Notice
NL	No Lease
NSO	No Surface Occupancy Stipulation
SLT	Standard Lease Term
TL	Timing Limitation Stipulation

Distances are enumerated and those equal or greater than 300 are feet and those 3 or less are miles.

Time periods are month/day.

Resource

Alt B

Wildlife

Sage Grouse Winter/Spring Range	TL 12/1-5/15
Sage Grouse Strutting Grounds (leks)	NSO 1/4
Sage Grouse Breeding Habitat	TL 3/1-6/30
State Game Ranges (4)	NSO
Big Game Winter Range	TL 12/1-5/15
Elk Calving/Big Game Birthing Areas	TL 4/1-6/30
Bighorn sheep yearlong habitat	TL 11/1-6/30
Bighorn sheep core areas	NSO
Bald Eagle Nesting/Breeding	NSO 1/2
	+ 1 TL 2/1-8/31
Raptor Breeding Areas	1/2 TL 3/1-7/31
Waterfowl Production Molting Areas	1/2 TL 4/1-8/31
NAWCA/IMWJV wetland projects	NSO 1/2
Peregrine Falcon Breeding Territories	NSO 1
Ferruginous hawk nesting areas	NSO 1/2
	+ 1 TL 3/1-8/31
Threatened, Endangered, and Special Status Species	CSU

Fisheries

Westslope Cutthroat Trout Habitat	
99-100% pure	NSO 1/2
Westslope Cutthroat Trout Habitat	
90 up to 99% pure	CSU 1/2
Fluvial and adfluvial arctic grayling	NSO 1/2
Class 1 Fisheries (Blue Ribbon)	NSO 1/2

Recreation

Developed Sites	NSO
Undeveloped Recreation Sites	—
Special Recreation Management Areas	CSU
Vehicle Use Restrictions	CSU

Cultural Resources

Cultural Res. Inventory Requirement	CSU
NRHP Eligible Properties/Districts	NSO 300
Traditional Cultural Properties	NSO 1/2

Paleontological Resources

Paleo. Inventory Requirement	CSU
Known Paleo. Sites/Locales	NSO

Visual Resources

VRM Class II, III & IV Areas	CSU
------------------------------	-----

Vegetation, Wetlands and Riparian	
Special Status Plant Inventory Requirement	CSU
Known or Discovered Populations	NSO 1/4
Wetlands, Floodplains & Riparian Areas	NSO
Landforms, Soils, and Water Quality	
Active Mass Movement Areas	NSO
Slopes $\geq 30\%$	CSU
Trails, Rivers and Special Designations	
National Historic Trails	NSO 1/2
National Historic Landmarks	NL
Continental Divide Natl. Scenic Trail	NSO 1/2
Rivers Suitable for WSR Designation	N/A
Beaverhead Rock ACEC	NSO
Block Mountain ACEC	NSO/TL/CSU
Blue Lake ACEC*	NL
Centennial Mountains ACEC*	NL/NSO/CSU/TL
Centennial Sandhills ACES	NSO 1/4/CSU
Everson Creek ACEC*	NSO 1/2/TL
Muddy/Big Sheep Creek ACEC	NL/NSO 300
Virginia City ACEC	NL
Other Resources	
Major Road ROWs	NSO
R&PPs and 2920 Authorizations	SLT
*Lands in the Centennial Mountains ACEC that also lie within the Centennial Mountains WSA boundary, lands in the Blue Lake ACEC that lie within the Axolotl Lakes WSA, and lands in the Muddy/Big Sheep Creek ACEC that also lie within the Hidden Pasture WSA are not available for oil and gas leasing.	

essary, from the surface managing agency before issuing oil and gas leases or when approving Applications for Permit to Drill.

- 5 Allow for the lease of lands under the jurisdiction of another agency that are otherwise unavailable for leasing only if oil and gas is being drained from such lands. If the unavailable lands are under the jurisdiction of another agency, leasing of such lands will only occur following consultation, and consent, if necessary, from the surface managing agency.
- 6 Allow for the lease of lands under the administration of the BLM that are otherwise unavailable for leasing if a state or fee well is completed within the same spacing unit, or if the lands are within a producing unit. These lands will be leased with a no surface occupancy and no subsurface occupancy stipulation without waiver, modification or exception provisions. There will only be a paper transaction with no physical impacts on the unavailable lands. There will be no exploration or development (drilling or production) within the unavailable lands. After issuance of a lease, the lease will be committed to a communitization agreement and the United States will then receive revenue in proportion to its acreage interest as it bears to the entire acreage interest committed to the agreements.
- 7 Use lease notices to provide additional information to the lessee. These notices do not place restrictions on lease operation, but do provide information about applicable laws and regulations, and the requirements for additional information to be supplied by the lessee.
- 8 Require approval of proposed drilling and associated activities before operations begin. The operator must file an Application for Permit to Drill or Sundry Notice that must be approved according to (1) lease stipulations, (2) Onshore Oil and Gas Orders, and (3) regulations and laws (see the "Permitting" section in Appendix M, *Procedures in Oil and Gas Recovery*). Apply Conditions of Approval as appropriate (see the *Conditions of Approval* in the "Application for Permit to Drill" section in Appendix M).
- 9 Consider proposals for coal and oil shale leasing on a case-by-case basis. A plan amendment would be necessary to lease, along with the appropriate level of environmental analysis.
 - Issue any oil shale leases under the authority of 30 U.S.C. Chapter 3A, Subchapter V, Sec. 241 which authorizes the Secretary of the Interior to lease deposits of oil shale
 - Apply unsuitability criteria described in 43 CFR Part 3461 to coal lands determined to have development potential on a case-by-case basis.

Actions

- 1 Offer public lands available for oil and gas leasing first by competitive bid at an oral auction. Apply lease notices and stipulations at the time of leasing as summarized in Table 5 and as written in Appendix K. Consider waivers, exceptions, and modifications in accordance with the provisions in Appendix K and provide for a 30-day public review if the grant of a waiver, exception, or modification is determined to be a substantial change.
- 2 Apply oil and gas lease stipulations recommended by the Bureau of Reclamation (BOR) on federal minerals underlying lands administered by BOR (see Appendix L).
- 3 Manage oil and gas leases existing prior to the Record of Decision for the Dillon RMP according to the existing lease stipulations. When the lease expires, manage those lands according to the oil and gas decisions and required stipulations outlined in the ROD/Approved Plan.
- 4 In cases where management of the surface over federal minerals is the responsibility of an agency other than BLM, BLM will consult with and obtain consent, if nec-

- 10 Prepare a site-specific environmental analysis if interest is expressed in exploring for or developing geothermal resources in the planning area. Apply oil and gas stipulations to any geothermal lease if appropriate. Geothermal exploration and production activity is sufficiently different from oil and gas that the stipulations developed for oil and gas may not be appropriate and can be modified, and additional mitigating measures over and above the oil and gas lease stipulations can be required.
- 11 Monitor reclamation occurring at the phosphate mine in the Centennial Mountains.

Goal 2

Allow environmentally responsible geophysical exploration for energy resources in the Dillon Field Office on lands administered by the BLM.

Actions

- 1 Review Notices of Intent to Conduct Geophysical Exploration (NOI) in the planning area and develop appropriate mitigation measures so as not to create undue and unnecessary degradation.
- 2 Prepare a site-specific environmental analysis for each NOI filed. Develop mitigation measures using the oil and gas lease stipulations approved in this plan as the starting point.
 - The transient nature of geophysical exploration and the short-term impacts of the exploration may provide an opportunity for operations to occur in seasonal wildlife areas during the time of closure under lease stipulations without creating detrimental effects on wildlife. As such the proposed exploration will be analyzed for the length and nature of its impact to determine if operations can be allowed during the period of closure found in lease stipulation(s).
 - Allow geophysical exploration on a case-by-case basis in areas closed to oil and gas leasing based on the nature and level of impacts from the exploration, and consistency with other applicable policy.
 - Geophysical operations may also be allowed in areas of No Surface Occupancy (NSO) stipulations for oil and gas leasing. A determination will be made considering the nature and impacts of the proposed exploration and the reason behind the NSO restriction. This will be documented and be the basis for allowing or not allowing geophysical exploration in NSO areas.
- 3 Apply travel restrictions based on route designations made through travel management decision to geophysical

cal exploration, with consideration given to exceptions as appropriate and granted on a case-by-case basis.

Monitoring

Monitoring for leasable minerals will be done to ensure compliance with applicable laws, regulations, conditions of leases, and the requirements of approved exploration/development plans/applications for permit to drill. Monitoring activities will include:

1. Periodic field inspections of leasable mineral activities. Inspections will be conducted to determine compliance with applicable laws, regulations, lease stipulations, and the requirements of approved exploration and development plans, applications for permit to drill, and sundry notices.
2. Monitoring of oil and gas drilling/production activities in the planning area. Total gross surface disturbance and net surface disturbance from all drilling will be tracked, based on the following formulas:
 Gross surface disturbance = current (existing) disturbance + new disturbance
 Net surface disturbance = current (existing) disturbance + new disturbance – reclaimed acreage

These acreage figures will be compared to the total of 523 acres of disturbance anticipated as a result of projected well drilling and field development. Additional analysis and/or amendment of the plan will be considered if the net surface disturbance acreage exceeds 523 acres.

An accurate accounting of production will also be tracked on producing leases. Acres of new disturbance, acres reclaimed, and production numbers from producing leases will be reported in the Annual Program Summary and Planning Update.

Locatable Minerals

Goal

Encourage and facilitate development of locatable minerals in a manner to prevent unnecessary or undue degradation.

Allocations

Manage approximately 30,000 acres of federal mineral estate currently withdrawn from operation of the mining law as closed to locatable mineral entry (see Map 16, oversized), but review as necessary prior to expiration (if applicable) to determine whether the withdrawals should be extended, revoked, or modified. This includes the Bear Trap Unit of the Lee Metcalf Wilderness, the Beaverhead River acquisition, FERC Power Projects on the Madison River and Wisconsin Creek, the reservoir site reserve for Lima Reservoir, areas withdrawn for several BLM recreation sites, public

water reserves, an air navigation site, the Clark Canyon Reservoir Reclamation Project, and several Forest Service administrative sites located outside National Forest Boundaries.

Make an additional 5,098 acres unavailable to mineral entry (see Map 16, oversized) upon completion of withdrawal actions (Note: there is some overlap of lands in the areas listed below, therefore the total of acres of items a-j does not correspond with the total acres proposed for withdrawal).

- a. Beaverhead Rock (120 acres)
- b. Christnot Mill (20 acres)
- c. Developed Recreation Sites (797 acres)
- d. Everson Creek (2,160 acres)
- e. Lewis's Lookout (160 acres)
- f. Land along the Madison River between Warm Springs and the planning area boundary to the north (1,609 acres)
- g. Road Agent Rock (10 acres)
- h. Squirrel Rock (10 acres)
- i. Virginia City Historic District (513 acres)
- j. Wedding Ring Rock (10 acres)

Manage federal mineral estate underlying R&PP conveyances as closed to mineral entry. Manage the remainder of split federal mineral estate as open to locatable mineral entry, subject to the provisions of 43 CFR Part 3814.

Actions

- 1 Ensure all requirements of appropriate state and federal laws are met in the management of mining operations. Refer inquiries to appropriate agencies for further guidance on other permit requirements.
- 2 Work done by hand without use of explosives will be considered "casual use".
- 3 Review and process notices and plans of operations submitted under 43 CFR Parts 3802 and 3809 to ensure the proposed action does not create unnecessary or undue degradation of the environment.
- 4 Coordinate with Montana DEQ during the review, approval, inspection and reclamation of mining operations.
- 5 Conduct at a minimum annual compliance inspections on each active notice and plan of operation.
- 6 Apply terms and conditions to mining activities (within the constraints of the mining law) to meet the *Western Montana Standards for Rangeland Health* for uplands, riparian and wetlands, water quality, air quality, and native plant and animal species.
- 7 Require bonding equal to 100 percent of the amount needed for full restoration of disturbed habitat to proper

functioning condition where surface disturbing mineral exploration or development takes place within 100 feet of the centerline of any stream containing westslope cutthroat trout with a genetic purity of 90 percent or greater. Require a Plan of Operation before mineral production activities are initiated in these same areas.

- 8 Analyze all recommendations to dispose of or withdraw additional lands to determine the mineral potential (e.g., mineral character) of each tract before any decision is finalized.
- 9 Withdraw approximately 2,305* additional acres in the following areas from locatable mineral entry as part of standard management (see Map 16, oversized):
 - a. Christnot Mill (20 acres)
 - b. Developed Recreation Sites not already withdrawn (797 acres)
 - c. Lewis's Lookout (160 acres)
 - d. BLM lands that are not already withdrawn located along the Madison River from the north Bear Trap Wilderness boundary north to the DFO boundary (1609 acres)
 - e. Road Agent Rock (10 acres)
 - f. Squirrel Rock (10 acres)
 - g. Wedding Ring Rock (10 acres)

*The sum of acres does not match the total due to the overlap of some of the proposed areas.

- 10 Withdraw approximately 2,793 additional acres in the following areas from locatable mineral entry as part of special management to protect relevant and important values within designated ACECs (see Map 16, oversized):
 - a. Beaverhead Rock (120 acres)
 - b. Everson Creek (2,160 acres)
 - c. Virginia City Historic District (513 acres)

Monitoring

Monitoring of mining operations will be done to ensure compliance with 43 CFR 3809, 3802 and 3715 and other regulations and conditions of approval, specifically preventing "unnecessary or undue degradation". When applicable and practical, Plan and Notice review, inspections and associated compliance work will be coordinated with the Montana Department of Environmental Quality. Coordination with Montana DEQ will help ensure adequate monitoring.

Each Plan of Operation and Notice has or will have mitigation measures that cover the life of the operation. Field inspections will look for compliance with these measures and include monitoring weed control, reclamation of disturbed areas, revegetation and protection of the environment and public health and safety. Findings for each inspection will be documented and placed in the case file. Any non-

compliance items will be noted and appropriate regulatory procedures followed.

43 CFR 3809 regulations require inspections at least four times a year for operations that use cyanide or other leachate or where there is significant potential for acid drainage. Inspections for active operations will occur twice a year and all others will be inspected once per year. Operations in sensitive areas or operations with a high potential for greater than usual impacts will require inspections more often.

The number of explorations/operations monitored and the number in compliance will be reported in the Annual Program Summary and Planning Update.

Salable Minerals (Mineral Materials)

Goal

Provide for the extraction of mineral materials to meet public demand, while minimizing adverse impacts to other resource values.

Allocations

Manage 136,226 acres as closed to mineral material disposal in the following areas (see Map 22):

- Bear Trap Wilderness
- All nine Wilderness Study Areas
- Centennial Sandhills
- Christnot Mill
- Developed recreation sites
- Lewis's Lookout
- Sheep Creek Common Use Area
- Lands within one-quarter mile either side of the Big Sheep Creek Road, except in sections 26 and 35 in T14S, R10W and section 2 in T15S, R10W

Manage the remainder of the planning area as open to mineral material disposal, subject to the provisions described in the *Action* section below.

Actions

- 1 Maintain current mineral material sites (see Map 22) until material is exhausted or other circumstances warrant closure.
- 2 Encourage extraction of mineral materials from previously disturbed sites rather than opening new sites.
- 3 Analyze proposals for new mineral materials sites outside of closed areas on a case-by-case basis and only establish new community pits/common use areas when a significant need for material is demonstrated and a significant amount of material will be removed. Exclusive sales outside of closed areas will be analyzed on a case-by-case basis. Follow the Standard Operating Pro-

cedures detailed in Appendix N when establishing new mineral materials sites.

- 4 Do not authorize mineral material disposal from any valid existing mining claim without the consent of the claimant.

Monitoring

Monitoring of salable minerals will be done to ensure compliance with applicable laws, regulations, BLM policy contained in BLM Manual Section 3600 and Handbook H-3600-1.

Field inspections of common use areas, exclusive sale sites and other operations will be done on a periodic basis and will determine compliance with applicable laws, regulations, and the requirements of the approved mining plan. Inspections will specifically note compliance with reclamation, weed control and the protection of the environment and public health and safety. Operations in sensitive environmental areas or operations with a high potential for greater than usual impacts will be inspected more often. Identification and resolution of salable mineral trespasses will also be performed.

The number of mineral material sites monitored and the number of these sites in compliance will be reported in the Annual Program Summary and Planning Update.

NATIONAL TRAILS

Goal 1

Assist in cooperative efforts to manage current and future national trails to protect the values for which they were designated. See Map 12 for trail locations in the planning area.

Actions

- 1 Manage both the Continental Divide National Scenic Trail (CDT) and the Bear Trap Canyon National Recreation Trail to preserve the surrounding scenic values and to provide for primitive recreation opportunities.
- 2 Place the highest priority for trail work (maintenance and/or reconstruction) on the CDT, along with the Bear Trap Canyon National Recreation Trail.
- 3 Formalize an agreement between the BLM, ARS, and USFS regarding specific areas of responsibility for trail segments along the CDT.
- 4 Complete, sign and maintain the BLM-managed portions of the CDT to allow the public to enjoy the trail while maintaining the surrounding natural beauty of the corridor and the opportunity for a relatively primitive recreation opportunity.

- 5 Manage the portions of the Lewis and Clark and Nez Perce (Nee-Me-Poo) National Historic Trails crossing lands administered by the DFO to protect and enhance their respective historic values. Consider interpretative opportunities on a case-by-case basis.
- 6 Follow BLM manual guidance, the National BLM Programmatic Agreement and Implementing Protocol for Montana, and the Comprehensive Plan for the Nez Perce (Nee-Me-Poo) National Historic Trail (USDA-FS 1990) in the management of National Historic Trails.
- 7 Manage 4.4 miles of the 16 miles of the Lewis and Clark National Historic Trail and associated viewshed in the Horse Prairie area under VRM Class III.

Monitoring

The Continental Divide National Scenic Trail (CDT) will be monitored annually to ensure that the trail presents no unreasonable public safety hazards, is not contributing to unacceptable levels of resource damage, and is suitable for use as a recreational hiking/equestrian travel route through the Centennial Mountains. The BLM will continue to work with various volunteer organizations and cooperate with the other affected agencies (USFS, USFWS, and ARS) to ensure public needs are being addressed along this route.

Periodic monitoring will be conducted along those segments of the Lewis and Clark National Historic Trail and the Nez Perce (Nee-Me-Poo) National Historic Trail managed by the Dillon Field Office to ensure that management actions are not adversely impacting the historical values for which the trails were designated. In addition, annual monitoring will be conducted to ensure that management activities are consistent with BLM Manual Guidance for the management of National Historic Trails, and developed and comprehensive plans prepared for specific trails (e.g. the Nez Perce (NEE-ME-POO) National Historic Trail Comprehensive Plan).

NOXIOUS WEEDS, INVASIVE AND NON-NATIVE SPECIES

Goal

Prevent the introduction and spread of invasive and noxious plants.

Objective (Desired Future Condition)

New infestations of noxious weeds are not common across the landscape, and existing large infestations are declining.

Actions

- 1 Manage Montana State designated noxious weeds according to the principles of integrated pest management found in *Partners Against Weeds: An Action Plan for*

the Bureau of Land Management (USDI-BLM 1996b), the Montana Weed Management Plan (Duncan 2001), and the Montana Noxious Weed Act.

- 2 Participate in education and awareness programs for staff, cooperators, and the public.
- 3 Continue inventory of public lands for noxious weeds.
- 4 Monitor treatment areas
- 5 Continue cooperative agreements with Beaverhead and Madison counties for Integrated Weed Management.
- 6 Encourage development of Cooperative Weed Management Areas where all the landowners are cooperatively working to contain or eradicate noxious weeds within designated areas.
- 7 Control noxious weeds by various methods that include chemical, cultural, physical, mechanical, and biological treatments or other land practices.
- 8 Evaluate treatment and control of invasive species such as cheatgrass in site-specific projects associated with the watershed analysis.
- 9 Reestablish perennial vegetation in a timely manner to rehabilitate disturbance areas.
- 10 Use native species for rehabilitation and reclamation unless site specific evaluations indicate that nonnative species are needed to ensure success or rapid vegetative reestablishment.
- 11 When analyzing proposals to conduct aerial application of herbicides for weed control, emphasize protection of special status plants and associated plant communities in the Big Sheep Creek Basin area, occupied pygmy rabbit habitat, sage grouse breeding habitat, and mountain mahogany habitats.
- 12 Prohibit aerial application of herbicides and pesticides within the Centennial Sandhills ACEC boundary, but allow for other weed control methods, taking into consideration the special status plants in the area.

Monitoring

A sample of known noxious weed sites identified for treatment will be visited each year and evaluated for effectiveness of control. The following acreages will be reported in the Annual Program Summary and Planning Update to track plan implementation:

Number of acres inventoried
 Number of acres evaluated to determine treatment effectiveness
 Number of acres treated

The number of allotments/acres that meet the Biodiversity standard in the *Western Montana Standards for Rangeland Health* relative to noxious weeds, invasive, and non-native species and the total number of allotments/acres assessed will also be reported in the Annual Program Summary and Planning Update.

PALEONTOLOGICAL RESOURCES

Goal 1

Preserve and protect significant paleontological resources and ensure that they are available for appropriate scientific, educational, and where appropriate recreational, uses by present and future generations.

Actions

- 1 Maintain an inventory of paleontological sites and localities.
- 2 Require permits for individuals or institutions conducting paleontological investigations for vertebrate fossils on public lands and insure that fossils remain in federal ownership in perpetuity.
- 3 Establish a long term monitoring program at known paleontological locales to assess potential adverse impacts and propose actions to mitigate adverse impacts as appropriate. Monitor a minimum of one locality per year.

Goal 2

Ensure that proposed land uses initiated or authorized by BLM avoid inadvertent damage to federal and non-federal paleontological resources

Actions

- 1 Conduct an inventory for vertebrate paleontological resources in conjunction with the inventory for cultural resources prior to projects that may result in surface or sub-surface disturbance.
- 2 Avoid impacts to paleontological remains through project redesign, project abandonment, and/or mitigation of adverse impacts through scientific recovery and analysis.

Goal 3

Promote the stewardship, conservation, and appreciation of paleontological resources through appropriate educational and public outreach programs

Actions

- 1 Design and prepare paleontological resource awareness programs to enhance the public appreciation of paleontological resource values.

- 2 Encourage scientific use of paleontological resources by university field schools.

Monitoring

An overview of paleontological resources in the Dillon Field Office identified 110 localities occurring within five major geographic areas: 1) Horse Prairie/Grasshopper Valleys; 2) Melrose/Beaverhead/Jefferson Valleys; 3) Muddy Creek Valley; 4) Sage Creek/Blacktail Valleys; and 5) Upper Ruby Valley. A long term monitoring program will consist of the visitation of a representative sample of paleontological localities in each of the five major geographical areas to establish a baseline condition assessment for major geologic formations containing paleontological materials within each of the five geographic areas. Once the baseline condition assessment information has been compiled, a minimum of one of each of the five geographic areas will be monitored on an annual basis to identify if any adverse impacts are occurring.

The number of localities visited on an annual basis and their condition will be reported in the Annual Program Summary and Planning Update.

RANGELAND VEGETATION

Goal

Manage the vegetative resource to maintain a diversity of ecological conditions on upland vegetation.

Objectives (Desired Future Condition)

Sagebrush steppe includes a mosaic of multiple-aged shrubs, forbs, and native perennial grasses. Shrub overstories are present in a variety of spatial arrangements and scales across the landscape, including disjunct islands and corridors.

A full range of sagebrush communities with diverse species and sub-species, canopy, density, and age classes are present across the landscape.

Grass and forb plant communities occur within site potential and are stable or improving in health and vigor.

Populations and habitats of rare plant species and their associated communities are stable or continue to improve in vigor and distribution.

Upland vegetation provides sufficient plant cover and litter accumulation to protect soils from wind and water erosion, and enhances nutrient cycling and productivity.

Actions

- 1 Implement the *Western Montana Standards for Rangeland Health* on BLM lands in southwest Montana by completing assessments for land health standards on a watershed basis, pursuant to current BLM guidance

found in H-4180-1, Rangeland Health Standards. Complete the assessments for land health standards based on the watershed areas and evaluation schedule identified on Map 20, pending funding or other constraints, and then begin rotation again.

- 2 Implement strategies to protect rangeland resources during periods of drought with an emphasis on voluntary adjustments in livestock use to maintain or achieve long-term resource productivity.
- 3 Consider the following species priority upland plant species:
 - Aspen
 - Curl leaf mountain mahogany
 - Basin big sagebrush
 - Mountain big sage brush
 - Basin wild rye
 - Bluebunch wheatgrass
 - Idaho fescue

These species are widespread across the planning area but priority is placed on them when they are part of the vegetative component of priority habitats such as big game winter range and special status species habitats.
- 4 Allow treatment of conifer encroachment in all non-forested habitats to restore the appropriate upland habitat type. Encroachment may be treated or harvested with prescribed and natural fire, mechanical treatments, or other tools as appropriate.
- 5 Consistent with forest and woodland management, focus treatment of conifer encroachment in areas of urban interface and in the southern Ruby Mountains, the south Tobacco Roots, and in the Barton/Idaho Gulch areas. However, treatments can occur across the planning area as determined through watershed evaluations.
- 6 Identify units, develop site-specific prescriptions, and identify the tools to be used to achieve the desired resource conditions for each habitat type on a case-by-case basis during the watershed analysis.
- 7 Manage xeric shrub habitat types for a fire return interval of approximately 50 years, using all available tools.
- 8 Manage mountain shrub habitat types for a fire return interval of 20 to 40 years, using all available tools.
- 9 Manage fire-sprouted mountain shrub habitat types for a fire return interval of approximately 20 years, using all available tools.
- 10 Consider treatment of mesic shrub habitat types, which only occur in limited amounts in the planning area, on a case-by-case basis.

- 11 Consider treatment of mountain mahogany habitat types, which only occur in limited amounts in the planning area, on a case-by-case basis. Consider use of fire or mechanical methods to maintain and enhance the existing habitat.
- 12 Emphasize protection of dense sagebrush patches within occupied pygmy rabbit habitat. Do not treat the densest patches of sagebrush within sagebrush communities occupied by pygmy rabbits.
- 13 Do not authorize activities contributing to the loss of Basin big sagebrush and Wyoming big sagebrush "stringer" habitat through mechanical damage or other means.
- 14 Improve existing seedings that are not meeting rangeland health standards for plant vigor and density by implementing grazing management systems or re-seeding with appropriate species of natives or cultivars. Focus restoration of any existing seedings on areas containing high resource values and/or priority habitats and species. Allow the use of all available tools.

Monitoring

Ecological trends due to changes in vegetation composition over time will be measured through periodic rangeland health assessments following procedures outlined in *Interpreting Indicators of Rangeland Health* (Pellant et al. 2005).

The number of allotments/acres that meet the Upland standard in the *Western Montana Standards for Rangeland Health* and the total number of allotments/acres assessed will be reported in the Annual Program Summary and Planning Update.

RECREATION

Note: See the *Travel Management* section for discussion of motorized and non-motorized use for recreational and other purposes.

Goal 1

Provide a diverse array of quality, resource based recreation opportunities while protecting and interpreting the resource values, providing educational opportunities, minimizing user conflicts, and promoting public safety.

Goal 2

Develop and maintain appropriate recreation facilities, balancing public demand, protection of Public Land resources, and fiscal responsibility.

Allocations

Manage the following nine areas as designated Special Recreation Management Areas (SRMA) (see Map 23) and man-

age them according to the specified recreational emphasis outlined in Table 6 in the *Actions* section:

- Axolotl Lakes
- Big Sheep Creek
- Centennial Mountains
- East Fork Blacktail Deer Creek
- Lower Big Hole
- Lower Madison
- Ruby Mountains
- South Pioneers
- Upper Madison

Manage the remaining lands in the planning area as the Extensive Recreation Management Area.

Designate the Rocky Hills area as a SRMA, including lands within the Henneberry Ridge WSA if the WSA is released from further consideration as wilderness (see Map 23).

Actions

- 1 Manage land in the planning area for a variety of recreation opportunities (e.g., hunting, fishing, sightseeing, off-highway vehicle use, horseback riding, mountain biking, hiking, rafting, rockhounding, etc.) consistent with other resource management objectives.
- 2 Implement the Lower Madison River Recreation Area Management Plan (USDI-BLM 2003a) and the Missouri-Madison Comprehensive Recreation Plan (Dames & Moore 1996, revised PPL Montana, LLC 2001).
- 3 Complete the evaluation and update of the Bear Trap Canyon Wilderness Management Plan (USDI-BLM 1984a) and implement.
- 4 Continue to implement the Lower Big Hole River Recreation Area Management Plan (USDI-BLM 1987a).
- 5 Consider development of additional recreational support facilities at the Maiden Rock Boat Launch site on the Lower Big Hole River.
- 6 Place emphasis on providing interpretive and informational signs and materials for public lands visitors.
- 7 Limit development of additional facilities to those areas where public recreational use of surrounding public lands requires them.
- 8 Construct and/or maintain non-motorized recreational trails as funding and staffing allow. Priority for this work will be placed in the Centennial Mountains, the East Fork Blacktail Deer Creek area, and the Ruby Mountains.

- 9 Consider rental of existing cabins/facilities on public lands for public recreational use on a case-by-case basis.
- 10 Manage each of the nine Special Recreation Management Areas (SRMAs) according to the recreational emphasis specified in Table 6.
- 11 Prepare a Recreation Area Management Plan for the South Pioneers to consider opportunities for motorized and/or mountain bike trail development.
- 12 If the Henneberry Ridge WSA is released and the Rocky Hills area become a designated SRMA and it is determined that the demand for mountain bike opportunities in the Dillon area might be satisfied through development of a trail system in the area, prepare a Recreation Area Management Plan for the Rocky Hills SRMA. Recreational emphasis would be for day use, mountain biking and hiking, and primitive camping.
- 13 Manage Ruby Reservoir as a developed recreation site within the Dillon Extensive Recreation Management Area.

Table 6
Recreational Emphasis by Special Recreation Management Area

SRMA	<i>Recreational Emphasis*</i>
Axolotl Lakes	Semi-primitive non-motorized summer recreation use, and both motorized and non-motorized winter use
Big Sheep Creek	Semi-primitive recreation, semi-primitive camping
Centennial Mountains	Primitive and semi-primitive, non-motorized recreation
East Fork Blacktail Deer Creek	Primitive and semi-primitive, non-motorized recreation, with limited camping
Lower Big Hole	River recreation, day use, and semiprimitive camping
Lower Madison	Day use, water based recreation at Ennis Lake, wilderness opportunities in the Bear Trap Canyon, non-motorized, river based recreation with semi-developed camping opportunities along the Lower Madison River
Ruby Mountains	Primitive and semi-primitive non-motorized recreation
South Pioneers	Motorized recreation, mountain biking, day use
Upper Madison	Non-motorized river recreation use, semi-developed camping opportunities
<p>*Areas identified for non-motorized recreational emphasis will continue to allow motorized access consistent with the approved route designations for those areas (see Maps 26 and 27, oversized), but will not favor management activities that encourage increased motorized recreational use.</p>	

- 14 Maintain all existing facilities (listed below) to a standard consistent with the recreational setting, and manage some in partnership with other agencies or groups. Map 24 depicts the location of these areas and facilities.
 - a. Axolotl Lakes Cabin
 - b. Bear Trap Trailhead
 - c. Clute's Landing
 - d. Deadwood Gulch
 - e. East Fork of Blacktail Deer Creek
 - f. Fall Creek Day Use
 - g. Kobayashi Beach
 - h. Maiden Rock
 - i. Ney Ranch Recreation Site
 - j. Palisades Campground
 - k. Palisades Day Use
 - l. Powerhouse Boat Launch
 - m. Red Mountain Campground
 - n. Red Mountain South
 - o. Ruby Creek Campground
 - p. Ruby Creek Boat Launch
 - q. Ruby Reservoir
 - r. Canaday (Scanlon) Boat Launch
 - s. Shoshone Ridge
 - t. Trail Creek Picnic Area
 - u. Warm Springs
- 15 Consider development of additional recreational support facilities at the Maiden Rock Boat Launch site on the Lower Big Hole River.
- 16 Develop the Storey Property along the Madison River (within sections 13, 14 and 24 of T.8S, R.1W) to provide a boat launch, parking area and toilet.
- 17 Prepare a management plan in cooperation with FWP for the Axolotl Lakes acquisition lands. Continue management of the Axolotl Lakes acquisition lands under interim management as described in BLM EA #MT-050-2001-13 until the management plan is developed. Interim management provides for:
 - a. No permanent grazing allocation
 - b. No recreational facility development
 - c. No special recreation permits for outfitters
 - d. Maintain the integrity of the cabin and pursue a rental program and other administrative uses
 - e. No motorized use *except*: (1) snowmobile use between December 1 and May 15, and (2) motorized administrative uses.
- 18 Establish appropriate use levels in coordination with FWP for BLM launch sites as necessary to ensure main-

tenance of quality recreation opportunities on streams and lakes in the planning area.

- 19 Protect significant cave resources in accordance with the Federal Cave Resource Protection Act of 1988.
- 20 Implement food storage strategies from the Southwest Montana State Grizzly Management Plan (MT FWP 2002) on BLM lands in the Grizzly Bear use areas outside of the Yellowstone Recovery Zone if grizzly bears are delisted. Until the grizzly bear is delisted, monitor the South Madison campground and undeveloped sites in the East Fork of the Blacktail and the Axolotl Lakes area for food storage problems related to grizzly bear use and the potential need for bear proof trash containers. Post major public land trailheads and access points in these areas and in the Centennial Mountains to advise recreationists about proper food storage to avoid back country conflict.

Goal 3

Issue special recreation permits in an equitable manner for specific recreational uses of the public lands and related waters as a means to minimize user conflicts, control visitor use, to protect recreation resources, and to provide for private and commercial recreation use.

Allocations

Establish seven Outfitter Permit Areas (OPAs) as depicted on Map 25 to manage outfitted big game hunting, and manage each OPA according to use levels based on historical use levels. Use levels and allocations to specific outfitters will be established in coordination with those affected within two years of issuance of the ROD that approves the RMP.

Actions

- 1 Authorize special recreation permits in accordance with Special Recreation Permit Handbook 2930-1.
- 2 Manage special recreation permits in accordance with federal regulations, special stipulations, and established terms and conditions.
- 3 Accept, consider, and analyze applications for recreation-related activities on public lands that require a Special Recreation Permit (SRP) other than outfitted big game hunting on a case-by-case basis.
- 4 Maintain but do not increase use levels for outfitted big game hunting above historical levels (pre-2006) within the seven OPAs.
- 5 Accept permit applications for new outfitted big game hunting only if use days are available.

Goal 4

Develop and maintain cooperative relationships with national, state and local recreation providers, tourism entities, and local recreational groups.

Actions

- 1 Maintain cooperation with a variety of user groups, especially in the local area, to provide diverse recreational opportunities for enjoyment of public lands.
- 2 Promote and support recreation-based tourism.
- 3 Complete development and maintenance of sites identified in the 2002 FERC re-licensing agreement for the Missouri-Madison hydroelectric project.

Monitoring

Monitoring of recreation resources will continue to occur throughout the planning area with emphasis placed on developed recreation sites and Special Recreation Management Areas. Monitoring will include regular patrols to check on signing, visitor use, recreation use-related impacts, and user conflicts. Monitoring will also emphasize identification of areas where there may be problems with compliance with rules and regulations resulting in user conflicts or resource damage. Actual visitor and/or vehicle counts will be documented at all developed recreation sites as sites are visited and then projected into an average visitor use. These numbers will then be used to validate recreation use trends. Monitoring of Special Recreation Permits will be conducted for compliance with terms, conditions, and special stipulations, as well as annual monitoring and evaluation of compliance with administrative requirements. Periodic assessments will be made to ensure that uses in Special Recreation Management Areas are consistent with their prescribed recreation opportunity classes.

Average visitor use numbers at developed recreation sites will be reported in the Annual Program Summary and Planning Update to track visitor use and recreation use trends over time. The number of recreation management plans prepared and special recreation permits issued will also be reported in the Annual Program Summary and Planning Update.

RENEWABLE ENERGY

Goal

Provide opportunities for the development of renewable energy resources from sources such as wind, biomass, solar, and low-impact hydropower while minimizing adverse impacts to other resource values.

Actions

- 1 Analyze proposals for the development of renewable energy resources from sources such as wind, biomass, solar, and low impact hydropower on a case-by-case basis. Although no areas would be specifically designated for renewable energy development, opportunities for such development would be provided to the extent consistent with other goals, objectives, and requirements of the land use plan.
- 2 Consider designated right-of-way avoidance and exclusion areas as well as designated right-of-way corridors and use areas in those situations in which a renewable energy project would require a right-of-way.
- 3 Manage rights-of-way proposals for renewable energy consistent with the provisions in the "Land Use Authorizations" portion of the *Lands and Realty* section of this plan.
- 4 Adopt Best Management Practices (BMPs) related to renewable energy development, including but not limited to those proposed in BLM's Programmatic Wind Energy EIS, and apply when and where applicable.

Monitoring

Renewable energy projects will be monitored through the BLM accomplishment tracking process. Where renewable energy projects require land use authorizations, monitoring will be conducted in accordance with the monitoring of Goal 1 in the *Lands and Realty* section.

RIPARIAN AND WETLAND VEGETATION

Goal

Restore and maintain riparian wetland areas so that at least 955 miles of streams and 2,050 acres of wetlands are in proper functioning condition. Design management to achieve objectives (Desired Future Conditions) or initiate an upward trend in 20 years.

Objectives (Desired Future Condition after 20-50 years of management)

Riparian and wetland vegetation supports the biological, hydrologic, and physical components of streams and wetlands based on site-specific capabilities.

Deciduous woody and coniferous communities are present with diverse composition, density, and age structure within site potential.

Herbaceous plant communities are dominated by deep-rooted native species that support streambank and shoreline stability, floodplain development, and nutrient cycling.

Stream channels display the dimensions, pattern, and profile that are representative of site potential (Rosgen).

Emphasize maintenance of riparian communities on approximately 415 miles of stream dominated by a tall deciduous shrub or aspen/cottonwood habitat types and on approximately 500 miles of stream dominated by herbaceous and coniferous habitat types (based on 2002 inventory summary). This will involve the following shifts in vegetation communities from existing conditions toward the desired future condition:

	Existing		Desired	
	Percent	Miles	Percent	Miles
Conifer types	45%	413	25%	228
Aspen/cottonwood types	15%	137	20%	183
Tall shrub types	30%	274	40%	365
Herbaceous, misc. types	10%	91	15%	137

Allocations

Maintain all current riparian exclosures as unleased for livestock grazing.

Actions

- 1 Implement riparian and wetland management consistent with state and federal law and regulation.
- 2 Take actions to cooperatively conserve riparian/wetland habitat, minimize the destruction, loss or degradation of wetlands, and preserve values served by floodplains where occurring on public land while reducing hazards to human safety.
- 3 Implement the *Western Montana Standards for Rangeland Health* (see Appendix A) to achieve proper functioning condition in riparian and wetland habitats. Incorporate of the *Guidelines for Livestock Grazing*, as well as strategies outlined in *Best Management Practices for Grazing* (MT DNRC 1999), when applicable.
- 4 Increase the amount of properly functioning habitat (PFC) from 18 percent to 50 percent, decrease functional-at-risk (FAR) habitat from 59 percent to 30 percent, and reduce nonfunctional habitat (NF) from 23 percent to 20 percent. Implement a full array of management actions including limiting grazing treatments to less than 30 days if necessary.
- 5 Restore approximately 100 miles of deciduous riparian habitat types that have a high composition of conifers (juniper, Douglas-fir or spruce) back to a tall deciduous shrub or aspen/cottonwood habitat type, using the following class strategy. Focus these actions only on riparian areas retaining at least a 10-15 percent

- woody deciduous canopy. Multiple classes may occur on a given stream reach but no individual class should represent less than 25 percent of existing conditions for treatment purposes.
- Class 1 – Conifer canopy <10 trees/acre and <5 percent canopy, Rosgen channel types A or B – no treatment
 - Class 2 – Conifer canopy 10-50 trees/acre and 5-15 percent canopy, Rosgen channel types C or E – use mechanical methods to reduce canopy to Class 1, leaving materials on-site to restrict ungulate access and enhance stream channel characteristics and stability.
 - Class 3 – Conifer canopy 15-50 percent uniformly distributed throughout riparian reach, Rosgen channel types C or E - use appropriate methods to reduce conifer canopy to Class 1 while maintaining or promoting riparian proper functioning condition. However, no mechanized equipment would be allowed within the riparian zone (with the exception of chainsaw use), and no new road construction would be authorized. Up to 70 percent of material may be removed, with remainder left on-site to restrict ungulate access and enhance stream channel characteristics and stability.
 - Class 4 – Spruce/Douglas-fir canopy >50 percent in distinct stands, Rosgen channel types A, B - no treatment.
 - Class 5 – Juniper canopy >50 percent - reduce canopy and numbers to Class 1, using appropriate methods as in Class 3. In addition, special consideration will be given to channel stability needs and site protection from ungulate use for an extended time period.
- 6 Develop and apply site-specific objectives and management strategies for riparian and wetland areas through implementation of activity plans.
 - 7 Coordinate with FWP on proposed vegetation treatments.
 - 8 Coordinate with FWP when considering the use and management of beavers as a tool to enhance riparian habitat conditions.
 - 9 Complete routine maintenance annually on all exclosures prior to livestock turnout.
 - 10 Monitor exclosures to compare differences between areas grazed and ungrazed by livestock.
 - 11 Update and revise the Red Rock Waterfowl Habitat Management Plan to emphasize wetland habitat improvement to benefit wetland-dependent species as well as maximize opportunities to reestablish and maintain trumpeter swan occupancy. Pursue cooperative management on co-owned public/private wetlands to enhance habitat capabilities and water availability.
 - 12 Manage the density and height of emergent wetland vegetation (cattails, rushes, etc.) to provide residual nesting cover and concealment for trumpeter swans and other waterfowl within the wetland and waterfowl production areas in the Centennial Valley (see Map 36).
 - 13 Analyze water developments on a case-by-case basis, considering the following:
 - Available water flow. In general, no water developments that remove more than 50% of average summer daily flows from a water source will be constructed unless systems can be designed for return flows back into the drainage within a 1/4 mile of the diversion.
 - Protection of source water riparian and wetland habitat. Where isolated springs are developed, associated riparian habitat will be protected, usually through fencing.
 - Protection of other resource values from direct and indirect impacts from construction and use of the water source. Measures to protect riparian habitats and other resource values including but not limited to sensitive plant species and cultural resources will be implemented based on site-specific needs. Only off-stream water developments and/or armored water gaps will be considered on streams where fencing has excluded the riparian area to prevent impacts to various resources.
 - Location of water tanks in relation to other resource values. Measures to protect resource values in proximity to tank locations will be implemented based on site-specific needs. In general, water tanks will be placed at least 1/4 mile from unfenced stream riparian habitat.
 - 14 Emphasize the use of temporary let-down wire fence with permanent posts where fencing is necessary to protect riparian habitats from livestock grazing, and in other situations where permanent fencing is not necessary.

Monitoring

Changes in miles/acres of riparian/wetland in proper functioning condition will be determined during watershed evaluations (see Map 20 for watershed areas) using the procedures outlined in BLM Technical References TR 1737-15 and TR 1737-16 (Prichard et. al 1998, 2003). Changes in vegetation communities will also be determined during these assessments.

Riparian/wetland plant community characteristics will be inventoried and monitored to establish trends in plant composition, canopy, age class diversity, and utilization that in-

dicade progress toward desired plant communities and properly functioning riparian conditions. The 1995 Montana Riparian Wetland Association inventory and assessment methodology (updated as necessary) will serve as the baseline to provide comprehensive plant community composition and canopy.

Rosgen inventories will provide baseline channel morphology information and identify site potential. Simple stream cross sections can also be used to provide estimates of width depth ratios and channel profiles.

In general, all riparian/wetland vegetation studies should be duplicated prior to the completion of watershed evaluations (see Map 20 for watershed areas). Frequency of monitoring activities will be defined in the Watershed Assessment Plans. Monitoring studies in individual activity plans and watershed assessments will reflect site-specific and area-wide progress toward desired future conditions.

The number of miles/acres that meet the Riparian/Wetland standard in the Western Montana Standards for Rangeland Health and the total number of miles/acres assessed will be reported in the Annual Program Summary and Planning Update. Miles/acres converted from conifer to deciduous and/or herbaceous riparian habitats will also be reported.

SOCIAL CONDITIONS

Goal

Provide for a diverse array of activities that result in social benefits while minimizing negative social effects.

Action

- 1 Evaluate and disclose impacts in accordance with provisions of NEPA and other guiding statutes as part of implementation level planning when it appears actions taken by the BLM DFO have the potential to affect social conditions.

Monitoring

None identified.

SOILS

Goal

Maintain or improve soil health or fertility, prevent, or minimize soil erosion and compaction, and reduce the possibility of mass wasting on unstable soils.

Actions

- 1 Consider soil conditions and types and their influence during watershed and activity level planning. Diagnose soil compaction and erosion problems using the *Western Montana Standards for Rangeland Health*.

- 2 Give greatest consideration to soils susceptible to compaction and erosion when assessing proposed activities.
- 3 Maintain canopy cover determined necessary to protect unstable soils.
- 4 Implement Best Management Practices (BMPs) (see Appendix B) and any necessary mitigation measures at the site-specific project level to maintain or improve the soil resource.
- 5 Apply appropriate mitigation measures including seasonal restrictions on activities authorized by BLM in areas with significant soil compaction or erosion.
- 6 Consider the intensity of the disturbance when addressing activities proposed in slump or unstable areas. Require detailed engineering design, geologic analysis, and mitigation plans for surface-disturbing projects proposed in areas of suspected instability. Surface disturbance associated with timber harvest will be allowed on unstable soils if acceptable techniques are applied to mitigate the possible negative effects of mass wasting.
- 7 Provide for the conservation and protection of the basic rangeland resources, soil and vegetation, during periods of drought. Modify grazing schedules and livestock management practices as necessary in order to conserve and protect soil during periods of drought.

Monitoring

A sample of ground-disturbing projects with the potential to affect soil resources will be evaluated on a periodic basis to determine if best management practices or identified mitigation measures were followed and if they were effective. Results will be reported in the Annual Program Summary and Planning Update. The number of allotments/acres that met the Upland and Riparian standards in the *Western Montana Standards for Rangeland Health* and the total number of allotments/acres assessed will also be reported in the Annual Program Summary and Planning Update.

SPECIAL STATUS SPECIES

See the respective sections for *Fish and Special Status Fish*, *Special Status Plant*, and *Wildlife and Special Status Birds and Mammals*.

SPECIAL STATUS SPECIES – PLANTS

Goal 1

Identify, conserve, and monitor rare, vulnerable, and representative habitats, plant communities, and ecosystems to

ensure that there is a self-sustaining persistence of special status plants within the DFO.

Goal 2

Ensure that proposed land uses initiated or authorized by BLM avoid inadvertent damage to federal and non-federal habitats supporting special status plants and plant communities.

Goal 3

Promote public awareness, appreciation and understanding of rare plants and their habitats.

Objective (Desired Future Condition)

The necessary habitat, biological processes, and disturbance regimes are present on DFO lands to maintain or enhance populations of special status plant species.

Allocations

Limit livestock grazing authorizations to the non-growing season in the following allotments or pastures to benefit BLM special status plant species:

- the Frenchie Allotment #10121 (combined from the former Frenchie Allotment # 10121, Timber Butte Allotment #20168, and Cold Spring Allotment #20215)
- the Spring Creek Pasture of the Stonehouse Allotment #30005

Do not issue a term grazing permit or lease in the Eli Spring area (south half of section 3, north half of section 10, T9S, R11W) though temporary non-renewable grazing could be authorized to meet objectives.

Actions

- 1 Ensure that habitat is provided for special status species, and that proposed actions do not jeopardize the continued existence of a threatened or endangered species, or cause its habitat to be adversely modified or destroyed.
- 2 Consult with USFWS when impacts are anticipated to threatened or endangered species or designated habitat.
- 3 Cooperate in implementation and monitoring of recovery plans, State of Montana management plans, and conservation strategies for all listed, recently delisted, and candidate species.
- 4 Implement management plans prepared for species not yet delisted in coordination with the State of Montana and other appropriate agencies once the species is delisted by the USFWS.

- 5 Enhance, restore and/or maintain habitat conditions and availability for special status species and prevent all avoidable loss of habitat.
- 6 Manage special status species habitats and populations using multi-scale assessments to identify current conditions, risks and opportunities.
- 7 Treat sensitive species as candidate species for project impact analysis.
- 8 Complete biological evaluations for projects for all special status plant and animal species using the joint format developed in conjunction with the Beaverhead-Deerlodge National Forest (see Appendix F).
- 9 Consider conservation strategies for sensitive species not listed under the Endangered Species Act when issuing land use authorizations.
- 10 Continue to assist in maintaining Montana's web-based rare plant field guide.
- 11 Assist with programs and training sessions to educate weed crews to recognize and avoid special status plants and their habitats.
- 12 Continue inventory efforts and consider monitoring efforts and research studies on special status plants and associated plant communities.
- 13 Consider the potential for adverse effects on BLM sensitive plants during project level planning and recommend mitigation measures.
- 14 Conduct field inspections to identify special status plant species prior to authorizing surface disturbing activities. Grant waivers for on-the-ground inventory in areas determined to have low potential based on previous research.
- 15 Do not allow activities that disturb mineral soil (such as blading, plowing, ripping, chaining, etc.) within the boundaries of populations of BLM special status plants.
- 16 Adjust management on a case-by-case basis when the *Western Montana Standards for Rangeland Health* are not being met or when monitoring of BLM special status plants indicates unacceptable impacts.
- 17 Adopt or develop habitat management plans and conservation strategies for BLM special status plant species and habitats that occur on public land in concert with watershed assessments. In riparian habitats, place priority on the following species:

- a. *Carex idahoensis* (Idaho Sedge)
- b. *Primula alcalina* (Alkali Primrose)
- c. *Taraxacum eriophorum* (Rocky Mountain Dandelion)
- d. *Thalictrum alpinum* (Alpine Meadowrue)

In sagebrush-steppe habitats, place priority on the following species:

- a. *Penstemon lemhiensis* (Lemhi Beardtongue)
- b. *Astragalus scaphoides* (Bitterroot Milkvetch)
- c. *Astragalus terminalis* (Railhead Milkvetch)

- 18 Protect the relevant and important special status plant values in the Centennial Sandhills ACEC (see Map 8) with the following special management:

- a. Implement management strategies to destabilize sand dunes and maintain the unique habitat within the sandhills area and create early seral habitat for special status plant species (for example, treat with prescribed fire followed by short-term high intensity grazing). Non-mechanical disturbances are preferred, but mechanical disturbances may be employed if non-mechanical methods are not effective at maintaining habitat.
- b. Continue inventory, monitoring and research studies of special status plant species and habitats.
- c. Prohibit aerial application of herbicides and pesticides within the ACEC boundary, but allow for other weed control methods in consideration of the special status plant values.

Other standard management provisions that will assist in protection of the relevant and important values include:

- No authorization of mineral material sites within the ACEC boundary
- No Surface Occupancy stipulations on oil and gas leasing within 1/4 mile of special status plants.
- Limiting vehicular travel to roads and trails designated as "open".

Monitoring

Surveys will be conducted to determine the distribution, resource conditions, and trends of special status plant species and representative habitats. This will include determining plant composition at the site, checking for invasion of exotic species, monitoring localized disturbances (from OHV use, livestock and wildlife use, recreational use, etc.), and determining trends in special status plant attributes. Monitoring methods will include establishing photo points and doing periodic ocular surveillance. Trends in special status plants and vegetation will be determined through such things as demographic studies, density, cover, and frequency (inside enclosures versus open areas). Methods to accomplish this could include establishing new rare plant enclosures to determine effects of use versus nonuse, developing

conservation agreements/conservation strategies, and conducting vegetative attribute sampling in accordance with BLM Technical Reference 1730-1, "Measuring and Monitoring Plant Populations" (Elzinga, Salzer & Willoughby 1998).

The number of allotments/acres that meet the Biodiversity standard in the *Western Montana Standards for Rangeland Health* relative to special status plants and the total number of allotments/acres assessed will be reported in the Annual Program Summary and Planning Update. The number of acres inventoried annually for special status plants will also be reported.

TRANSPORTATION AND FACILITIES MAINTENANCE

Goal 1

Manage facilities, including roads and trails, to provide for public access or administrative needs, while maintaining or protecting resource values and in coordination with other federal agencies, state and local governments, and private landowners.

Actions

- 1 Inventory and maintain transportation system roads and trails under BLM jurisdiction in accordance with assigned maintenance levels as outlined in Appendix O to meet public health and safety requirements, but also in consideration of resource issues including but not limited to proliferation of weeds and disturbance of cultural resources.
- 2 Maintain other facilities such as boat ramps, communication facilities, etc. according to Bureau standards and to meet public health and safety requirements.
- 3 Maintain non-system roads under BLM jurisdiction on an as needed basis, dependent on time, funding, and access priorities. Where problems exist with non-essential roads, close and rehabilitate those roads if the expenditure of funds is justified.
- 4 Roads and trails on BLM-administered land under the jurisdiction of other entities will be maintained by the appropriate holder of rights within the provisions of the granting authority or right.
- 5 Analyze new road, trail, or facility construction on a case-by-case basis.
- 6 New roads determined by BLM to be necessary on a temporary basis will be constructed to the minimum standard necessary for the activity proposed, and closed or reclaimed when use is over.

- 7 New roads determined by BLM to be necessary for permanent or long-term use as part of BLM's transportation system will be constructed in consideration of the type of use and level of road necessary and in accordance with standards and guidelines in BLM Handbook 9113. Also see *Travel Management* Actions 8, 9, and 10.
- 8 Manage the road system to maintain no net change in roads designated open over the long term (with a baseline of 1,342 miles of open road) when wildlife issues (wildlife displacement, habitat fragmentation, road density) or other resource issues are identified in regard to "new roads" (roads that were not identified in the 2002 inventory). However, manage for an open road density not to exceed one mile per square mile if resource issues related to road density are identified, considering both existing and new roads within a project level cumulative effects area. Seasonal restrictions may be used to mitigate resource concerns by reducing the open road density during periods of concern. Where a greater density of short-term temporary roads is necessary to support specific projects, new project roads will be evaluated at project completion, and if necessary, route designations will be changed to provide the most appropriate access routes in consideration of wildlife or other resource management needs. In areas where resource issues are not identified, do not increase the number of "new roads" by more than one percent of the baseline (1,342 miles) over the life of the plan. To meet these provisions, mileage of new road can be offset by closing existing roads.

Monitoring

The condition of BLM facilities will be assessed in accordance with procedures under development by the BLM National Condition Assessment Program. Comprehensive condition assessments (CCA) will be completed at recreation sites and administrative sites on a five year schedule, with periodic inspections (PIs) at least every three years. CCAs are detailed, formal inspections to verify and update the inventory and condition data in the Facility Asset Management System (FAMS). PIs are a quick "walk through" review to verify existing FAMS data on inventory and condition. Similar assessments in accordance with procedures currently under development will be conducted for road and trail facilities. However, road and trail condition assessments will need to be prioritized in the planning area, and only a sample of the roads and trail system might be completed on an annual basis. Inspection procedures required for dams and bridges to ensure public safety will be continued as required by law. With all facilities, informal inspection and "discovery" will be a major part of the condition monitoring program. Information provided by BLM employees and the public on problems or concerns as a result of storms, vandalism, and/or normal wear and tear to facilities will also be used to monitor the condition of BLM facilities.

The number of facilities and miles of roads assessed annually will be reported in the Annual Program Summary and Planning Update.

TRAVEL MANAGEMENT AND OHV USE

Note: All acreage and mileage numbers provided within this section are approximate.

Goal

In coordination with other federal agencies, state and local governments, and private landowners, manage motorized travel to provide recreational experiences while maintaining or protecting resource values.

Allocations

Wheeled Motorized Use/Non-Motorized Use

Manage no areas as "open" under the regulations at 43 CFR Part 8340-8342.

Manage 826,876 acres as "limited" to designated routes for OHV use under the regulations at 43 CFR Part 8340-8342.

- Designate approximately 1,342 miles of road on BLM lands as open to public travel as shown on Maps 26 and 27 (oversized).
- Make 159 miles of the 1,342 miles of road subject to seasonal restrictions

Manage 74,350 acres as depicted on Map 28 as "closed" to OHV use under the regulations at 43 CFR Part 8340-8342. (Although some of these areas contain short segments of roads which will continue to be open to vehicles at least seasonally, these road segments do not provide access to the majority of acres in the area identified as closed. By contrast, other areas currently identified as closed to all motor vehicles, but with designated routes providing access to the majority of the area, are identified as "limited" in accordance with the definition provided in 43 CFR Part 8340.0-5 (g)).

Snowmobiles

Manage 138,169 acres as closed to snowmobile use (see Map 29) in the following areas:

Bachelor Mountain area
 Bear Trap Wilderness
 Blacktail Mountains WSA
 Centennial Mountains WSA
 East Fork Blacktail Deer Creek WSA
 Farlin Creek WSA
 Hidden Pasture WSA
 Ruby Mountains WSA
 T15S, R9W, Section 1 (near East Creek, Lima Peaks area)

Other miscellaneous areas adjacent to Forest Service closures

Manage the remaining lands in the planning area (approximately 763,057 acres) as available for snowmobile use during some or all of the year, as specified on the Southwest Montana Interagency Visitor/Travel Plan Map.

Actions

- 1 Promote the use of shared trails whenever possible.
- 2 Manage travel within the Centennial Mountains according to the decisions made in the Centennial Mountains Travel Management Plan (USDI-BLM 2001a). Important elements of that decision which are not reflected on the 1996 edition of the Southwest Montana Interagency Visitor/Travel Map include:
 - a. Closure of a portion of the Corral Creek Road to motorized vehicle use
 - b. Closure of the Price-Peet Road beyond the constructed segment to motorized vehicle use
 - c. Limiting all motorized wheeled vehicle travel to designated routes
 - d. Closure of the area to mountain bike use except on routes designated open to motorized vehicle use
- 3 Consider development or construction of motorized and/or mountain bike routes on a case-by-case basis, especially in the south end of the Pioneer Mountains to create loop routes to connect public and Forest Service roads.
- 4 Construct and/or maintain non-motorized recreational trails as funding and staffing allow. Priority for this work will be placed in the Centennial Mountains, the East Fork Blacktail Deer Creek area, and the Ruby Mountains.
- 5 Update and maintain the road and trail database to correct mapping errors and refine decisions.
- 6 Based on monitoring, amend, revise, revoke, or take other action to protect resources and public safety and minimize conflict among uses in accordance with 43 CFR Part 8364.
- 7 Continue to participate with the Southwest Montana Interagency Travel Management Committee (preparers of the Southwest Montana Interagency Visitor/Travel Map) using Maps 26 and 27 (oversized) as the baseline route designation maps across BLM lands.
 - Maps 26 and 27 (oversized) reflect those routes that would be open to travel by the general public *if* access is available (across private or other lands) *to* those routes that exist on public lands. Prior to producing an interagency travel map for use by the general public, eliminate those routes where no access is available to reach the public lands. (However, showing those routes on Maps 26 and 27 (oversized) as designated open for public use within this plan will allow for future use of that route if access becomes available to reach them).
 - Modify the Southwest Montana Interagency Visitor/Travel Map as updates occur to show those routes designated open for public use if and when access becomes available to reach them.
 - Continue seasonal restrictions as identified on the 1996 Southwest Montana Interagency Visitor/Travel. Finalize specific dates for seasonal closures in coordination with the interagency group.
- 8 Evaluate "existing routes" not included in the inventory base (and thus not considered in this plan) on a case-by-case basis through an environmental analysis process to determine whether they should be open to public travel. In order to be considered an existing route, the route must be able to be verified to have been present on the ground no later than the 2002 inventory season. Designate routes determined to enhance public access opportunities, and not in conflict with management of other resources as open and add them to the Southwest Montana Interagency Travel/Visitor Map through routine plan maintenance. Continue to use the principles developed by the Western Montana RAC (see Appendix P) when considering travel management modifications.
- 9 Evaluate "new roads" on a case-by-case basis through an environmental assessment process to determine whether they will be open to public travel. "New roads" means roads that do not presently exist but are necessary for access to timber sales, mining activities, to provide general access, or to facilitate other authorized uses of public lands. Designate routes determined to enhance public access opportunities that do not conflict with management of other resources as open and add them to the travel management map through routine plan maintenance.
- 10 Manage the road system to maintain no net change in roads designated open over the long term (with a baseline of 1,342 miles of open road) when wildlife issues (wildlife displacement, habitat fragmentation, road density) or other resource issues are identified in regard to "new roads" (roads that were not identified in the 2002 inventory). However, manage for an open road density not to exceed one mile per square mile if resource issues related to road density are identified, considering both existing and new roads within a project level cumulative effects area. Seasonal restrictions may

be used to mitigate resource concerns by reducing the open road density during periods of concern. Where a greater density of short-term temporary roads is necessary to support specific projects, new project roads will be evaluated at project completion, and if necessary, route designations will be changed to provide the most appropriate access routes in consideration of wildlife or other resource management needs. In areas where resource issues are not identified, do not increase the number of "new roads" by more than one percent of the baseline (1,342 miles) over the life of the plan. To meet these provisions, mileage of new road can be offset by closing existing roads.

11 Allow motorized cross-country or route travel to occur without prior permission in areas closed to motorized travel for the following activities:

- a. Military, fire, search and rescue, and law enforcement operations for emergency purposes.
- b. BLM personnel, or agency contractors, performing official administrative business (e.g., prescribed fire, noxious weed control, revegetation, surveying, etc.). Where possible, personnel will place a sign or notice in the area they are working in to identify for the public the function they are authorized to perform.
- c. Lessees and permittees performing administrative functions on public lands within the scope of a permit or lease. Some examples of administrative functions include, but are not limited to gas or electric utilities monitoring a utility corridor for safety conditions or normal maintenance, accessing a remote communication site for normal maintenance or repair, livestock permittees checking vegetative conditions, building or maintaining fences, delivering salt and supplements, moving livestock, checking wells or pipelines as part of implementation of the grazing permit or lease, and scientific groups under contract for resource assessments or research. This provision does not preclude modifying permits or leases to limit motorized cross-country travel during further site-specific analysis to meet resource management objectives or standards and guidelines.
- d. For dispersed camping up to 300 feet from roads or trails, except within the Lower Madison River SRMA. Site selection must be completed by non-motorized means and accessed by the most direct route. Future area-specific planning and rulemaking may also identify areas where this exception will not apply.

12 Allow motorized cross-country or route travel on a case-by-case basis with prior written permission of the Field

Manager in areas closed to motorized travel for the following activities, including but not necessarily limited to:

- a. Travel for non-BLM associated personnel on administrative business such as noxious weed control, surveying, animal damage control, etc. When possible, the authorized party performing the administrative function will place a sign or notice in the area they are working to identify for the public the function they are authorized to perform.
- b. Travel by entities requiring access to private lands, resources, or legal improvements within or adjacent to closed or limited areas. Access will be allowed to the degree necessary to provide for reasonable use and enjoyment of that property where no reasonable alternatives exist.
- c. Travel necessary to conduct mining-related casual use activities (see 43 CFR Part 3809.5(1)) such as claim staking, annual assessment work, and the collection of geochemical, rock, soil or minerals using hand tools.
- d. Travel for personal use permits such as firewood and Christmas tree cutting if specifically provided for on the permit. Exception areas identified on the Southwest Montana Inter-agency Visitor/Travel Map will not require prior written permission.

13 Prohibit game retrieval using motorized vehicles except on designated travel routes.

14 Consider access for people with disabilities under Section 504 of the Rehabilitation Act of 1973 on a case-by-case basis. Identify specific areas annually, if necessary, to provide for disabled hunter access on existing routes where seasonal road closures restrict general public access beyond locked gates.

15 Adjust travel route designations as necessary when a process is in place to address R.S. 2477 assertions.

Monitoring

Travel management and OHV use monitoring within the planning area will focus on compliance with specific route and area designations and restrictions, with primary emphasis on those routes or areas causing the highest levels of user conflicts or adverse impacts to resources. Various methods of monitoring may be employed including: aerial monitoring, ground patrol, "citizen watch," and appropriate methods of remote surveillance such as traffic counters, etc. Route or area closures will be regularly monitored for compliance. Cooperation with other agencies in travel management and OHV use monitoring will continue to be emphasized, and improved wherever possible.

TRIBAL TREATY RIGHTS

Goal

Accommodate treaty and legal rights of appropriate Native American groups in management of public lands.

Actions

- 1 Continue to notify and consult with appropriate Native American tribes on BLM authorized actions. Conduct consultation and coordination on a government-to-government basis with Federally recognized tribes.
- 2 Accommodate the exercise of rights provided by treaties applicable to the planning area. Coordinate with the appropriate entities within tribal government on issues under its jurisdiction to determine appropriate protocols that provide for treaty uses of public lands.

Monitoring

A minimum of one "face-to-face" general consultation and project coordination meeting will be held on an annual basis with the appropriate representatives from the Confederated Salish and Kootenai Tribes of the Flathead Reservation, and the Shoshone-Bannock Tribes of the Fort Hall Reservation. Consultation meetings will be held with the appropriate representatives of other tribes as requested or as deemed necessary. Additional project specific coordination will be conducted as necessary, particularly for projects involving timber sales, land exchanges, oil and gas development, etc., with notification by mail and telephone conversation to determine additional consultation needs. The appropriate tribal representatives will also be maintained on the Field Office NEPA and project notification mailing lists.

Dates of consultation meetings and other tribal contacts will be reported in the Annual Program Summary and Planning Update.

UTILITY AND COMMUNICATION CORRIDORS

Goal 1

Encourage the use of designated right-of-way corridors and use areas to the extent practical in order to minimize adverse environmental impacts and the proliferation of separate rights-of-way.

Allocations

Manage five (5) areas as designated right-of-way use areas for communication sites (see Map 17):

- Armstead Mountain
- Maurer Mountain
- Pipe Organ
- Bear Trap
- Virginia City Hill.

Encourage (but do not require) applicants to locate within these five designated right-of-way use areas. Require new facilities locating within existing communication site areas (see Map 17) to conform with the designated uses for each respective site (see Table 7, also shown as Table 4 in the *Lands and Realty Section*).

Manage two of the existing right-of-way corridors delineated in the 1992 "Western Regional Corridor Study" as designated right-of-way corridors where they cross public lands (see Map 17). These corridors are each currently occupied by an electrical transmission line. Nominal corridor width will be 1,320 feet (1/4 mile) on each side of centerline of the existing facilities, except where the alignment forms the boundary of a Special Management Area, where the width will be 2,640 feet (1/2 mile) on the side opposite that boundary. Applicants for electrical transmission lines 69 kV and larger and pipelines 10 inches in diameter and greater will be encouraged to locate such facilities within these two designated corridors.

Manage the Bear Trap Unit of the Lee Metcalf Wilderness and the Beaverhead Rock ACEC as a designated right-of-way exclusion area (see Map 17). No new rights-of-way will be granted in these areas. However, any valid existing rights-of-way will be recognized and holders of such authorizations will be allowed to maintain their facilities.

Manage approximately 123,286 acres within the nine Wilderness Study Areas and the Lewis and Clark Trail as designated right-of-way avoidance areas where the issuance of new rights-of-way will be avoided unless there are no other options and authorization in any WSA will be consistent with the *Interim Management Policy for Lands Under Wilderness Review* (see Map 17). Valid existing rights-of-way in right-of-way avoidance areas will be recognized and holders of such authorizations will be allowed to maintain their facilities.

Table 7
Communication Sites, Locations, and Designated Use Categories

<i>Communication Site</i>	<i>Legal Description ** (Principal Meridian, Montana)</i>	<i>Designated Use</i>
Armstead Mountain	SE1/4 NE1/4, Sec.34., T.10S, R.11W	Low Power; Non-Broadcast
Pipe Organ	SW1/4 NE1/4, Sec.4, T..9S, R.10W	Low Power; Non-Broadcast
Maurer Mountain	NE1/4 NW1/4, Sec.29, T.10S, R..9W	Low Power; Broadcast and Non-Broadcast
Bear Trap	SE1/4 NE1/4, Sec.18, T.4S, R.1E	Low Power; Non-Broadcast
Baldy Ridge	NE1/4 SE1/4, Sec.26, T.7S, R.3W	Government Use Only
Badger Pass (Bannack)	NE1/4 NW1/4, Sec.22, T.7S, R.11W	Low Power; Non-Broadcast, (Existing Facility Only)
Barton Gulch	SE1/4 SW1/4, Sec.12, T.7S, R.4W	Resource Monitoring
Lakeview Ridge	Lot 4 of Sec.26 and Lot 1 of Sec.27, T.14S, R.2W	Resource Monitoring
Monida Pass	NE1/4 NE1/4, Sec.25, T.14S, R.7W	Resource Monitoring
VC Hill	NE1/4 SW1/4, Sec.32, T.6S, R.2W	Low Power; Non-Broadcast

****** These legal descriptions do not delineate the boundaries of the right-of-way use areas, but give approximate locations. Boundaries of the use areas are/will be defined in individual site plans.

Actions

Note: Actions described under the *Lands and Realty* section and not repeated here still apply to *Utility and Communication Corridors* and related authorizations.

- Do not require rights-of-way, leases, permits, or easements for those activities that are considered casual use of public lands.
- Analyze requests for land use authorizations on a case-by-case basis and apply mitigation measures as necessary in compliance with the NEPA process.
- Locate new right-of-way facilities within or adjacent to existing rights-of-way, to the extent practical, in order to minimize adverse environmental impacts and the proliferation of separate rights-of-way.
- Develop site plans for each of the designated communication site use areas and update periodically as necessary. Boundaries of the use areas will be defined by these site plans.
- Group new communication site users into suitable existing sites to reduce impacts and expedite application processing. Encourage applicants for communication site facilities to locate within the five designated use areas. Map 17 shows existing authorized communication sites and designated use areas.
- Require site plans to be completed prior to authorizing any new areas for communication sites. Consider the use of alternative energy sources where electric power is not available.
- Where avoidance areas and designated corridors overlap (e.g., the Lewis and Clark Trail and the designated corridor through the Beaverhead River Canyon), issuance of new rights-of-way and upgrade/expansion of existing rights-of-way will be allowed if mitigative measures can reduce impacts to resources of concern to an appropriate level.
- Provide access across public lands to and along right-of-way corridors and use areas necessary to construct new facilities, except in avoidance areas where access would be considered on a case-by-case basis.
- Permit other uses of right-of-way corridors and use areas to the extent they do not interfere with or preclude the use of these locations for their intended purpose and are consistent with other portions of the plan.

Monitoring

The effectiveness of the existing right-of-way corridors and right-of-way use areas will be discussed during the periodic meetings of management, realty personnel and key DFO staff described in the monitoring for Goal 1 in the *Lands and Realty* section. The need for additional corridors and use areas will also be discussed during these meetings. Periodic on-the-ground inspections of the corridors and use areas will be conducted to ensure they are being managed correctly and that conflicting uses are not occurring which could preclude the use of these locations for their intended purpose.

VISUAL RESOURCES

Goal

Manage scenic values in accordance with the objectives established for VRM classes as presented in Table 8.

Allocations

Map 30 depicts the location of the VRM classes across the planning area.

Manage approximately 128,269 acres under VRM Class I in the following areas:

- Bear Trap Wilderness
- All Wilderness Study Areas

If released, each respective WSA would be managed as specified in Appendix Q.

Manage approximately 30,810 acres, including lands around the Axolotl Lakes area and lands within the Virginia City Historic Landmark boundary as VRM Class II.

Manage approximately 723,585 acres as VRM Class III.

Manage approximately 18,412 acres as VRM Class IV, including the following areas with past or present mining operations:

- active Placer Operations located east of Bannack State Park
- Ermont Mining District
- Rochester Mining District
- Silver Star Mining District
- Revenue Mining District

Actions

- 1 Use the visual resource contrast rating system during project level planning to determine whether or not proposed activities will meet VRM objectives. Identify mitigation measures to reduce visual contrasts and prepare rehabilitation plans to address landscape modifications on a case-by-case basis.
- 2 Protect the relevant and important scenic values in the Centennial Mountains ACEC with the following special management:
 - a. Incorporate landscape design principles into vegetation treatments

Table 8
Visual Resource Management Class Objectives

Class I

Preservation of the landscape is the primary management goal in Class I areas. 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. Activities or modifications of the environment should not be evident or attract the attention of the casual observer. Changes should 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 caused by management activities may be evident but should not detract from the existing landscape.

Class IV

Class IV VRM objective is to provide for management activities which require major modification of the existing character of the landscape. Changes may attract attention and be dominant landscape features but should reflect the basic elements of the existing landscape. Class IV rating is generally reserved for areas where the visual intrusions dominate the viewshed but are in character with the landscape (areas such as rural communities, multiple subdivisions, mining developments, etc.).

- 3 Protect the relevant and important scenic values in the Muddy Creek/Big Sheep Creek ACEC with the following special management:

- a. Apply special provisions if necessary to protect scenic values during any project activities (including but not limited to locatable mineral proposals)

Other standard management provisions that will assist in protection of the relevant and important values include:

- a. Management of the area under VRM Class II

Monitoring

Any project design features or mitigation measures identified to address visual resource management concerns will be monitored to ensure compliance with established VRM classes. Where appropriate, monitoring will include the use of the visual contrast rating system, described in BLM Manual 8400 during project review and upon project completion to assess the effectiveness of project design features and any mitigating measures.

The number of areas/projects monitored for compliance with VRM objectives will be reported in the Annual Program Summary and Planning Update.

WATER

Goal

Restore and maintain the chemical, physical, and biological integrity of the waters in the Dillon FO to protect beneficial uses. Prevent water quality degradation, and improve watershed function throughout the planning area.

Objectives (Desired Future Conditions)

All water sources provide water quality and quantity sufficient to meet Montana State standards and to protect or restore beneficial uses.

Stream channels display the dimensions, pattern and profile that are representative of site potential to allow floodplain aquifer recharge, moderate stream flows and buffer the effects of flooding.

Actions

- 1 Implement the *Western Montana Standards for Rangeland Health* (see Appendix A) to ensure water quality meets State standards and beneficial uses are protected or restored.
- 2 Comply with the non-degradation provisions of the Montana Water Quality Act.
- 3 Use Best Management Practices (BMPs) (see Appendix B) to prevent non point source water pollution and

apply mitigation measures on a case-by-case basis when implementing projects.

- 4 Obtain permits pertaining to projects affecting water quality, wetlands, and/or streams prior to implementing BLM projects
- 5 Require outside applicants to provide copies of pertinent permits prior to BLM authorizations.
- 6 Continue to coordinate and cooperate with Montana DEQ and communities in the development of Water Quality Restoration Plans (WQRPs) and Source Water Protection Plans.
- 7 Analyze water developments on a case-by-case basis, considering the following:
 - Available water flow. In general, no water developments that remove more than 50% of average summer daily flows from a water source will be constructed unless systems can be designed for return flows back into the drainage within a 1/4 mile of the diversion.
 - Protection of source water riparian and wetland habitat. Where isolated springs are developed, associated riparian habitat will be protected, usually through fencing.
 - Protection of other resource values from direct and indirect impacts from construction and use of the water source. Measures to protect riparian habitats and other resource values including but not limited to sensitive plant species and cultural resources will be implemented based on site-specific needs. Only off-stream water developments and/or armored water gaps will be considered on streams where fencing has excluded the riparian area to prevent impacts to various resources.
 - Location of water tanks in relation to other resource values. Measures to protect resource values in proximity to tank locations will be implemented based on site-specific needs. In general, water tanks will be placed at least 1/4 mile from unfenced stream riparian habitat.

- 8 Implement watershed rehabilitation measures as soon as possible after major catastrophic natural or human-caused fire or flood events.
- 9 Comply with Montana law regarding water rights. Maintain water rights and instream flow reservations subject to Montana water law. Participate in the Montana statewide water adjudication.

Monitoring

A sample of ground-disturbing projects with the potential to affect water resources will be evaluated on a periodic basis to determine if best management practices or identified mitigation measures were followed and if they were effective. Results will be reported in the Annual Program Summary and Planning Update. The number of areas/acres that meet the Water Quality standard in the *Western Montana Standards for Rangeland Health* and the total number of areas/acres assessed will also be reported in the Annual Program Summary and Planning Update.

WILD AND SCENIC RIVERS

Goal

Identify river segments suitable for inclusion in the National Wild and Scenic River System to protect their outstandingly remarkable values and free-flowing nature.

Allocation

Recommend none of the eight (8) river segments determined eligible (106.67 miles) as suitable for inclusion in the National Wild and Scenic Rivers System. See the Final Report on Wild and Scenic River Eligibility Determinations released in July 2002 (USDI-BLM 2002) for additional information on river segments.

Actions

- 1 Manage river segments and associated corridors in accordance with the management described throughout this plan rather than under the protective management objectives for eligible or suitable rivers.

Monitoring

None. No river segments were proposed as suitable for designation under the Wild and Scenic Rivers Act. The outstandingly remarkable values identified as part of the Wild and Scenic River inventory will be monitored under other plan provisions.

WILD HORSES AND BURROS

Goal 1

Promote the wild horse and burro adoption program.

Actions

- 1 Support the wild horse and burro program with public education information about adoption opportunities.
- 2 Conduct inspections within the vicinity of the planning area as requested to meet pre-adoption and titling requirements.
- 3 Provide staff to assist with adoptions in the region.

Monitoring

Specific monitoring at the field office level will not occur since the planning area has no wild horses or burros. However, assistance provided by Dillon Field Office staff to the Wild Horse and Burro program at adoptions or with inspections will be reported in the Annual Program Summary and Planning Update.

WILDERNESS

Goal 1

Manage designated wilderness areas for the preservation of natural conditions and processes, and to provide opportunities for solitude or a primitive and unconfined type of recreation.

Actions

- 1 Manage the 6,347 acres of designated wilderness within the Bear Trap Unit of the Lee Metcalf Wilderness (see Map 31) according to direction provided by the BLM Manual H-8560-1, *Management of Designated Wilderness Areas* and the *Final Wilderness Management Plan for Bear Trap Canyon Unit of Lee Metcalf Wilderness* (USDI-BLM 1984a).
- 2 Conduct monitoring to determine use and apply direction found in *Limits of Acceptable Change Management Direction, Bear Trap Canyon Unit* (USDI-BLM 1991c).
- 3 Apply updated versions of the wilderness management plan and the LAC direction as completed.
- 4 If additional areas are designated as wilderness by Congress, prepare a wilderness management plan written specifically for that area and manage accordingly.

Monitoring

The Bear Trap Canyon Wilderness will be monitored in accordance with the direction provided in the Wilderness Management Plan (BLM, November, 1984) and the Limits of Acceptable Change Management Direction (BLM, February, 1991) until those documents are superseded by updated direction. Likewise, any new areas that may be designated wilderness by Congress over the life of the plan would be monitored in accordance with guidance developed in their respective wilderness management plans.

WILDERNESS STUDY AREAS

Goal

Manage wilderness study areas (WSAs) so as not to impair their suitability for preservation as wilderness until such time as Congress either designates them as wilderness or releases them from further study.

Allocations

Release the 860 acres of public land within the Tobacco Root Tack-on WSA studied under Section 202 from further consideration as wilderness because it is too small to be considered for wilderness on its own, and no longer complements management of adjacent lands managed by the Beaverhead-Deerlodge National Forest. Manage the area consistent with adjacent lands and in consideration of other land use plan provisions.

Maintain the nine remaining Wilderness Study Areas (see Map 31) and continue to manage these areas according to the *Interim Management Policy for Lands Under Wilderness Review* until such time as Congress either designates them as wilderness or releases them from further consideration as wilderness. These areas include:

- Axolotl Lakes (MT-076-069)
- Bell-Limekiln Canyon (MT-076-026)
- Blacktail Mountains (MT-076-002)
- Centennial Mountains (MT-ISA-002)
- East Fork of Blacktail Deer Creek WSA (MT-076-007)
- Farlin Creek (MT-076-034)
- Henneberry Ridge (MT-076-028)
- Hidden Creek Pasture (MT-076-022)
- Ruby Mountains (MT-076-001)

Actions

- 1 Allow the use of prescribed fire and associated tools (including mechanical treatments if necessary) in Wilderness Study Areas only where it is determined wilderness values would be enhanced. Use of prescribed fire and associated tools in WSAs would be limited to areas where fire history evidence correlates to historically frequent fire events. Prescribed fire treatments should also move the area toward achieving wildland fire use prescriptions to allow naturally ignited fires to play a more natural role within the WSA. Subsequent fire suppression activities would then be limited to locations outside the WSA except where emergencies threaten life or adjacent private lands. See the *Fire and Forest and Woodland Vegetation* sections for more specific information.
- 2 In the event any or all of the Wilderness Study Areas in the Dillon Field Office are released from further consideration as wilderness, manage the lands within those areas according to the management prescribed in Appendix Q. Where specific management is not addressed, the areas would be managed consistent with surrounding lands as provided for under this land use plan.

Monitoring

Wilderness Study Areas will be monitored in accordance with direction provided in the *Interim Management Policy for Lands Under Wilderness Review* (BLM Handbook H-

8550-1). The policy requires monitoring of all WSAs, at least once per month during the months the area is accessible by the public. Suitable monitoring methods will include both aerial and ground surveillance. As allowed by the IMP, alternative monitoring schedules may be prepared and implemented if approved by the State Director.

WILDLIFE including SPECIAL STATUS BIRDS AND MAMMALS

Goal 1

Ensure that native wildlife species are provided habitat of sufficient quantity and quality to enhance biological diversity and sustain their ecological, economic and social values is a goal common to all alternatives. Improve public awareness, understanding and support for resolving issues surrounding wildlife species conservation, management and ecology.

Goal 2

Ensure the long-term, self-sustaining persistence of special status bird and mammal species in the Dillon Field Office.

Objectives (Desired Future Conditions)

A full spectrum of biological communities, habitats, and their ecological processes is present.

Populations of native plants and animals are well-distributed across the landscape.

Wetland habitats support a healthy diversity and abundance of dependent wildlife species, with emphasis on special status species needs.

Forested and sagebrush habitat are within the historic range of variability for vegetation composition, canopy and structure, and support a diversity and abundance of dependent wildlife species, especially special status species needs.

Habitat is in suitable condition to allow wildlife movement between large blocks of habitat and seasonal and special habitats on a localized and landscape scale.

Actions—General Wildlife and Special Status Species

- 1 Implement national wildlife conservation initiatives.
- 2 Provide habitat and forage to support wildlife population goals in current FWP big game management plans.
- 3 Consider the following habitats priority wildlife habitats:
 - all listed and special status species habitats, with grizzly bear and lynx receiving the most emphasis in coniferous forest habitats, and sage grouse receiving the most emphasis in sagebrush steppe habitats
 - coniferous forest and sagebrush habitats that provide important big game winter habitat
 - sagebrush habitats that provide bighorn sheep year-long or seasonal habitats
 - sagebrush habitats that provide sage grouse breeding, early brood rearing, or winter habitat
 - mountain mahogany and sagebrush steppe habitat associations in the Lima Sweetwater Breaks key raptor management area
 - all riparian and wetland habitats
- 4 Consider the following species priority wildlife species:
 - all listed and special status species, with grizzly bear, lynx, and sage grouse receiving the most emphasis
 - bighorn sheep
 - migratory birds listed on the USFWS Region 10 Birds of Conservation Concern list and in Montana Bird Conservation Plan (see Appendix R).
- 5 Evaluate, update, and revise as necessary the following habitat management plans (HMPs) and implement the remaining habitat projects within five years:
 - a. Hidden Pasture Bighorn
 - b. Blacktail
 - c. Red Rock Waterfowl
 - d. Axolotl Lakes
 - e. Wall Creek
- 6 Maintain current exclosures free from livestock grazing, ensure routine maintenance is completed annually on all exclosures before livestock turnout, and monitor to compare differences between areas grazed and ungrazed by livestock.
- 7 Install functional wildlife access ramps on all water tanks on public lands.
- 8 Modify existing fences on public land identified as barriers to wildlife movement to accommodate wildlife passage.
- 9 Follow "wildlife friendly" fence specifications in BLM Manual H1741-1 for new fences.
- 10 Coordinate vegetation treatment projects and management activities that influence wildlife habitat with FWP.
- 11 Use individual species conservation strategies to design habitat strategies that will promote conservation of as many other wildlife species as possible.
- 12 Continue to gather habitat and population data to enhance management effectiveness, with emphasis on migratory birds, amphibians and reptiles, and bats.
- 13 Restore, enhance and maintain habitats for migratory birds, including special status bird species, by implementing cooperative joint venture programs under the North American Bird Conservation Initiative and in consideration of conservation strategies in BLM's Non-game Migratory Bird Habitat Conservation Plan (USDI-BLM 1992) (see Appendix R).
- 14 Minimize disturbance during spring breeding seasons in habitats that sustain bird species identified on the USFWS Region 10 "Birds of Conservation Concern" list.
- 15 Manage ferruginous hawk breeding habitat to protect nesting structures, maintain sagebrush/grassland interspersed, and enhance prey abundance. Evaluate proposed activities within the Lima Foothills and Sweetwater Breaks key raptor management areas (see Map 32) for potential disturbance during the breeding season, and limit activities from March 1 through August 31 within one-half mile of nest sites on a case-by-case basis. Do not authorize surface disturbances within the boundaries of this area that would alter physical structures used by nesting ferruginous hawks (cliffs, rock outcrops, etc.).
- 16 Coordinate when new roads are proposed for construction and/or when changes are proposed regarding travel restrictions on existing roads to determine if concerns with wildlife displacement and/or habitat fragmentation exist. See the *Travel Management* section for additional details.
- 17 Manage the road system to maintain no net change in roads designated open over the long term (with a baseline of 1,342 miles of open road) when wildlife issues (wildlife displacement, habitat fragmentation, road density) or other resource issues are identified in regard to "new roads" (roads that were not identified in the 2002 inventory). However, manage for an open road density not to exceed one mile per square mile if resource issues related to road density are identified, considering both existing and new roads within a project

level cumulative effects area. Seasonal restrictions may be used to mitigate resource concerns by reducing the open road density during periods of concern. Where a greater density of short-term temporary roads is necessary to support specific projects, new project roads will be evaluated at project completion, and if necessary, route designations will be changed to provide the most appropriate access routes in consideration of wildlife or other resource management needs. In areas where resource issues are not identified, do not increase the number of "new roads" by more than one percent of the baseline (1,342 miles) over the life of the plan. To meet these provisions, mileage of new road can be offset by closing existing roads.

18 Protect the relevant and important wildlife value (the axolotl habitat) in the Blue Lake ACEC (see Map 6) with the following special management:

- a. Do not authorize activities contributing to nutrient enrichment or increased water temperature in Blue Lake (e.g., livestock grazing, timber harvest, wheeled vehicle use, etc).
- b. Place or construct barriers to prevent unauthorized motorized travel into the area
- c. Require no surface occupancy for mineral leasing
- d. Develop interpretive materials about the axolotl to inform the public of this special value

19 Protect the relevant and important special status species values in the Centennial Mountains ACEC (see Map 7) with the following special management:

- a. Do not authorize new permanent roads within the ACEC to maintain unfragmented habitat for wildlife migration
- b. Evaluate proposed activities, including backcountry helicopter operations and winter recreational use, for their potential to affect important and relevant values in the area and do not permit any activities that interfere with protection of those values.
- c. Allow livestock use as currently authorized. Evaluate any proposed changes in grazing, including time and intensity of use, for impacts on relevant and important values and allow if relevant and important values in the ACEC are maintained or enhanced.
- d. Do not allow conversion of grazing permits from cattle to sheep to avoid potential conflicts with grizzly bear.

Under standard management, the eastern portion of the ACEC is subject to the *Interim Management Policy for Lands Under Wilderness Review*, unless more restrictive provisions are outlined either as standard provisions in the plan, or as special management.

20 Manage wildlife migration/dispersal corridors (depicted on Map 33) that provide connectivity for special status species such as lynx, grizzly bear, and wolf (as well as wildlife in general) to reduce conflicts between listed species and land use authorizations and activities by applying the following actions to all public lands within the identified area:

- a. Evaluate projects and authorizations proposed on public lands in this area that may increase habitat fragmentation, create physical barriers to movement, or potentially increase mortality.
- b. Coordinate with others to identify critical barriers and potential passage locations, particularly on Interstate 15 at Monida and between Clark Canyon Dam and Barrett's diversion.
- c. Implement food storage strategies from the Southwest Montana State Grizzly Management Plan (MT FWP 2002) on BLM lands in the Grizzly Bear use areas outside of the Yellowstone Recovery Zone if grizzly bears are delisted. Until the grizzly bear is delisted, monitor the South Madison campground and undeveloped sites in the East Fork of the Blacktail and the Axolotl Lakes area for food storage problems related to grizzly bear use and the potential need for bear proof trash containers. Post major public land trailheads and access points in these areas and in the Centennial Mountains to advise recreationists about proper food storage to avoid back country conflict.
- d. Amend grazing permits in these areas to state that depredation losses are possible.
- e. Authorize no new sheep permits or conversion of cattle permits to sheep within wildlife dispersal/migration corridors (permits could continue to be transferred). This would not preclude the use of sheep as a management tool on a case-by-case basis (for example, grazing sheep to help control weeds).

21 Manage special status species habitats and populations using multi-scale assessments to identify current conditions, risks and opportunities.

22 Consider potential impacts to special status species, including bats, amphibians and reptiles on a case-by-case basis during project and activity planning.

23 Ensure that habitat is provided for special status species, and that proposed actions do not jeopardize the continued existence of a threatened or endangered species, or cause its habitat to be adversely modified or destroyed.

- 24 Consider conservation strategies for sensitive species when issuing land use authorizations.
- 25 Manage special status species habitat to minimize disturbance and displacement due to authorizations and activities, particularly during breeding seasons.
- 26 Implement habitat improvement or restoration projects to enhance the distribution and availability of special status species. Prioritize habitat projects where fragmentation and risks to the security of special status species is highest.
- 27 Enhance, restore and maintain habitat conditions and availability for special status species and prevent all avoidable loss of habitat.
- 28 Cooperate in implementation and monitoring of recovery plans, State of Montana management plans, and conservation strategies for all listed, recently delisted, and candidate species.
- 29 Implement management plans prepared for species not yet delisted in coordination with the State of Montana and other appropriate agencies once the species is delisted by the USFWS.
- 30 Use the format developed in conjunction with the Beaverhead-Deerlodge National Forest (Appendix F) to complete biological evaluations for projects to determine effects on special status plant and animal species and bird species included in the USFWS Region 10 list of "Birds of Conservation Concern" (Appendix R).
- 31 Treat sensitive species as candidate species for project impact analysis.
- 32 Consult with the US Fish and Wildlife Service when impacts are anticipated to threatened or endangered species or designated habitat.
 - a. Use the interagency analysis screens for threatened and endangered species to facilitate consistent consultation and streamline consultation on actions that have insignificant or discountable effects (see Appendix S).
 - b. Use the analysis screens for bald eagle, gray wolf, and grizzly bear in Appendices S, T, and U in conjunction with the joint BLM-FS evaluation form to evaluate proposed actions and projects to determine effects and the need for additional consultation with the US Fish and Wildlife Service.
 - c. Use the analysis screen for lynx and measures in the Lynx Conservation and Assessment Strategy (LCAS) (see Appendix W) in conjunction with the joint BLM-FS evaluation form to evaluate proposed actions and projects to determine effects and the need for additional consultation with the US Fish and Wildlife Service.
- 33 Adjust lynx analysis units (LAUs) as lynx habitat information is refined or conditions change and drop those with insufficient potential habitat to support a home range of a breeding female lynx.
- 34 Implement the following non-discretionary terms and conditions to ensure that actions conducted under the plan do not result in unexpected consequences that affect more grizzly bears or impart additional effects to grizzly bears than anticipated in the USFWS biological opinion of October 29, 2004 (incidental take of no more than two bears over the life of the plan as a result of habituation and/or food conditioning of grizzly bears or conflicts with livestock, an unquantifiable level of take from displacement effects of road densities and activity in project areas, and no more than one bear over the life of the plan as a result of conflicts with sheep used for BLM weed control projects):
 - If more than ten miles of road construction is planned or completed annually, BLM Dillon Field Office will consult with the USFWS.
 - Temporary roads will be closed and reclaimed within two years following the end of road use or project completion.
 - The BLM will maintain an up-to-date record of grizzly bear management actions that take place on BLM lands or as a result of activities authorized by BLM Dillon Field Office.
 - If an incident of depredation or use of improperly stored food items results in removal of a grizzly bear, BLM shall follow the Interagency Grizzly Bear Committee (IGBC) guidelines in reporting the incident to the USFWS.
 - BLM shall report any depredation or food storage incidences to the USFWS Montana Ecological Services Sub-office in Billings, or Montana Ecological Services Field Office in Helena in addition to the reporting required in the IGBC guidelines.
 - To monitor changes in road densities and potential effects on grizzly bear or their habitat, BLM will provide an annual report to the USFWS documenting:
 - a. the number of miles of new road constructed
 - b. the number of miles of road closed to public use and reclaimed
 - c. the number of miles of temporary road on the landscape, and length of time since construction of the temporary road
 - d. how open road densities may have changed relative to target densities of one mile per square mile within the analysis area for projects. (USFWS recommends the use of 6th

code hydrologic units for an unbiased and consistent analysis of open road density, using the unit containing the project and the adjoining 3-6 units with similar habitat).

35 Require the following measures for any projects located in areas where grizzly bear use is known or likely to occur (see Map 34) where domestic sheep are used to control noxious weeds:

- Domestic sheep grazing to control noxious weeds will not be used where previous livestock depredations have occurred from grizzly bears or wolves.
- Domestic sheep will be removed from a project area if depredation or encounters occur from grizzly bears or wolves.
- Any contracts or agreements to use domestic sheep grazing to control noxious weeds will specify that no control actions against grizzly bears or wolves will be requested by the contractor if depredations or encounters occur as part of the weed grazing action. Any encounters with wolves or grizzly bears will be reported to Montana FWP and the USDA Wildlife Services.
- Domestic sheep will be herded, and will be attended by guard dogs at all times.
- Temporary, predator-proof electric fencing will be used to protect night bedding areas where potential for predation by wolves and grizzly bears exists.

36 Implement the following conservation actions recommended by USFWS as discretionary actions to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information:

- Participate in ongoing interagency efforts to identify, map, and manage linkage habitats essential to grizzly bear movement between ecosystems. (Contact the USFWS grizzly bear recovery coordinator office at (406) 243-4903 for more information).
- Continue to manage road access on BLM lands to achieve lower road densities where possible.
- Manage garbage food and livestock feed storage to prevent access to bears to benefit grizzly bears as well as black bears and other carnivores. Reduction in human/carnivore interactions will also increase public safety.
- Where grizzly bear use is known or likely to occur and where practicable, delay disturbance activities during the spring in spring habitats to minimize displacement of grizzlies.
- Include security cover needs for grizzly bears in timber and vegetation management activity plans to increase the utility of habitat for grizzly bears across the Dillon planning area. Specifically, adjust the size and shape of cutting and harvest units to reduce the distance to cover, adjust edges, and

leave patches of trees and understory within cutting units to reduce line-of-sight distances.

37 Reinitiate consultation with USFWS if:

- The amount or extent of incidental take is exceeded. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending re-initiation.
- New information reveals an agency action may affect listed species or critical habitat in a manner or to an extent not considered in this opinion
- An agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the USFWS Biological Opinion on the Dillon RMP
- A new species is listed or critical habitat designated that may be affected

38 Coordinate with APHIS regarding depredation management on public land in accordance with the APHIS-BLM Master Memorandum of Understanding and the 1997 Predator Damage Management Plan (USDA-APHIS/ADC 1997).

Actions—Coniferous Forest Wildlife Habitats

39 Minimize big game displacement by limiting sustained vegetation treatment activities of more than one week in duration (including, but not limited to, broad-scale burning and mechanical treatments) to occur in no more than two adjacent 6th order hydrologic units at a time. These adjoining units would be maintained as disturbance-free as possible during operations.

40 Minimize impacts to migratory bird populations during the breeding season when considering vegetative treatments (such as fire, fuels, habitat improvement, etc.) by using measures such as the size of the treatment area, timing, spacing of treatments, etc.

41 Enhance open-forest habitat for dependent species by maximizing Douglas fir treatment unit size within the limits of topography and stand size. Assign priority to areas within historic bighorn sheep habitat where reduced forest canopy could enhance bighorn reestablishment or expansion, including Barton Gulch, the south Tobacco Root Mountains, and the south Ruby Mountains.

Actions—Sagebrush Steppe Wildlife Habitats

42 Use the National and Montana sage grouse conservation strategies (see Appendix X) as the basis to address habitat management in the watershed planning process and in project level analysis.

- 43 Manage sagebrush habitats so that mid-scale level shrub cover includes a mix of height classes with herbaceous understory adequate for meeting seasonal habitat requirements for sage grouse and other wildlife species that use sagebrush habitat including wintering antelope and mule deer.
 - In habitats with predominately mountain big sagebrush, manage sites with the potential to support sagebrush in a manner that maintains > 70 percent of those areas in canopy closure of 5 to 25 percent.
 - In habitats that include predominately Wyoming big sagebrush, manage sites with ecological potential to maintain sagebrush over at least 60 percent of those areas in a canopy closure of 5 to 25 percent.
 - Maintain an herbaceous understory emphasizing multiple species of native forbs and grasses, recognizing that herbaceous productivity decreases at >10-15 percent canopy cover.
 - Emphasize restoration and rehabilitation of sagebrush in areas that are capable of supporting sagebrush and contribute to the distribution and connectivity of patches.
- 44 When making project decisions located in sage grouse habitats, objectives for sage grouse habitats and relevant information about sage grouse seasonal habitat will be considered when determining the desired resource condition. If specific issues regarding sage grouse are identified, applicable conservation actions or guidelines will be reviewed by interdisciplinary teams and considered in the decision-making process. None of the conservation actions or guidelines in the Management Plan and Conservation Strategies for Sage Grouse in Montana will be construed as mandatory or standards.
- 45 Allow no net loss of overall distribution and quality of sagebrush habitats, recognizing that short-term, localized losses may occur through management activities.
- 46 Focus wildfire suppression efforts on protecting large dense stands of sagebrush that are isolated from other dense stands.
- 47 Emphasize protection of dense sagebrush patches within occupied pygmy rabbit habitat. Do not treat the densest patches of sagebrush within sagebrush communities occupied by pygmy rabbits.
- 48 Do not authorize activities contributing to the loss of Basin big sagebrush and Wyoming big sagebrush "stringer" habitat in special status species habitats through mechanical damage or other means.
- 49 Minimize impacts to migratory bird populations during the breeding season when considering vegetative treatments (such as fire, fuels, habitat improvement, etc.) by using measures such as the size of the treatment area, timing, spacing of treatments, etc.
- 50 Enhance bighorn sheep habitat suitability in currently occupied habitat (see Map 35) by minimizing or avoiding competing uses (competition for forage and water) and disturbance factors (seasonal disturbance on lambing habitat).
- 51 Maintain cattle as the primary class of livestock authorized to graze on mountain mahogany habitat. Sheep grazing on mountain mahogany habitat will be mitigated through site-specific management treatments, changed to cattle use, or eliminated where monitoring data indicates it is necessary.

Actions—Riparian and Wetland Wildlife Habitats

- 52 Consider wildlife needs on a case-by-case basis for any projects proposed in riparian/wetland habitat.
- 53 Implement wetland-based initiatives for waterfowl and wetland dependant species.
- 54 Coordinate with FWP to manage beaver where site-specific assessments have identified concerns with beaver presence or absence in riparian-wetland habitats for wildlife.
- 55 Allow no net loss of overall distribution and quality of wetland habitats, recognizing that short-term, localized losses may occur through management activities.
- 56 Manage the density and height of emergent wetland vegetation (cattails, rushes, etc.) to provide residual nesting cover and concealment for trumpeter swans and other waterfowl within the wetland and waterfowl production areas in the Centennial Valley (see Map 36).
- 57 Update and revise the Red Rock Waterfowl Habitat Management Plan to emphasize wetland habitat improvement to benefit wetland-dependent species as well as maximize opportunities to reestablish and maintain trumpeter swan occupancy. Pursue cooperative management on co-owned public/private wetlands to enhance habitat capabilities and water availability.

Monitoring

Support and assist FWP in monitoring wildlife habitat and population goals through the Montana Comprehensive Fish and Wildlife Conservation Strategy. Assess changes in sagebrush, coniferous forest and riparian/wetland habitat distribution, canopy, composition and condition on a landscape and watershed basis during watershed evaluations (see Map 20 for watershed areas). Where vegetation treatments have

been implemented, or natural events have occurred, monitor changes in species composition and structure compared to pre-treatment conditions.

Continue to monitor known populations of special status species, in conjunction with Federal, state and private agencies or organizations (bald eagle, peregrine falcon, sage grouse, pygmy rabbit, trumpeter swan, raptors). Monitoring may use intensive research projects or periodic population/habitat inventories to determine habitat extent or population status. This monitoring may be accomplished through contracts and/or with the aid of partnership funding sources in support of individual species conservation strategies. Participate in Intermountain Joint Venture efforts for all-bird monitoring at mid- and fine-scale.

Annually document and report to USFWS the amount and extent of surface-disturbing activities that result in habitat fragmentation in wildlife corridors and linkage areas, focusing on road density changes and potential effects on griz-

zly bear. The report will include:

- a. the number of miles of new road constructed
- b. the number of miles of road closed to public use and reclaimed
- c. the number of miles of temporary road on the landscape, and length of time since construction of the temporary road
- d. how open road densities may have changed relative to target densities of one mile per square mile within the analysis area for projects. (USFWS recommends the use of 6th code hydrologic units for an unbiased and consistent analysis of open road density, using the unit containing the project and the adjoining 3-6 units with similar habitat).

This information will be included in the Annual Program Summary and Planning Update, along with a summary of areas monitored for changes in species composition and structure, and the number/type of baseline inventories completed.

LIST OF PREPARERS

Project Manager

Renee Johnson

Field Manager

Tim Bozorth

Interdisciplinary Planning Team

Lynn Anderson	Outdoor Recreation Planner
Steve Armiger	Hydrologist
Laurie Blinn	GIS Specialist
Kipper Blotkamp	Fuels Specialist
John Bown	Minerals Planner and Environmental Specialist
Joe Casey	Forester
Jeff Daugherty	Realty Specialist
Cinthia Eichhorn	Cartographic Technician
Wendy Favinger	Economist
Brad Gillespie	Fuels Specialist
Mark Goeden	Assistant Field Manager
Bob Gunderson	Geologist
Dale Hanson	Paleontologist
Elizabeth Hartsoch	Cartographic Technician
Brian Hockett	Rangeland Management Specialist
Paul Hutchinson	Fish Biologist
Kandace Kulish	Cartographic Specialist
Huey Long	Soil Scientist
Chris Nemeth	Civil Engineering Technician
Jim Roscoe	Wildlife Biologist
Mark Sant	Archaeologist
John Simons	Rangeland Management Specialist
Larry Swanson	Associate Director, Center for the Rocky Mountain west
John Thompson	Planning and Environmental Specialist
Joan Trent	Sociologist
Rob Van Deren	Beaverhead and Madison County representative
Rick Waldrup	Outdoor Recreation Planner

Document and Website Production

Mary Apple	Public Affairs Officer
Kathy Ives	Printing Specialist
Lisa Romero	Webmaster
Katie Stevens	Planning and Environmental Specialist

Dillon ROD/RMP

REFERENCES CITED

- APLIC (Avian Power Line Interaction Committee). 1996. Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 1996. Edison Electric Institute/Raptor Research Foundation, Washington, D.C.
- Dames and Moore. 1996. Missouri-Madison Comprehensive Recreation Plan.
- Duncan, C.L. 2001. *Montana Weed Management Plan*. Plan prepared for the Weed Summit Steering Committee. Weed Management Services, Helena, Montana.
- Elzinga, Caryl L., Daniel W. Salzer, and John W. Willoughby. 1998. Measuring and Monitoring Plant Populations, BLM Technical Reference 1730-1.
- EPA. 1998. Interim Air Quality Policy on Wildland and Prescribed Fires. 42 pp.
- Montana Sage Grouse Work Group. 2004. Management Plan and Conservation Strategies for Sage Grouse in Montana—Final.
- MT DNRC. 1999. Best management practices for grazing. Helena, Montana.
- MT FWP. 2002. *Grizzly Bear Management Plan for Southwestern Montana 2002-2012: Final Programmatic Environmental Impact Statement*. Montana Fish, Wildlife and Parks. Helena, Montana.
- Pellant, M., P. Shaver, D.A. Pyke, and J.E. Herrick. 2005. Interpreting Indicators of Rangeland Health, Version 4. Technical Reference 1734-6. U.S. Department of the Interior, Bureau of Land Management, National Science and Technology Center, Denver, CO. BLM/ WO/ST-00/001+1734/REV05. 122 pp.
- Prichard, Don, J. Anderson, C. Correll, J. Fogg, K. Gebhardt, R. Krapf, S. Leonard, B. Mitchell, and J. Staats. 1998. Riparian Area Management. Technical Reference 1737-15. A User Guide to Assessing Proper Functioning Condition and the Supporting Science for Lentic Areas. U.S. Department of the Interior, Bureau of Land Management, National Applied Resource Sciences Center, Denver, CO. BLM/RS/ST-98/001+1737. 126 pages.
- Prichard, Don, F. Berg, W. Hagenbuck, R. Krapf, R. Leinard, S. Leonard, M. Manning, C. Noble, and J. Staats. 2003. Riparian Area Management. Technical Reference 1737-16. A User Guide to Assessing Proper Functioning Condition and the Supporting Science for Lentic Areas. U.S. Department of the Interior, Bureau of Land Management, National Applied Resource Sciences Center, Denver, CO. BLM/RS/ST-99/001+1737+REV03. 109 pages.
- PPL, Montana. 2001. Missouri-Madison Comprehensive Recreation Plan (revised).
- USDA-APHIS/ADC (United States Department of Agriculture, Animal and Plant Health Inspection Service (APHIS), Animal Damage Control (ADC). 1997. *Environmental Assessment for Predator Damage Management in Western Montana*. Prepared in cooperation with the United States Department of Agriculture Forest Service, United States Department of Interior Bureau of Land Management and United States Fish and Wildlife Service, and the Montana Department of Fish, Wildlife and Parks, Montana Department of Livestock, and Montana Department of State Lands.
- USDA-FS (United States Department of Agriculture, Forest Service). 1990. Comprehensive Plan for the Nez Perce (Nee-Me-Poo) National Historic Trail.
- _____. 1997. Lee Metcalf Wilderness Fire Management Guidebook.
- USDI-BLM (US Department of the Interior, Bureau of Land Management). 1976a. Axolotl Lakes Habitat Management Plan. Manuscript on file, BLM Dillon Field Office, Dillon, Montana.
- _____. 1976b. Blacktail Habitat Management Plan. Manuscript on file, BLM Dillon Field Office, Dillon, Montana.
- _____. 1979. *Dillon Management Framework Plan*. BLM Dillon Resource Area, Dillon, Montana.
- _____. 1980a. *Mountain Foothills Grazing Management Program EIS*. BLM Montana State Office Billings, Montana.
- _____. 1980b. Hidden Pasture Bighorn Habitat Management Plan. Manuscript on file, BLM Dillon Field Office, Dillon, Montana.
- _____. 1981. Sheep Creek Aquatic Habitat Management Plan. Manuscript on file, BLM Dillon Field Office, Dillon, Montana.

- _____. 1983a. Red Rock Waterfowl Habitat Management Plan. Manuscript on file, BLM Dillon Field Office, Dillon, Montana.
- _____. 1983b. Wall Creek Allotment Habitat Management Plan. Manuscript on file, BLM Dillon Field Office, Dillon, Montana.
- _____. 1984a. *Final Wilderness Management Plan for the Bear Trap Unit of the Lee Metcalf Wilderness*. Montana State Office, Billings, Montana.
- _____. 1987a. *Lower Big Hole Recreation Management Plan*. BLM-Dillon Resource Area, Dillon, Montana.
- _____. 1991a. *Vegetation Treatment on BLM Lands in Thirteen Western States: Final Environmental Impact Statement*. Cheyenne, Wyoming.
- _____. 1991b. *Montana Statewide Wilderness Study Report, Volume II – Wilderness Study Area Specific Recommendations*. Montana State Office, Billings, Montana.
- _____. 1991c. *Limits of Acceptable Change Management Direction, Environmental Assessment. Bear Trap Canyon Unit, Lee Metcalf Wilderness*. Dillon Resource Area, Dillon, Montana.
- _____. 1992. BLM's Nongame Migratory Bird Habitat Conservation Plan.
- _____. 1996a. *Standards for Rangeland Health and Guidelines for Livestock Management: Environmental Impact Statement*. Montana State Office. Billings, Montana.
- _____. 1996b. *Partners Against Weeds: An Action Plan for the Bureau of Land Management*. Billings, Montana.
- _____. 2001a. *Centennial Mountains Travel Management Plan* (EA#MT-050-01-05). Dillon, Montana.
- _____. 2002. *Final Report on Wild and Scenic River Eligibility Determinations*. BLM Dillon Field Office, Dillon, Montana.
- _____. 2003a. Lower Madison River Recreation Management Plan. BLM Dillon Field Office, Dillon, Montana.
- _____. 2003b. Fire/Fuels Management Plan Environmental Assessment/Plan Amendment for Montana and the Dakotas, Billings, Montana.
- _____. 2003c. Record of Decision. Off-Highway Vehicle Environmental Impact Statement and Proposed Plan Amendment for Montana, North Dakota and South Dakota, June 2003. Bureau of Land Management, Montana State Office.
- _____. 2004a. Draft Dillon Resource Management Plan and Environmental Impact Statement. Volumes I, II and III, released March 2004.
- _____. 2004b. Bureau of Land Management National Sage-Grouse Habitat Conservation Strategy. United States Department of the Interior. November 2004.
- _____. 2005a. Proposed Dillon Resource Management Plan and Final Environmental Impact Statement. Volumes I and II, released April 2005.
- _____. 2005b. Centennial Watershed Assessment Report, Executive Summary, and Determination. 71 pages. January 2005. Manuscript on file, BLM Dillon Field Office, Dillon, Montana.
- _____. 2005c. Centennial Watershed Environmental Assessment. EA MT-050-05-02. 119 pages plus maps and appendices. July 2005. Manuscript on file, BLM Dillon Field Office, Dillon, Montana.
- _____. 2005d. Centennial Watershed Proposed Decision and Response to Comments. 35 pages. September 2005. Manuscript on file, BLM Dillon Field Office, Dillon, Montana.
- USDI-BLM and USDA-FS (US Department of the Interior, Bureau of Land Management and United States Department of Agriculture, Forest Service). 2001a. Final Off-Highway Vehicle Environmental Impact Statement and Proposed Plan Amendment for Montana, North Dakota and Portions of South Dakota. Billings, Montana.
- USFWS. 2003. Interim Guidelines to Avoid and Minimize Wildlife Impacts from Wind Turbines. Guidance issued to Regional Directors, Regions 1-7, under cover of memorandum dated May 13, 2003.

GLOSSARY

-A-

Accelerated Erosion: Soil loss above natural levels resulting directly from human activities. Because of the slow rate of soil formation, accelerated erosion can lead to a permanent reduction in plant productivity.

Active Preference: That portion of the total grazing preference for which grazing use may be authorized.

Activity Plan: Site-specific plan which precedes actual development. This is the most detailed level of BLM planning, and is also referred to as project level or implementation level planning.

Actual Use: The amount 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.

Adit: Horizontal, or nearly horizontal, passage from the surface by which a mine is worked or dewatered.

Administrative Unit: Field Office, Resource Area, District or State.

Air Quality: Refers to standards for various classes of land as designated by the Clean Air Act of 1978.

Allotment: An area of land where 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 Categorization: Grazing allotments and rangeland areas used for livestock grazing are assigned to an allotment category during resource management planning. Allotment categorization is used to establish priorities for distributing available funds and personnel during plan implementation to achieve cost-effective improvement of rangeland resources. Categorization is also used to organize allotments into similar groups for purposes of developing multiple use prescriptions, analyzing site-specific and cumulative impacts, and determining trade-offs.

Allotment Management Plan: A written program of livestock grazing management, including supportive measures if required, designed to attain specific management goals in a grazing allotment.

Alluvial Fan: A low, outspread, relatively flat to gently sloping mass of loose rock material deposited by a stream where it flows from a narrow mountain valley onto a plain or broad valley.

Alluvium: Any sediment deposited by flowing water, as in a river bed, floodplain, or delta.

Amendment: The process for considering or making changes in the terms, conditions, and decisions of approved Resource Management Plans or Management Framework Plans using the prescribed provisions for resource management planning appropriate to the proposed action or circumstances. Usually only one or two issues are considered that involve only a portion of the planning area.

Analysis of the Management Situation: A comprehensive documentation of the present conditions of the resources, current management guidance, and opportunities for change.

Animal Unit Month: A standardized measurement of the amount of forage necessary for the sustenance of one cow unit or its equivalent for 1 month. Approximately 800 pounds of forage.

Appeal: Application for review by a higher court.

Aquatic: Living or growing in or on the water.

Aquifer: A water-bearing bed or layer of permeable rock, sand, or gravel capable of yielding large amounts of water.

Archaeological resource/remains: A term with legal definition and application, meaning any material remains of human life or activities that are at least 100 years of age, and that are of archaeological interest.

Area of Critical Environmental Concern: Areas within the public lands where special management attention is required to: (1) protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources, or other natural systems or processes, or (2) protect life and safety from natural hazards.

Arid: A condition of a region where precipitation is insufficient to support any but drought-adapted vegetation.

Armoring: Placement of protective material for the primary purpose of reducing sediment into streams or other water bodies.

Aspect: (1) the visual first impression of vegetation at a particular time or seen from a specific point. (2) The predominant direction of the slope of the land.

Assessment: The act of evaluating and interpreting data and information for a defined purpose.

Authorized Officer: The Federal employee who has the delegated authority to make a specific decision.

Authorized Use: Uses of public land that may be authorized include agriculture development, residential use (under certain conditions), business, industrial, and commercial uses, advertising; research projects, State National Guard maneuvers, and motion picture filming. Recreational concessions are considered business uses and may be authorized by lease. Timber harvest, livestock grazing, mineral extraction and special recreation events, among other uses, are authorized under other regulations and not under Section 302 of FLPMA.

Avoidance Areas: Areas with sensitive resource values where rights-of-way would be strongly discouraged. Authorizations made in avoidance areas would have to be compatible with the purpose for which the area was designated and not be otherwise feasible on lands outside the avoidance area.

-B-

Back Country Byways: Vehicle routes that traverse scenic corridors utilizing secondary or back country road systems. National back country byways are designated by the type of road and vehicle needed to travel the byway.

Backfill: Material used to replace soil and earth removed during mining.

Backfilling: The replacement of soil and earth removed during mining.

Basin: A depressed area having no surface outlet (topographic basin); a physiographic feature or subsurface structure that is capable of collecting, storing, or discharging water by reason of its shape and the characteristics of its confining material (water); a depression in the earth's surface, the lowest part often filled by a lake or pond (lake basin); a part of a river or canal widened (drainage, river, stream basin).

Best Management Practices: A suite of techniques that guide, or may be applied to, management actions to aid in achieving desired outcomes. Best management practices are often developed in conjunction with land use plans, but they are not considered a land use plan decision unless the land use plan specifies that they are mandatory. They may be updated or modified without a plan amendment if they are not mandatory.

Big Game: Large species of wildlife that are hunted, such as elk, deer, bighorn sheep, and pronghorn antelope.

Biodiversity: The diversity of living organisms considered at all levels of organization including genetics, species, and higher taxonomic levels, and the variety of habitats and ecosystems, as well as the processes occurring therein.

Biological Assessment: The gathering and evaluation of information on proposed endangered and threatened species and critical habitat and proposed critical habitat. Required when a management action potentially conflicts with endangered or threatened species, the biological assessment is the way federal agencies enter into formal consultation with the Fish and Wildlife Service and describe a proposed action and the consequences to the species the action would affect.

Biomass: Vegetative material leftover from stand treatments. This term usually refers to such material that can be gathered and transported to cogeneration plants, and there utilized for production of electricity.

Board feet: A unit of solid wood one foot square and one inch thick.

Bole: The main stem(s) of a timber species tree.

Bond, or Corporate Guarantee: The use of corporate assets as part or all of the financial assurance for reclamation.

Browse: To browse (verb) is to graze a plant; also, browse (noun) is the tender shoots, twigs and leaves of trees and shrubs often used as food by livestock and wildlife.

Buffer zone (strip): A protective area adjacent to an area of concern requiring special attention or protection. In contrast to riparian zones which are ecological units, buffer strips can be designed to meet varying management concerns.

Bunchgrass: Individual grasses that have the characteristic growth habit of forming a "bunch" as opposed to having stolens or rhizomes or single annual habit.

-C-

Cambrian: The oldest of the periods of the Paleozoic Era; also the system of strata deposited during that period.

Candidate species: Any species included in the Federal Register notice of review that are being considered for listing as threatened or endangered by the U.S. Fish and Wildlife Service.

Canopy: The uppermost layer consisting of the crowns of trees or shrubs in a forest or woodland.

Carrying capacity: The maximum stocking rate possible without damaging vegetation or related resources.

Casual Use: Activities that only negligibly disturb federal lands and resources. For mining activities, casual use generally includes the collecting of geochemical, rock, soil, or mineral specimens using hand tools, hand panning, and nonmotorized sluicing. It also generally includes use of metal detectors, gold spears, and other battery-operated devices for sensing the presence of minerals, and hand and battery-operated drywashers. 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.

Categorical Exclusion: A category of actions (identified in agency guidance) that do not individually or cumulatively have a significant effect on the human environment, and for which neither an environmental assessment nor an Environmental Impact Statement is required.

Cave Resource: Any naturally occurring void, cavity, recess, or system of interconnected passages beneath the surface of the earth or within a cliff or ledge, including any cave resource therein, that is large enough to permit a person to enter, whether the entrance is excavated or naturally formed. Also included is any natural pit or sinkhole.

Cenozoic: The most recent era of geologic history (65 million years ago until the present) during which the world's modern landforms, animals, and plants came into being.

Channel: An open conduit either naturally or artificially created which periodically or continuously contains moving water or forms a connecting link between two bodies of water.

Clean Air Act: Federal legislation governing air pollution.

Climax: The culminating stage in plant succession for a given site where vegetation has reached a highly stable condition.

Climax Vegetation: The final vegetation community and highest ecological development of a plant community that emerges after a series of successive vegetational stages. The climax community perpetuates itself indefinitely unless disturbed by outside forces.

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.

Closed Area or Trail: Designated areas and trails where the use of off-road vehicles are permanently or temporarily prohibited. The use of off-road vehicles in closed areas may be

allowed only with the approval of the authorized officer.

Closed Road: A road or segment which is restricted from certain types of use during certain seasons of the year. The prohibited use and the time period of closure is specified.

Coal: A readily combustible rock containing more than 50 percent weight and more than 70 percent by volume of carbonaceous material including inherent moisture, formed from compaction and induration of variously altered plant remains similar to those in peat. Differences in the kinds of plant materials (type), in degree of metamorphism (rank), and in the range of impurity (grade) are characteristic of coal and are used in classification.

Code of Federal Regulations (CFR): The official, legal tabulation or regulations directing federal government activities.

Collaboration: A cooperative process in which interested parties, often with widely varied interests, work together to seek solutions with broad support for managing public and other lands. This may or may not involve an agency as a cooperating agency.

Colluvium: A general term applied to loose and incoherent deposits, usually at the foot of a slope or cliff and brought there chiefly by gravity. Talus and cliff debris are included in such deposits.

Commercial Forest Land: Forest land which is producing, or has a site capable of producing, at least 20 cubic feet/acre/year of a commercial tree species.

Common Variety Minerals: Stone, gravel, pumice, pumicite, and cinders that, though possibly having value for trade, manufacture, the sciences, or the mechanical or ornamental arts, do not have a distinct, special value for such use beyond normal uses. On the public lands such minerals are considered saleable and are disposed of by sales or by special permits to local governments.

Community: An assemblage of plant and animal populations in a common spatial arrangement.

Composition (of forest vegetation): The proportion of each tree species in a stand, expressed as a percentage of the total number, basal area, or volume of all tree species in the stand.

Conformance: That a proposed action shall be specifically provided for in the land use plan or, if not specifically mentioned, shall be clearly consistent with the goals, objectives, or standards of the approved land use plan.

Conifer: A tree of the order Coniferae with cones and needle-shaped or scalelike leaves.

Coniferous: Pertaining to conifers, which bear woody cones containing naked seeds.

Conservation Agreement: A formal signed agreement between the U.S. Fish and Wildlife Service or National Marine Fisheries Service and other parties that implements specific actions, activities, or programs designed to eliminate or reduce threats or otherwise improve the status of a species. CA's can be developed at a State, regional, or national level and generally include multiple agencies at both the State and Federal level, as well as tribes. Depending on the types of commitments the BLM makes in a CA and the level of signatory authority, plan revisions or amendments may be required prior to signing the CA, or subsequently in order to implement the CA.

Conservation Strategy: A strategy outlining current activities or threats that are contributing to the decline of a species, along with the actions or strategies needed to reverse or eliminate such a decline or threats. Conservation strategies are generally developed for species of plants and animals that are designated as BLM Sensitive species or that have been determined by the Fish and Wildlife Service or National Marine Fisheries Service to be Federal candidates under the Endangered Species Act.

Consistency: The proposed land use plan does not conflict with officially approved plans, programs, and policies of tribes, other Federal agencies, and State, and local governments to the extent practical within Federal law, regulation, and policy.

Contiguous: lands or legal subdivisions having a common boundary; lands having only a common corner are not contiguous.

Cooperating Agency: Assists the lead Federal agency in developing an Environmental Analysis or Environmental Impact Statement. The Council on Environmental Quality regulations implementing NEPA define a cooperating agency as any agency that has jurisdiction by law or special expertise for proposals covered by NEPA. Any tribe or Federal, State, or local government jurisdiction with such qualifications may become a cooperating agency by agreement with the lead agency.

Corridor: A wide strip of land within which a proposed linear facility could be located.

Council on Environmental Quality:

Cover: Any form of environmental protection that helps an animal stay alive (mainly shelter from weather and concealment from predators).

Cover Type: The present vegetation composition of an area, described by the dominant plant species.

Critical Habitat: An area occupied by a threatened or endangered species "on which are found those physical and biological features (1) essential to the conservation of the species, and (2) which may require special management considerations or protection".

Cultural resource/cultural property: a definite location of human activity, occupation, or use identifiable through field inventory (survey), historical documentation, or oral evidence. The term includes archaeological, historic, or architectural sites, structures, or places with important public and scientific uses, and may include definite locations (sites or places) or traditional cultural or religious importance to specified social and/or cultural groups. Cultural resources are concrete, material places and things that are located, classified, ranked, and managed through the system of identifying, protecting, and utilizing for public benefit.

Cultural resource inventory classes:

- **Class I – Existing data inventory:** a study of published and unpublished documents, records, files, registers, and other sources, resulting in analysis and synthesis of all reasonably available data. Class I inventories encompass prehistoric, historic, and ethnological/sociological elements, and are in large part chronicles of past land uses. They may have major relevance to current land use decisions.
- **Class II – Sampling field inventory:** a statistically based sample survey designed to help characterize the probable density, diversity, and distribution of archaeological properties in a large area by interpreting the results of surveying limited and discontinuous portions of the target area.
- **Class III – Intensive field inventory:** a continuous, intensive survey of an entire target area, aimed at locating and recording all archaeological properties that have surface indications, by walking close-interval parallel transects (generally at 30 m intervals) until the area has been thoroughly examined.

Cumulative Impact: The impact on the environment that results from the incremental impact of the action when added to other past, present, or reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

Cunits: A unit of volume equivalent to 100 cubic feet of solid wood.

-D-

Deciduous: Pertaining to plants that shed all their leaves every year in a certain season.

Denning Habitat: Habitat used during parturition and rearing of young until they are mobile. The common component appears to be large amounts of coarse woody debris, either down logs or root wads. Coarse woody debris provides escape and thermal cover for kittens. Denning habitat may be found either in older mature forest of conifer or mixed conifer/deciduous types, or in regenerating stands (>20 years since disturbance). Denning habitat must be located within daily travel distance of foraging habitat (typical maximum daily distance for females is 3-6 miles).

Designated Roads and Trails: Specific roads and trails where some type of motorized vehicle use is allowed either seasonally or year-long.

Development Well: A well drilled within the known or proven productive area of an oil field with the expectation of producing oil or gas from the producing reservoir.

Discharge (Water): The rate of flow or volume of water flowing in a stream at a given place or within a given period of time.

Dispersed or Extensive Recreation: Recreation activities of an unstructured type which are not confined to specific locations such as recreation sites. Example of these activities may be hunting, fishing, off-road vehicle use, hiking, and sightseeing.

Disturbance: Events that alter the structure, composition, or function of terrestrial or aquatic habitats. Natural disturbances include drought, floods, wind, fires, wildlife grazing, and insects and pathogens. Human-caused disturbances include actions such as timber harvest, fire, livestock grazing, road construction, and the introduction of exotic species.

Distribution Line: An electric power line operating at a voltage of less than 69 kilovolts.

Diversity: The relative abundance of wildlife species, plant species, communities, habitats, or habitat features per unit of area.

Drainage: The removal of excess water from land by surface or subsurface flow.

Drawdown, Ground Water: A lowering of the ground water surface caused by pumping, measured as the difference between the original ground water level and the level after a period of pumping.

Drilling: The operation of boring a hole in the earth, usually for the purpose of finding and removing subsurface formation fluids such as oil and gas.

Dry Hole: Any well incapable of producing oil or gas in commercial quantities. A dry hole may produce water, gas, or even oil, but not enough to justify production.

-E-

Easement: A right afforded a person or agency to make limited use of another's real property for access or other purposes.

Ecosystem: A complete, interacting system of living organisms and the land and water that make up their environment; the home places of all living things, including humans.

Emergent Vegetation: Aquatic plant species that are rooted in wetlands but extend above the water's surface.

Endangered Species: A plant or animal species whose prospects for survival and reproduction are in immediate jeopardy, as designated by the Secretary of the Interior, and as is further defined by the Endangered Species Act.

Entry: An application to acquire title to public lands.

Environmental Assessment: A concise public document that analyzes the environmental impacts of a proposed federal action and provides sufficient evidence to determine the level of significance of the impacts.

Environmental Impact Statement: A detailed written statement required by the National Environmental Policy Act when an agency proposes a major federal action significantly affecting the quality of the human environment.

Erosion: The wearing away of the land surface by running water, wind, ice, or other geological agents.

Exception (oil and gas): A one-time exemption to a lease stipulation. Exceptions are determined on a case-by-case basis.

Exclusion Areas: Areas with sensitive resource values where rights-of-way would be prohibited.

Exploration: The work of investigating a mineral deposit to determine by geological surveys, geophysical surveys, geochemical surveys, boreholes, pits, and underground workings if it is feasible to mine.

Extensive Recreation Management Area: Areas where 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.

-F-

Fan: An accumulation of debris brought down by a stream descending through a steep ravine and debouching in the plain beneath, where the detrital material spreads out in the shape of a fan, forming a section of a very low cone.

Federal Land Policy and Management Act of 1976: 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.

Federal Register: A daily publication that reports Presidential and Federal Agency documents.

Fire-dependent ecosystems: Ecosystems in which recurring disturbances by fire are essential to ecosystem function.

Fire Management Plan: A strategic plan that defines a program to manage wildland and prescribed fires and documents the fire management program in the approved land use plan; the plan is supplemented by operational procedures such as preparedness plans, preplanned dispatch plans, prescribed fire plans, and prevention plans.

Fire Preparedness: Activities that lead to a safe, efficient, and cost-effective fire management program in support of land and resource management objectives through appropriate planning and coordination.

Fire Regimes: periodicity and pattern of naturally occurring fires in a particular area or vegetative type, described in terms of frequency, biological severity, and areal extent (Tande 1980).

Fishery: Habitat that supports the propagation and maintenance of fish.

Flood Plain: The relatively flat area or lowlands adjoining a body of standing or flowing water which has been or might be covered by floodwater.

Fluvial: Pertaining to streams or produced by stream action.

Forage: All browse and herbaceous foods available to grazing animals, which may be grazed or harvested for feeding.

Forb: A herbaceous plant that is not a grass, sedge, or rush.

Forest Health treatments: Treatments that restore forest ecosystems to a condition that sustains their complexity while providing for human needs.

Forest Land: Land that is now, or has the potential of being, at least 10 percent stocked by forest trees (based on crown

closure) or 16.7 percent stocked (based on tree stocking).

Formation: A body of rock identified by lithic characteristics and stratigraphic position; it is prevailing, but not necessarily tabular, and is mappable at the earth's surface or traceable in the subsurface.

Fossil: Mineralized or petrified form from a past geologic age, especially from previously living things.

Fragile Soil: A soil that is especially vulnerable to erosion or deterioration due to its physical characteristics and/or location. Disturbance to the surface or the vegetative cover can initiate a rapid cycle of loss and destruction of soil material, structure, and ability to sustain a biotic community.

Free-flowing River: Existing or flowing in a natural condition without impoundment, diversion, straightening, rip-rapping, or other modification of the waterway.

Fuels:

Fuel loading: The weight of fuels in a given area, usually expressed in tons per acre, pounds per acre, or kilograms per square meter.

-G-

Geographic Information System (GIS): A computer system capable of storing, analyzing, and displaying data and describing places on the earth's surface.

Geophysical Exploration: The use of geophysical instruments and methods to determine subsurface conditions by analyzing such properties as specific gravity, electrical conductivity, or magnetic susceptibility.

Goal: A broad statement of a desired outcome. Goals are usually not quantifiable and may not have established time frames for achievement.

Grazing System: The manipulation of livestock grazing to accomplish a desired result.

Groundwater: Water contained in pore spaces of consolidated and unconsolidated surface material.

Guidelines: Actions or management practices that may be used to achieve desired outcomes, sometimes expressed as best management practices. Guidelines may be identified during the land use planning process, but they are not considered a land use plan decision unless the plan specifies that they are mandatory.

-H-

Habitat: A specific set of physical conditions that surround a species, group of species, or a large community. In wild-

life management, the major constituents of habitat are considered to be food, water, cover, and living space. The complete suite of biotic and abiotic components of the environment where an animal lives.

Heap: A large, engineered pile of ore over which chemical agents such as cyanide are sprinkled in extracting metals by heap leaching.

Heap Leaching: A low-cost technique for extracting metals from ore by percolating leaching solutions through heaps of ore placed on impervious pads. This method is generally used on low-grade ores.

Heavy Metal: Any of the metals that react readily with dithizone, including zinc, copper, cobalt, lead, bismuth, gold, cadmium, iron, manganese, nickel, tantalum, tellurium, platinum, and silver.

Herbaceous: Pertaining to or characteristic of an herb (fleshy-stem plant) as distinguished from the woody tissue of shrubs and trees.

Highwall: The unexcavated face of exposed overburden and ore in an open pit mine.

Historic: Period wherein nonnative cultural activities took place, based primarily upon European roots, having no origin in the traditional Native American culture(s).

Historic property or historic resource: “any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register. The term includes, for purposes of these regulations, artifacts, records, and remains that are related to and located within such properties. The term ‘eligible for inclusion in the National Register’ includes both properties formally determined as such by the Secretary of the Interior and all other properties that meet National Register listing criteria” {quoted from 36 CFR 900.2(e)}.

Home Range: The area in which an animal travels in the scope of natural activities.

Horizon (soil): A layer of soil or soil material roughly parallel to the land surface and differing from adjoining genetically related layers in physical, chemical, and biological properties or characteristics, such as color, structure, and texture.

Hummock: A low, rounded hill, knoll, hillock; a tract of wooded land higher than a nearby swamp or marsh.

Hydrologic Condition: The current state of the processes controlling the yield, timing, and quality of water in a watershed. Each physical and biologic process that regulates or influences streamflow and ground-water character has a

range of variability associated with the rate or magnitude of energy and mass exchange. At any point in time, each of these processes can be defined by their current rate or magnitude relative to the range of variability associated with each process. Integration of all processes at one time represents hydrologic condition.

Hydrologic Unit: A level of a hierarchical system to describe geographic areas. Hydrologic units are used for the collection and organization of hydrologic data.

Hydrophytic: Water-loving; ability to grow in water or saturated soils.

-I-

Igneous Rock: Rock, such as granite and basalt, that has solidified from a molten or partially molten state.

Impact: A modification of the existing environment caused by an action (such as construction or operation of facilities).

Impacts (or Effects): Environmental consequences (the scientific and analytical basis for comparison of alternatives) as a result of a proposed action. Effects may be either direct, which are caused by the action and occur at the same time and place, or indirect, which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable, or cumulative.

Implementation Decisions: Decisions that take action to implement land use plan decisions. They are generally appealable to Interior Board of Land Appeals.

Implementation Plan: A site-specific plan written to implement decisions made in a land use plan. An implementation plan usually selects and applies best management practices to meet land use plan objectives. Implementation plans are synonymous with “activity” plans. Examples of implementation plans include interdisciplinary management plans, habitat management plans, and allotment management plans.

Indian tribe: Any Indian group in the conterminous United States that the Secretary of the Interior recognizes as possessing tribal status.

Indicator (Species): A species of animal or plant whose presence is a fairly certain indication of a particular set of environmental conditions. Indicator species serve to show the effects of development actions on the environment.

Indirect effects: Secondary effects that occur in locations other than the initial action or later in time.

Infiltration: The downward entry of water into the soil or other material.

Initial (fire) Attack: An aggressive fire suppression action consistent with firefighter and public safety and values to be protected.

Interdisciplinary Team: A group of individuals with different training, representing the physical sciences, social sciences, and environmental design arts, assembled to solve a problem or perform a task. The members of the team proceed to a solution with frequent interaction so that each discipline may provide insights to any stage of the problem and disciplines may combine to provide new solutions. The number and disciplines of the members preparing the plan vary with circumstances. A member may represent one or more discipline or Bureau program interest.

Interim Management Policy: Policy that guides management of the BLMs Wilderness Study Areas. The policy balances the various uses of Wilderness Study Areas with the requirement to protect the lands wilderness values.

Interior Board of Land Appeals: The Department of the Interior, Office of Hearings and Appeals board that acts for the Secretary of the Interior in responding to appeals of decisions on the use and disposition of public lands and resources. Because the Interior Board of Land Appeals acts for and on behalf of the Secretary of the Interior, its decisions usually represent the Department's final decision but are subject to the courts.

Intermittent Stream: A stream which occasionally is dry or reduced to pool stage.

Invasive Species: Organisms that have been introduced into an environment where they did not evolve. Executive Order 13112 focuses on organism whose presence is likely to cause economic harm, environmental harm, or harms to human health.

Inversion: The state of the atmosphere in which a layer of cool air is trapped near the earth's surface by an overlying layer of warm air so that the lower layer cannot rise. Serious air pollution problems may result from air pollutants being emitted into the limited mixing depth below the inversion.

-J-

Jurisdiction: The legal right to control or regulate use of a transportation facility. Jurisdiction requires authority, but not necessarily ownership.

-K-

Key Linkage Areas: Key linkage areas provide landscape connectivity between blocks of lynx habitat. Linkage areas occur both within and between geographic areas where in-

tervening areas of non-lynx habitat such as basins, valleys, agricultural lands separate blocks of lynx habitat, or where lynx habitat naturally narrows between two blocks.

-L-

Land Classification: A process for determining the suitability of public lands for certain types of disposal or lease under the public land laws or for retention under multiple use management.

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.

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, regardless of the scale at which the decisions were developed.

Leasable Minerals: Those minerals or materials designated as leasable under the Mineral Leasing Act of 1920. They include coal, phosphate, asphalt, sulphur, potassium, and sodium minerals, and oil, gas, and geothermal.

Lease: (1) A legal document that conveys to an operator the right to drill for oil and gas; (2) the tract of land, on which a lease has been obtained, where producing wells and production equipment are located.

Lease Stipulation (oil and gas): Conditions of lease issuance that provide protection for other resource values or land uses by establishing authority for substantial delay or site changes or the denial of operations within the terms of the lease contract. The authorized officer has the authority to relocate, control timing, and impose other mitigation measures under Section 6 of the Standard Lease Form. Lease stipulations clarify the Bureau's intent to protect know resources or resource values.

Lessee: A person or entity holding record title in a lease issued by the United States (see 43 CFR 3160.0-5).

Lek: An assembly area where birds, especially sage grouse, carry on display and courtship behavior.

Limited Areas or Trails: Designated areas or trails where the use of off-road vehicles is subject to restrictions, such as limiting the number or types of 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.

Limits of Acceptable Change: A framework for establishing acceptable and appropriate resource and social conditions in recreation settings. A system of management planning.

Litter: The uppermost layer of organic debris on the soil surface, essentially the freshly fallen or slightly decomposed vegetal material.

Loamy: Intermediate in texture and properties between fine- and course-textured soils.

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.

Lode: A mineral deposit in solid rock.

Lode Mining: Mining of a mineral deposit in solid rock.

Lynx Analysis Unit (LAU): The LAU is a project analysis unit upon which direct, indirect, and cumulative effects analyses are performed. LAU boundaries should remain constant to facilitate planning and allow effective monitoring of habitat changes over time. An area of at least the size used by an individual lynx, about 25-50 square miles.

Lynx Habitat: Lynx occur in mesic coniferous forest that have cold, snowy winters and provide a prey base of snowshoe hare. In the Rocky Mountains primary vegetation that contributes to lynx habitat is lodgepole pine, subalpine fir, and Englemann spruce. Secondary vegetation that, when interspersed within subalpine forests, may also contribute to lynx habitat, includes cool, moist Douglas-fir, grand fir, western larch, and aspen forest. Dry forest types (ponderosa pine, climax lodgepole pine) do not provide lynx habitat. Primary elevations for lynx habitat are between 1500-2000 m. (4,920 – 6,560 ft.) elevation zones in the northern Rockies.

-M-

Management Decision: A decision made by the BLM to manage public lands. Management decisions include both land use plan decisions and implementation decisions.

Management Framework Plan: Planning decision document prepared before the effective date of the regulations implementing the land use planning provisions of the FLPMA, which establishes, for a given area of land, land-use alloca-

tions, coordination guidelines for multiple-use, and objectives to be achieved for each class of land use or protection.

Management Opportunities: A component of the analysis of the management situation; actions or management directions that could be taken to resolve issues or management concerns.

Metalliferous: Metallic minerals such as gold, silver, and lead.

Metamorphic Rock: Any rock derived from preexisting rocks by mineralogical, chemical, and structural changes, essentially in the solid state, in response to marked changes in temperature, pressure, shearing stress, and chemical environment at depth in the earth's crust.

Mill: A plant in which ore is treated for the recovery of valuable minerals or valuable minerals are concentrated into a smaller bulk for shipping to a smelter or other reduction works.

Mill site (Millsite claim): A site located on nonmineral land and used for erecting a mill or reduction works, or for other uses reasonably incident to support of a mine. Millsites are limited to 5 acres and may be located either by metes and bounds or by legal subdivision.

Mine: An opening or excavation in the earth for extracting minerals.

Mineral: Any solid or fluid inorganic substance that can be extracted from the earth for profit.

Mineral Entry: The filing of a claim on public land to obtain the right to any 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 common varieties of sand, stone, gravel, pumice, pumicite, and clay, that are not obtainable under the mining or leasing laws but that can be acquired under the Mineral Materials Act of 1947, as amended.

Mineral Withdrawal: A formal order that withholds federal lands and minerals from entry under the Mining Law of 1872 and closes the area to mineral location (staking mining claims) and development.

Minimize: To reduce the adverse impact of an operation to the lowest practical level.

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 single mining claim may contain as many adjoining locations as the locator may make or buy. There are four categories of mining claims: lode, placer, millsite, and tunnel site.

Mining District: An area, usually designated by name, with described or understood boundaries, where minerals are found and mined under rules prescribed by the miners, consistent with the Mining Law of 1872.

Mitigation Measures: Methods or procedures that reduce or lessen the impacts of an action.

Monitoring: The periodic observation and orderly collection of data on 1) changing conditions of public land related to management actions and 2) the effects of implementing decisions.

Modification: A change in a Plan of Operations that requires some level of review by BLM because it exceeds what was described in the approved Plan of Operations.

Modification (oil and gas): A change to the provision of a lease stipulation either temporarily or for the term of the lease.

Monitoring Plan: the process of tracking the implementation of land use plan decisions.

Multiple Use: The management of the public lands and their various resource values so that they are utilized in the combination that will best meet the present and future needs of the American people; making the most judicious use of the lands for some or all of these resources or related services over areas large enough to provide sufficient latitude for periodic adjustments in use to conform to changing needs and conditions; the use of some lands 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 lands 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 greatest unit output.

-N-

National Ambient Air Quality Standards: The allowable concentrations of air pollutants in the ambient (public out-

door) air. National ambient air quality standards are based on the air quality criteria and divided into primary standards (allowing an adequate margin of safety to protect the public health) and secondary standards (allowing an adequate margin of safety to protect the public welfare). Welfare is defined as including (but not limited to) effects on soils, water, crops, vegetation, human-made materials, animals, wildlife, weather, visibility, climate, and hazards to transportation, as well as effects on economic values and on personal comfort and well-being.

National Environmental Policy Act (NEPA) of 1969: An Act that encourages productive and enjoyable harmony between man and his environment and promotes efforts to prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; enriches the understanding or the ecological systems and natural resources important to the Nation, and establishes the Council on Environmental Quality.

National Landscape Conservation System: A system of Congressional, Presidential, or other designated areas managed by the BLM, the components of which include National Monuments, National Conservation Areas, Wilderness Areas, Wilderness Study Areas, Wild and Scenic Rivers, National Historic Trails, National Scenic Trails, the California Desert Conservation Area, and the Headwaters Forest Reserve.

National Register of Historic Places: A register of districts, sites, buildings, structures, and objects, significant in American history, architecture, archaeology and culture, established by the "Historic Preservation Act" of 1966 and maintained by the Secretary of the Interior.

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) recreation—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.

Neotropical Migratory Birds: Birds that travel to Central America, South America, the Caribbean, and Mexico during the fall to spend the winter and then return to the United States and Canada during the spring to breed. These birds include almost half of the bird species that breed in the United States and Canada.

No Surface Occupancy: A fluid minerals leasing constraint that prohibits occupancy or disturbance on all or part of the lease surface to protect special values or uses. Lessees may exploit the fluid mineral resources under the leases restricted by this constraint through use of directional drilling from sites outside the area.

Non-metalliferous: Non-metallic minerals such as fluorspar, asbestos, and mica.

Notice: The notification a mining operator must submit to BLM of the intention to begin an operation that will disturb 5 acres or less a year within a mining claim or project area. The intent of a Notice is to permit operations with limited geographic disturbance to begin after a quick review for potential resource conflicts and to eliminate the need for federal action. A Notice requires no special forms, but an operator must submit specific information. BLM must complete its review of the Notice within 15 calendar days of its receipt unless more information is needed to determine if the operation would cause unnecessary or undue degradation.

Noxious Weeds: A plant species designated by Federal or State law as generally possessing one or more of the following characteristics: aggressive and difficult to manage; parasitic; a carrier or host of serious insects or disease; or nonnative, new, or not common to the United States.

Nutrient Cycling: The circulation of chemical elements such as nitrogen, oxygen, carbon, and phosphorus in specific pathways from the abiotic (not involving or produced by organisms) portions of the environment into organic substances in plants and animals and then back into abiotic forms.

-O-

Objective: A description of a desired condition for a resource. Objectives can be quantified and measured and, where possible, have established time frames for achievement.

Open: Generally denotes that an area is available for a particular use or uses. Refer to specific program definitions found in law, regulations, or policy guidance for application to individual programs.

Obligate: Essential, necessary, unable to exist in any other state, mode, or relationship.

Off-Highway Vehicle (off-road vehicle): Any motorized vehicle capable of, or designed for, travel on or immediately over land, water, or other natural terrain, excluding: (1) Any nonamphibious 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 in times of national defense emergencies.

Open Areas and Trails: Designated areas and trails where off-road vehicles may be operated, subject to operating regulations and vehicle standards or an area where all types of vehicle use is permitted at all times, subject to standards.

Open Pit Mining: A surface mining method in which overlying rock and soil are removed to expose an ore body, which is then drilled, blasted, and hauled from the pit.

Operator: Any person who has taken formal responsibility for the operations conducted on the leased lands.

Ore: A mineral deposit of high enough quality to be mined at a profit.

Outstanding: 1. Standing out among others of its kind; conspicuous; prominent; 2. superior to others of its kind; distinguished; excellent.

Outstandingly Remarkable (River) Values: Values among those listed in Section 1(b) of the Wild and Scenic Rivers Act are "scenic, recreational, geological, fish and wildlife, historical, cultural, or other similar values. . . ." Other similar values which may be considered include botanical, hydrological, paleontological, or scientific. Professional judgment is used to determine whether values exist to an outstandingly remarkable degree.

Overstory: The layer of foliage in a forest canopy.

-P-

Paleontological Resources (Fossils): The physical remains of plants and animals preserved in soils and sedimentary rock formations. Paleontological resources are important for understanding past environments, environmental change, and the evolution of life.

Paleontology: A science dealing with the life forms of past geological periods as known from fossil remains.

Parent Material (Soil): The unconsolidated more or less chemically weathered mineral or organic matter from which the upper level of the soil profile has developed.

Patent: The instrument by which the Federal Government conveys title to the public lands.

Perennial Stream: A stream that flows continuously during all seasons of the year.

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. Expressed in AUMs.

Permittee: Holder of a valid permit that authorizes certain uses of the public lands (e.g., for grazing).

Petroglyph: A figure, design, or indentation carved, abraded, or pecked into a rock.

pH: A measure of acidity or hydrogen ion activity. Neutral is pH 7.0. All values below 7.0 are acidic, and all values above 7.0 are alkaline.

Pictograph: A figure or design painted onto a rock.

Placer: An alluvial deposit of sand and gravel containing valuable minerals such as gold.

Placer Deposit: A mass of gravel, sand, or similar material resulting from the crumbling and erosion of solid rocks containing particles of gold or other valuable minerals that have been derived from rocks or veins.

Placer Mining: A method of mining in which the overburden is removed to expose gold-bearing gravel deposits beneath. The gravel is then sluiced to separate the gold.

Plan: A document that contains a set of comprehensive, long range decisions concerning the use and management of Bureau administered resources in a specific geographic area.

Planning Area: A geographical area for which land use and resource management plans are developed and maintained.

Planning Criteria: The standards, rules, and other factors developed by managers and interdisciplinary teams for their use in forming judgments about decision making, analysis, and data collection during planning. Planning criteria streamline and simplify the resource management planning actions.

Planning Decision (land use plan decision): establishes desired outcomes and actions needed to achieve them. Decisions are reached using the BLM planning process. When they are presented to the public as proposed decisions, they can be protested to the BLM Director. They are not appealable to Interior Board of Land Appeals.

Pleistocene Megafauna: Large mammals that inhabited North America before the end of the last glaciation and that became extinct. Such animals include the mammoth, mastodon, camel, giant sloth, *Bison antiquus*, and *Bison occidentalis*.

Population: Within a species, a distinct group of individuals that tend to mate only with members of the group. Because of generations of inbreeding, members of a population tend to have similar genetic characteristics.

Potential Natural Vegetation: The vegetation that would become established if all successional sequences were completed without interferences by man under the present environmental conditions.

Precambrian: Pertaining to the earliest era of geological history, extending from 4.5 billion to 540 million years ago and encompassing 7/8 of the earth's history. Just before the end of the Precambrian, complex multicellular organisms, including animals, evolved.

Precious Metal: A general term for gold, silver, or any of the minerals of the platinum group.

Pre-commercial thinning: A thinning that does not yield trees of commercial value, usually designed to reduce stocking in order to concentrate growth on the more desirable trees.

Prehistoric: Refers to the period wherein Native American cultural activities took place which were not yet influenced by contact with historic nonnative culture(s).

Prescribed Fire: The introduction of fire to an area under regulated conditions for specific management purposes.

Prevention of Significant Deterioration: A regulatory program based not on the absolute levels of pollution allowable in the atmosphere but on the amount by which a legally defined baseline condition will be allowed to deteriorate in a given area. Under this program, geographic areas are divided into three classes, each allowing different increases in nitrogen dioxide, particulate matter, and sulfur dioxide concentrations.

Prey Base: Populations and types of prey species available to predators.

Primitive and Unconfined Recreation: Non-motorized, non-mechanized and undeveloped types of recreational activities.

Project Plan: Detailed survey and design plan.

Project Area: The area of land upon which an operator conducts mining operations, including the area needed for building or maintaining of roads, transmission lines, pipelines, or other means of access.

Protest: Application for review by a higher administrative level.

Public Land: Land or interest in land owned by the United States and administered by the Secretary of the Interior through the BLM, except lands located on the Outer Continental Shelf, and land held for the benefit of Indians, Aleuts, and Eskimos.

-Q-

Quarry: An open or surface working, usually for the extraction of stone, slate, limestone, etc.

Quarry Site: Place where minerals occur which were a source of raw material for prehistoric/historic industries.

-R-

Rangeland: Land used for grazing by livestock and big game animals on which vegetation is dominated by grasses, grass-like plants, forbs, or shrubs.

Raptor: Bird of prey with sharp talons and strongly curved beaks such as hawks, owls, vultures, and eagles.

Reasonably Foreseeable Development 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.

Reclamation: The process of converting disturbed land to its former use or other productive uses.

Record of Decision: A document signed by a responsible official recording a decision that was preceded by the preparing of an environmental impact statement.

Relict: A remnant or fragment of the vegetation of an area that remains from a former period when the vegetation was more widely distributed.

Reserves (mineral): Known mineral deposits that are recoverable under present conditions but are as yet undeveloped.

Reservoir (oil and gas): A naturally occurring, underground container of oil and gas, usually formed by deformation of strata and changes in porosity.

Resource Advisory Council: A council established by the Secretary of the Interior to provide advice or recommendations to BLM management.

Resource Management Plan: A land use plan as prescribed by the Federal Land Policy and Management Act which establishes, for a given area of land, land-use allocations, coordination guidelines for multiple-use, objectives and actions to be achieved.

Resource Reserve Allotment: A unit of public land that will not have term grazing permits issued. Such an allotment would only be grazed on a temporary nonrenewable basis. The use of these allotments would be to provide temporary grazing to rest other areas following wildfire, habitat treatments, or to allow for more rapid attainment of rangeland health. The allotment must be of sufficient size to be managed as a discrete unit. Resource Reserve Allotments should be distributed throughout the planning area.

Retort: A vessel used for the distillation of volatile materials.

Revision: The process of completely rewriting the land use plan due to changes in the planning area affecting major portions of the plan or the entire plan.

Right-of-way: A permit or an easement which authorizes the use of public lands for certain specified purposes, commonly for pipelines, roads, telephone lines, electric lines, reservoirs, etc.; also, the lands covered by such an easement or permit.

Right-of-way Corridor: A parcel of land that has been identified by law, Secretarial order, through a land use plan or by other management decision as being the preferred location for existing and future right-of-way grants and suitable to accommodate one type of right-of-way or one or more rights-of-way which are similar, identical or compatible.

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 dependent on free water in the soil.

River Designation: The process whereby rivers are added to the National Wild and Scenic Rivers System by an act of Congress or by administrative action of the Secretary of the Interior with regard to state-designated rivers under Section 2(a)(ii) of the Wild and Scenic Rivers Act.

Roadless: Refers to the absence of roads which have been improved and maintained by mechanical means to insure relatively regular and continuous use. A way maintained solely by the passage of vehicles does not constitute a road.

Rock Art: Petroglyphs or pictographs.

Runoff: The water that flows on the land surface from an area in response to rainfall or snowmelt.

-S-

Saleable Minerals: Common variety minerals on the public lands, such as sand and gravel, which are used mainly for construction and are disposed of by sales or special permits to local governments.

Saline: Containing high concentrations of salt.

Salmonid: Any fish of the Salmonidae family, including salmon and trout.

Scale: Refers to the geographic area and data resolution under examination in an assessment or planning effort.

Scenic Quality: The degree of harmony, contrast and variety within a landscape.

Scenic River: A river or section of a river that is free of impoundments and whose shorelines are largely undeveloped but accessible in places by roads.

Scoping: The process of identifying the range of issues, management concerns, preliminary alternatives, and other components of an environmental impact statement or land-use planning document. It involves both internal and public viewpoints.

Seasonal Restriction: A fluid minerals leasing constraint that prohibits surface use during specified time periods to protect identified resource values. The constraint does not apply to the operation and maintenance of production facilities unless analysis demonstrates that such constraints are needed and that less stringent, project-specific constraints would be insufficient.

Section 7 Consultation: The requirement of Section 7 of the Endangered Species Act that all federal agencies consult with the U.S. Fish and Wildlife Service or the National Marine Fisheries Service if a proposed action might affect a federally listed species or its critical habitat.

Section 106 Compliance: The requirement of Section 106 of the National Historic Preservation Act that any project funded, licensed, permitted, or assisted by the Federal Government be reviewed for impacts to significant historic properties and that the State Historic Preservation Officer and the Advisory Council on Historic Preservation be allowed to comment on a project.

Sediment Yield: The amount of sediment produced in a watershed, expressed in tons, acre feet, or cubic yards, of sediment per unit of drainage area per year.

Sediment: Soil, rock particles and organic or other debris carried from one place to another by wind, water or gravity.

Sedimentary Rock: Rock resulting from consolidation of loose sediment that has accumulated in layers.

Sedimentation: The process or action of depositing sediment.

Segregation: Any act such as a withdrawal or exchange that suspends the operation of the public land laws.

Sensitive Species: All species that are under status review, have small or declining populations, live in unique habitats, or need special management. Sensitive species include threatened, endangered, and proposed species as classified by the Fish and Wildlife Service and National Marine Fisheries Service.

Seral: Pertaining to the successional stages of biotic communities.

Shaft: A vertical or inclined opening to an underground mine.

Shrub: A low, woody plant, usually with several stems, that may provide food and/or cover for animals.

Significant: An effect that is analyzed in the context of the proposed action to determine the degree or magnitude of importance of the effect, either beneficial or adverse. The degree of significance can be related to other actions with individually insignificant but cumulatively significant impacts.

Slash: The branches, bark, tops, cull logs and broken or uprooted trees left on the ground after logging.

Slope: The degree of deviation of a surface from the horizontal.

Sluiced: Refers to a mining method that uses a long, inclined trough or launder containing in its bottom, riffles that provide a lodging place for heavy minerals in ore concentration. The material to be concentrated is carried down through the sluices on a current of water. Sluice boxes are widely used in placer operations for concentrating such minerals as gold and platinum from stream gravels.

Social Science: The study of society and of individual relationships in and to society, generally including one or more of the academic disciplines of sociology, economics, political science, geography, history, anthropology, and psychology.

Soil Productivity: The capacity of a soil to produce a plant or sequence of plants under a system of management.

Soil Texture: The relative proportions of the three size groups of soil grains (sand, silt, and clay) in a mass of soil.

Solitude: (1) the state of being alone or remote from others; isolation; (2) a lonely or secluded place.

Source Water Delineation and Assessment Reports: Major component of the Montana Source Water Protection Plan defining Source Water Protection Areas. The reports attempt to delineate an inventory zone whose size and areal extent are determined by the type of water source, susceptibility to contamination, and characteristics of the aquifer, including flow characteristics of the groundwater.

Source Water Protection Plan: A management plan, usually developed by local communities, that addresses public water system concerns based on information contained within Source Water Delineation and Assessment Reports.

Spawning Gravels: Stream-bottom gravels where fish deposit and fertilize their eggs. The covering of these gravels with silt can block the supply of oxygen to the eggs or serve as a cementing agent to prevent fry from emerging.

Special Recreation Management Area: Areas which require explicit recreation management to achieve recreation objectives and provide specific recreation opportunities.

Special Status Species: Includes proposed species, listed species, and candidate species under the ESA; State-listed species; and BLM State Director-designated sensitive species (see BLM Manual 6840 - Special Status Species Policy).

Species Diversity: The number, different kinds of, and relative abundances of species present in a given area.

Standard: A description of the physical and biological conditions or degree of function required for healthy, sustainable lands (e.g., land health standards).

Stipulations: Requirements that are part of the terms of a mineral lease. Some stipulations are standard on all Federal leases. Other stipulations may be applied to the lease at the discretion of the surface management agency to protect valuable surface resources and uses.

Strategic Plan: A plan that establishes the overall direction for the BLM. This plan is guided by the requirements of the Government Performance and Results Act of 1993, covers a 5-year period, and is updated every 3 years. It is consistent with FLPMA and other laws affecting the public lands.

Stratigraphy: The arrangement of strata, especially as to geographic position and chronologic order of sequence.

Stream Reach: A specified length of a stream or channel.

Structure (Stream Channel): Any object, usually large, in a stream channel that controls water movement.

Structure (of forest vegetation): The horizontal and vertical distribution of plants in a stand, including height, diameter, crown layers, and stems of trees, shrubs, herbaceous understory, snags and coarse woody debris.

Substrate: The mineral or organic material that forms the bed of a stream; the base upon which an organism lives; the surface on which a plant or animal grows or is attached.

Substrate Embeddedness: An estimate of the surface area of the large substrate types that are covered with fine substrate particles (< 2mm diameter).

Sustainability: The ability of an ecosystem to maintain ecological processes and functions, biological diversity, and productivity over time.

Sustained Yield: Maintenance of an annual or regular periodic output of a renewable resource from public land consistent with the principles of multiple use.

-T-

Tailings: The waste matter from ore after the extraction of economically recoverable metals and minerals.

Take: As defined by the Endangered Species Act, "to harass, harm, pursue, hunt, shoot, wound, kill, capture, or collect, or attempt to engage in any such conduct."

Terms and Conditions: Measures contained in livestock grazing permits and leases, which are determined by the authorized officer to be appropriate to achieve management and resource condition objectives for the public lands and other lands administered by the BLM, and to ensure conformance with Fundamentals of rangeland health and Standards and guidelines for grazing administration.

Terrestrial Species: Ground-dwelling plants and animals.

Thermal Cover: Vegetation or topography that prevents radiational heat loss, reduces wind chill during cold weather, and intercepts solar radiation during warm weather.

Threatened Species: Any plant or animal species defined under the Endangered Species Act as likely to become endangered within the foreseeable future throughout all or a significant portion of its range; listings are published in the Federal Register.

Thrust Fault: A reverse fault that is characterized by a low angle of inclination with reference to a horizontal plane.

Timber Database: Commercial forestland judged to be environmentally and economically suitable and available for the continuous production of timber; the land from which the allowable cut is calculated and harvested.

Tools: Something that helps to accomplish the stated goal or action for a resource/resource use or program. Tools include: timing, duration of grazing, forage utilization, grazing rotation, deferment of grazing, stubble height, bank alteration, and structural features.

Total Maximum Daily Load: An estimate of the total quantity of pollutants (from all sources: point, nonpoint, and natural) that may be allowed into waters without exceeding applicable water quality criteria.

Traditional Lifeway Values: Values that are important for maintaining a group's traditional system of religious belief, cultural practice, or social interaction. A group's shared traditional lifeway values are abstract, nonmaterial, ascribed ideas that cannot be discovered except through discussions with members of the group. These values may or may not be closely associated with definite locations. Traditional lifeway values sometimes imbue cultural resources with significance. They can be identified through consultation and considered through public participation during planning and environmental review. The BLM does not manage people's values, beliefs, or social systems.

Tundra: Treeless arctic and alpine areas where cover may consist of bare ground, grasses, sedges, forbs, dwarf shrubs, mosses, or lichens.

-U-

Ungulates: Hoofed animals, including ruminants but also horses, tapirs, elephants, rhinoceroses, and swine.

Uplands: Lands at higher elevations than alluvial plains or low stream terraces; all lands outside the riparian-wetland and aquatic zones.

User Day: Any calendar day, or portion thereof, for each individual accompanied or serviced by an operator or permittee on the public lands or related waters; synonymous with passenger day or participant day.

Utilization (rangeland): The proportion of the current year's forage production that is consumed or destroyed by grazing animals. Utilization is usually expressed as a percentage.

-V-

Valid Existing Rights: Locatable mineral development rights that existed when the Federal Land Policy and Management Act was enacted on October 21, 1976. Some areas are segregated from entry and location under the Mining Law to protect certain values or allow certain uses. Mining claims that existed as of the effective date of the segregation may still be valid if they can meet the test of discovery of a valuable mineral required under the Mining Law. Determining the validity of mining claims located in segregated lands

requires BLM to conduct a validity examination and is called a "valid existing rights" determination.

Vegetation Community: An assemblage of plant populations in a common spatial arrangement.

Vegetation Manipulation: Alteration of vegetation by using fire, plowing, or other means.

Vegetation Type: A plant community with distinguishable characteristics described by the dominant vegetation present.

Vein: A well-defined, typically tabular zone or belt of mineral-bearing rock confined between nonmineralized rock.

Viable: Capable of sustaining a healthy and reproducing population over a long period of time.

Visual Resources: The visible physical features of a landscape (topography, water, vegetation, animals, structures, and other features) that constitute the scenery of an area.

-W-

Waiver (oil and gas): A permanent exemption to a lease stipulation.

Waste Rock: Barren rock at a mine or material that is too low in grade to be of economic value.

Water Quality: The chemical, physical, and biological characteristics of water with respect to its suitability for a particular use.

Water Quality Restoration Plans: A comprehensive plan developed in conjunction with MTDEQ, local watershed groups, and numerous agencies and entities to address and establish water quality goals, Total Maximum Daily Loads, restoration strategies, and monitoring.

Water Table: The surface in a groundwater body where the water pressure is atmospheric. It is the level at which water stands in a well that penetrates the water body just far enough to hold standing water.

Watershed: A geomorphic area of land and water within the confines of a drainage divide. The total area above a given point on a stream that contributes flow at that point.

Wetlands: Areas that are inundated or saturated by surface or ground water often and long enough to support and under normal circumstances do support a prevalence of vegetation typically adapted for life in saturated soil conditions.

Wild Horses and Burros: All unbranded and unclaimed horses and burros using public lands as all or part of their habitat.

Wild, Scenic or Recreational River: The three classes of what is traditionally referred to as a “Wild and Scenic River.” Designated river segments are classified as wild, scenic and/or recreational, but the segments cannot overlap.

Wild and Scenic Study River: Rivers identified in Section 5 of the Wild and Scenic Rivers Act for study as potential additions to the National Wild and Scenic Rivers System. The rivers shall be studied under the provisions of Section 4 of the Wild and Scenic Rivers Act.

Wild River: Those rivers or sections of rivers that are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted. These represent vestiges of primitive America.

Wildcat, or Exploration, Well: A well drilled in the area where there is no oil or gas production.

Wilderness Characteristics: Key characteristics of a wilderness listed in section 2(c) of the “Wilderness Act” of 1964 and used by BLM in its wilderness inventory. These characteristics include size, naturalness, outstanding opportunities for solitude, outstanding opportunities for primitive and unconfined type of recreation, and special features.

Wilderness Study Area: 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.

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.

Wildfire: Any unwanted wildland fire.

Wildland Fire: Any nonstructure fire, other than prescribed fire, that occurs in the wildland.

Wildland Fire Situation Analysis: A decision-making process that evaluates alternative management strategies against selected safety, environmental, social, economical, political, and resource management objectives as selection criteria.

Wildland Urban Interface (WUI): The line, area or zone where structures and other human developments meet or intermingle with undeveloped wildland or vegetative fuels.

Winter Range: Range that is grazed during winter.

Withdrawal: An action that restricts the use of public lands by removing them from the operation of some or all of the public land or mining laws.

Woodland: A forest community occupied primarily by non-commercial species such as juniper, mountain mahogany, or quaking aspen groves; all western juniper forest lands are classified as woodlands, since juniper is classified as a noncommercial species.

APPENDIX A

WESTERN MONTANA STANDARDS FOR RANGELAND HEALTH AND GUIDELINES FOR LIVESTOCK GRAZING

Standards for Rangeland Health and Guidelines for Livestock Grazing

Introduction

The following policies, practices, and procedures developed in concert with the Western Montana RAC will be implemented in order to ensure that Bureau of Land Management (BLM) lands are healthy. The concept of healthy rangelands expresses the BLM's desire to maintain or improve productivity of plant, animal (including livestock), soil, and water resources at a level consistent with the ecosystem's capability.

In order to meet society's needs and expectations for sustained production and conservation of natural resources from BLM rangelands, use of these lands must be kept in balance with the land's ability to sustain those uses. Identifying that balance requires an understanding and application of ecological principles that determine how living and non-living components of rangelands interact. Recognition of the inter-dependence of soil, water, plants, and animals (including livestock) is basic to maintaining healthy rangelands and is the key element in BLM's Standards for Rangeland Health and Guidelines for Livestock Grazing.

Standards describe desired ecological conditions that the BLM intends to attain in managing BLM lands, whereas Guidelines define practices and procedures that will be applied to achieve Standards. While Standards will initially be applied to grazing, it is the BLM's intent to eventually apply these Standards to all rangeland uses that have the ability to affect or be affected by the ecological characteristics of rangelands.

Fundamentals of Rangeland Health

The BLM has defined four Fundamentals of Rangeland Health that are basic ecological principles underlying sustainable production of rangeland resources. These Fundamentals are embodied in the BLM's Grazing Regulations (43 CFR, Part 4100), which became effective in August of 1995. These four Fundamentals of Rangeland Health served as the basis for developing Standards for Rangeland Health and are as follows:

1. Watersheds are in, or are making significant progress toward, properly functioning physical condition, including their upland, riparian/wetland, and aquatic components; soil and plant conditions support water infiltration, soil moisture storage, and release of water that are

in balance with climate and landform, and maintain or improve water quality, water quantity, and timing and duration of flow.

2. Ecological processes, including the hydrologic cycle, nutrient cycles, and energy flow, are maintained, or there is significant progress toward their attainment, in order to support healthy biotic populations and communities.
3. Water quality complies with state water quality standards and achieves, or is making progress toward achieving, established BLM management objectives, such as meeting wildlife needs.
4. Habitats are, or are making significant progress towards being, restored or maintained for Federal threatened and endangered species, Federal proposed, Federal candidate, other special status species, native species, and for economically valuable game species and livestock.

By developing Standards and Guidelines based on the Fundamentals listed above, it is the BLM's intent to achieve the following:

1. Promote healthy, sustainable rangeland ecosystems that produce a wide range of public values such as wildlife habitat, livestock forage, recreation opportunities, wild horse and burro habitat, clean water, clean air, etc.
2. Accelerate restoration and improvement of public rangelands to properly functioning condition, where appropriate.
3. Provide for the sustainability of the western livestock industry and communities that are dependent upon productive, healthy rangelands.
4. Ensure that BLM land users and stakeholders have a meaningful voice in establishing policy and managing BLM rangelands.

Standards and Guidelines

Standards are descriptions of the desired condition of the biological and physical components and characteristics of rangelands. Standards:

- are measurable and attainable;
- comply with various Federal and state statutes, policies, and directives applicable to BLM rangelands; and
- establish goals for resource condition and parameters for management decisions.

Indicators are features of an ecosystem that can be measured or observed in order to gain an understanding of the relative condition of a particular landscape or portion of a landscape. Indicators will be used by the rangeland man-

ager to determine if Standards are being met. The indicators proposed for use are commonly accepted and used by members of the rangeland management profession in monitoring rangelands. Methods and techniques for evaluating these indicators are also commonly available. In using these terms, it should be recognized that not every indicator applies equally to every acre of land or to every ecological site. Additional indicators not listed below may need to be developed for some rangelands depending upon local conditions.

Similarly, because of natural variability, extreme degradation, or unusual management objectives, discretion will be used in applying Standards. Judgments about whether a site is meeting or failing to meet a Standard must be tempered by a knowledge of the site's potential. Site potential is determined by soil, geology, geomorphology, climate, and landform. Standards must be applied with an understanding of the potential of the particular site in question, as different sites have differing potentials.

Guidelines are management approaches, methods, and practices that are intended to achieve a Standard.

Guidelines:

- typically identify and prescribe methods of influencing or controlling specific public land uses;
- are developed and applied consistent with the desired condition and within site capability; and
- may be adjusted over time.

It should be understood that these Standards and Guidelines are to be applied in making specific grazing management decisions. However, it should also be understood that they are considered the minimum conditions to be achieved. Flexibility must be used in applying these policy statements because ecosystem components vary from place to place and ecological interactions may be different.

Standards and Guidelines used on BLM Land in the Dillon Field Office are described in the following pages.

STANDARD #1:

Uplands are in proper functioning condition.

This will be determined by:

- Erosional flow patterns;
- Surface litter;
- Soil movement by water and wind;
- Soil crusting and surface sealing;
- Compaction layer;
- Rills;
- Gullies;
- Cover amount; and
- Cover distribution

Biotic environment

- Community diversity;
- Community structure;
- Exotic plants;
- Photosynthesis activity;
- Plant status;
- Seed production;
- Recruitment; and
- Nutrient cycle.

The determination of rangeland health should be based on the evaluation of three criteria: degree of soil stability and watershed function, nutrient cycles and energy flows, and available recovery mechanisms.

Indicators to assess soil stability and watershed function relate to two fundamental processes of watershed degradation: 1) Soil erosion by wind and water; and 2) infiltration or capture, and utilization of precipitation. Indicators such as rills, gullies, flow patterns, pedestaling and compaction, may be used to assess watershed condition.

Indicators that can be used to evaluate nutrient cycles and energy flows relate to distribution of plants, litter, roots, and photosynthetic period; i.e. plant community diversity and structure, exotic plants, photosynthetic activity and plant status.

Recovery mechanisms or plant demographic indicators may include increasing vegetative cover, plant vigor, kind and number of seedlings, and changes in plant age distribution.

Physical environmental features of a proper functioning watershed are indicated by:

- Little evidence of soil erosion by wind and/or water;
- Rills, gullies, pedestaling, flow patterns are not present (significant);
- Surface sealing and soil crusting is not evident;
- Plant (ground) cover and litter accumulation is adequate to protect site; and
- Natural disturbance events are integral to proper ecosystem function.

Biotic environment features of a proper functioning watershed are indicated by:

- Variety and number of plant life-forms (grass, forb, shrub, tree, succulent) across the site;
- Plants exhibit a good diversity of size, height, distribution, and age/class well distributed;
- Exotic plants, weeds are absent or sparse on site;
- Plants display normal growth and root development;
- Photosynthesis activity occurs throughout the site;
- Plants are alive, productive with well developed root systems;

- Seed stalks/seed adequate for stand maintenance for all life-forms;
- Litter distribution and incorporation is uniform across site; and
- Nutrient/energy cycle mechanisms are adequate for plant maintenance.

STANDARD #2:

Riparian and wetland areas are in proper functioning condition.

This will be determined by:

Hydrologic

- Flood plain inundated in relatively frequent events (1-3 years);
- Amount of altered streambanks;
- Sinuosity, width/depth ratio, and gradient are in balance with the landscape setting (i.e., landform, geology, and bioclimatic region);
- Riparian zone widening; and
- Upland watershed not contributing to riparian degradation.

Erosion Deposition

- Flood plain and channel characteristics; i.e., rocks, coarse and/or woody debris adequate to dissipate energy;
- Point bars are vegetating;
- Lateral stream movement is associated with natural sinuosity;
- System is vertically stable;
- Stream is in balance with water and sediment being supplied by the watershed (i.e., no excessive erosion or deposition); and
- Bare ground.

Vegetation

- Reproduction and diverse age structure of vegetation;
- Diverse composition of vegetation;
- Species present indicate maintenance of riparian soil moisture characteristics;
- Streambank vegetation is comprised of those plants or plant communities that have deep binding root masses capable of withstanding high streamflow events;
- Utilization of trees and shrubs;
- Riparian plants exhibit high vigor;
- Adequate vegetative cover present to protect banks and dissipate energy during high flows; and
- Plant communities in the riparian area are an adequate source of large woody debris.

Broadly, "proper functioning condition" may be defined as the ability of a stream to perform its riparian functions. These

functions include sediment filtering, bank building, water storage, aquifer recharge, and hydrologic energy dissipation.

No single factor or characteristic of a riparian site can provide a complete picture of either that site's condition or the direction of its successional change. Things considered "negative" in traditional evaluations of ecological sites may not be such for riparian sites. For example, the percent of exposed soil surface, which often reflects overgrazing or erosion on upland sites, may be a result of normal riparian activity; sediment deposition resulting after spring runoff, or a high water event.

Hydrology/Streambanks

The hydrology of a riparian area is perhaps its most important characteristic. Changes in hydrology may result in short and long-term vegetative changes. In some situations, construction (rip rap, roads, railroads, etc.) has influenced the streambanks and stability has been increased over the natural levels. These streambanks may eventually lose their stability, and become altered. This generally occurs if the problems which caused the weak streambanks have not been remedied. Also, constructed streambanks (especially those with rip rap) will often disrupt the normal energy dissipation of the stream and eventually the meandering of a stream can result in the erosion of streambanks downstream.

Lateral Cutting

Lateral cutting is indicated by new stream-caused bank disruption along the outside of stream curves, and much less commonly along the straight portions of a stream. A high degree of active lateral cutting can indicate a degraded watershed.

Altered Streambanks

In many instances, land uses have degraded streambanks, accelerating stream movement across the flood plain. We define altered streambanks as those having impaired structural integrity (strength or stability) due to human-caused activities such as exposed soil surfaces from cattle trails and wallows, hiking and ATV trails, roads, logging skid trails, mining activities, etc.

Deep Binding Root Mass

Properly functioning streambanks are "armored" by both vegetation and bank rock materials (e.g. boulders and cobbles). There have been few studies documenting the depth and extent of root systems of various plant species. Despite this lack of documented evidence, some generalizations can be made. All tree and shrub species are considered to have deep, binding root masses. Among riparian herbaceous species, the first rule is that annual plants do not

have deep, binding root mass qualities. Perennial species offer a wide range of root mass qualities. Some rhizomatous species, such as the deep-rooted sedges, are excellent streambank stabilizers. Other rhizomatous species such as Kentucky bluegrass, have only shallow root systems and are poor streambank stabilizers. Still others such as Baltic rush, appear to be intermediate in their ability to stabilize banks.

Downcutting

Active downcutting of a stream is often hard to recognize. Perched wetland vegetation and streambank features, plus the lack of a separate layer of channel bottom materials (i.e., the stream flows directly on the substrate material), can be clues to downcutting. A stream is incised when downcutting of the stream has resulted in a width to depth ratio so low that average 2-year floods do not come out of the banks.

Soils/Geology

The soils and geology (landform and parent material) of a riparian site influence how the site reacts to disturbances and changes over time. Changes in physical characteristics are often (but not always) more difficult to remedy through management actions than are vegetative changes. The depth and texture of soil, of a riparian site, influences the capacity of that site to hold water (act as a sponge) for prolonged late season flows and support desired vegetation.

Bare Ground

Exposed soil surface is important in evaluating the health of riparian areas for several reasons:

- Vulnerability to erosion;
- It may contribute to, as well as reflect, streambank deterioration;
- The more exposed soil, the less vegetation is available for soil protection and sediment entrapment; and
- Exposed soil provides opportunity for invasion by noxious weeds and undesirable species.

Vegetation

Because they are more visible than soil or hydrological characteristics, plants may provide early indications of riparian health.

Reproduction of Trees and Shrubs

One of the clearest indicators of ecological stability, and subsequent health, is the presence of all age classes (seedling, sapling, pole, mature, decadent, and dead) of tree and shrub species where the potential exists.

Dead and Decadent Trees and Shrubs

The amount of dead and decadent material in trees and shrubs is another indicator of the overall "health" of riparian areas. Large amounts of decadent and dead woody material may indicate fluctuations in climate, such as severe winter temperatures, spring freezes, or insect infestations. In all cases, the overall biotic health is effected and may have implications on physical features of a stream such as streambank integrity, channel incisement, and lateral cutting.

Utilization of Trees and Shrubs

Heavy utilization by livestock and/or wildlife can prevent the regeneration or establishment of woody species and thus block succession of the plant community toward a later seral stage. As with herbaceous species, excessive use of these woody species may cause their elimination from the site and their replacement by disturbance-induced species or undesirable invaders.

Plant Composition

The presence of disturbance-induced herbaceous plants (either native or introduced) may indicate that the site could be more healthy and thus is not performing its optimum riparian functions. Most of these species provide less soil holding and sediment trapping capability, and less desirable forage for livestock and wildlife.

STANDARD #3:

Water quality meets State standards.

This will be determined by:

- dissolved oxygen concentration;
- pH;
- turbidity;
- temperature;
- fecal coliform;
- sediment;
- color;
- toxins; and
- other parameters: ammonia, barium, boron, chlorides, chromium, cyanide, endosulfan, lindane, nitrates, phenols, phosphorus, sodium, sulfates, etc.

When discussing rangeland health, water quality is a relative term which must be associated with water-use to become meaningful. Since the beginning of time, natural processes have influenced the chemical, physical, and biological characteristics of water. The natural quality of water varies from place to place, with the season of the year, with the climate, and with the kind of rock and soil through or-

ganic materials such as roots and leaves, and reacts with living things such as microscopic organisms like plankton and algae. Natural water quality is changed by stream sediments; it is modified by temperature, soil bacteria, and evaporation. These and other factors determine the quality of nature's "impure" water.

Water quality criteria specify concentrations of water constituents which, if not exceeded, are expected to support an aquatic ecosystem suitable for higher uses of water. Water quality criteria are intended to protect essential and significant life in water, as well as the direct users of water, and also to protect life that is dependent on life in water for its existence.

Some of the common indicators of water quality are:

- Dissolved oxygen concentration (DO) is a function of temperature of the water, altitude and barometric pressure. The ability of water to hold oxygen decreases with the increases in temperature, altitude and dissolved solids. This is important in fish spawning areas where DO levels must be maintained at specific levels for good growth and general well being of fish and associated biota.
- pH (hydrogen-ion concentration) is an indicator of acidity and/or alkalinity and an index of hydrogen-ion activity. Lower values indicated acid, higher values indicated alkaline. Fresh water organisms function properly if the pH ranges from 6.0 to 9.0 units. pH concentrations below the recommended level are toxic to fish and other aquatic organisms.
- Turbidity is the disturbance of water due to the presence of suspended matter such as clays, silt, organic matter, and various effluents. It is the expression of the optical property of water. Excess turbidity reduces light penetration, which reduces photosynthesis by phytoplankton, and submerged vegetation.
- Temperature is an important function which affects aquatic productivity. Temperature changes may result from natural climatic conditions due to man's manipulation of the riparian environment. Temperature is a function of location, season, time, duration of flow, depth, and many other variables. Aquatic biota are adapted to certain thermal conditions existing in the habitat for their survival and well being. The interrelationship between these conditions is so great that small changes in temperature may have far-reaching effects.
- Coliform groups include bacteria organisms in their natural habitat and sources, i.e., feces, soil, water, vegetation, etc. Fecal coliform may be an indicator of recent fecal pollution. Other coliform organisms may be the result of plant and soil runoff water.
- Sediment is a measure of suspended sand, silt, colloid and organic matter which will settle in time to the stream

bottom. They originate from sources such as erosion, mine waste, plowed fields, construction projects, natural erosion, or vegetative manipulation. They may affect fisheries by covering the bottom of the stream or lake with a blanket of material that destroys the bottom fauna or spawning grounds for fish.

- Color is attributed to substances in solution after the suspensoid have been removed. It may be organic or inorganic substances that affect photosynthesis activity in the water. Organic substances include humic materials, peat, aquatic plants, etc. Inorganic sources include iron and manganese compounds, chemicals, industrial waste, etc.
- Toxins are those compounds or substances which are found in by-products or waste of the various industries or activities that make their way into water sources which produce a variety of effects of fish or alter the biological productivity of water sources.

Acceptable water quality is indicated by:

- Dissolved oxygen concentrations – DO concentrations are being maintained at or near saturation levels.
- pH concentrations are at or near recommended State levels.
- Turbidity readings do not exceed Jackson Turbidity Unit readings for the water source.
- Water temperature readings meet State standard preferred for good growth and productivity.
- Coliform – organisms of the coliform group do not exceed State standard.
- Sediment – water normally contains suspended solids that do not exceed State standard.
- Color – water color does not limit or significantly restrict photosynthesis processes.
- Toxins – levels are in conformance with State standard.

STANDARD #4:

Air quality meets State standards.

This will be determined by:

Section 176 (c) of the Clean Air Act, which states that activities of all Federal agencies must conform to the intent of the appropriate State Air Quality Implementation Plan and not:

- Cause or contribute to any violation of ambient air quality standards;
- Increase the frequency of any existing violations; and
- Impede the State's progress in meeting its air quality goals.

Montana Air Quality Standards

PM-10	50 ug/m3 annual ave. 150 ug/m3 24-hr. ave.*
Sulfur Dioxide	0.02 ppm annual ave. 0.10 ppm 24-hr. avg.* 0.50 ppm 1-hr. avg.**
Carbon Monoxide	23 ppm hourly avg.* 9.0 ppm 8-hr avg.*
Nitrogen Dioxide	0.05 ppm annual avg. 0.30 ppm hourly avg.*
Ozone	0.10 ppm hourly avg.*
Lead	1.5 ug/m3 90 day avg.
Foliar Fluoride	35 ug/g grazing season avg. 50 ug/g monthly avg.
Settled Particulate Matter (dustfall)	10mg/m2 30-day avg.
Hydrogen Sulfide	0.05 ppm hourly avg.*
Visibility	particle scattering coefficient of 3×10^{-5} per meter annual average.***

* Not to be exceeded more than once per year.

** Not to be exceeded more than 18 times per year.

*** Applies to PSD mandatory Class I areas.

The Clean Air Act established the Prevention of Significant Deteriorations (PSD) regulations which set limits for increases in ambient pollution levels and established a system for preconstruction review of new major air pollution sources. Three PSD classes have been established: Class I, Class II, and Class III. Class I areas consist of all international parks, national parks greater than 5,000 acres, national wilderness areas greater than 5,000 acres, and national wildlife refuges which existed on August 7, 1977, when the amendment was signed into law.

Protection of air quality is provided to Class I areas by severely limiting the amount of additional human-caused air pollution which can be added. All other areas, except non-attainment areas, are classified as Class II in which a greater amount of additional human-caused pollution may be added. In no case, however, may pollutant concentrations exceed the National or State ambient air quality standards.

STANDARD #5:

Provide habitat as necessary, to maintain a viable and diverse population of native plant and animal species, including special status species.

This will be indicated by:

- Plants and animals are diverse, vigorous and reproducing satisfactorily, noxious weeds are absent or insignificant in the overall plant community;

- Spatial distribution of species is suitable to ensure reproductive capability and recovery;
- A variety of age classes are present;
- Connectivity of habitat or presence of corridors prevents habitat fragmentation;
- Diversity of species (including plants, animals, insects, and microbes) are represented; and
- Plant communities in a variety of successional stages are represented across the landscape.

BLM is charged with managing and developing habitat for a large variety of fish, wildlife, and special status species of plants. Basic habitat considerations can be categorized as including food, water, cover, and space. Specific habitat requirements often vary depending on what geographic area is being considered, species which are present, and the nature and extent of other uses which may be competing. A review of components of the above listed standards (Proper Functioning Riparian-Wetland areas, Uplands and Water Quality) will provide much of the requirements needed to achieve, fish, wildlife, and special status plant habitat.

Guidelines**GUIDELINE #1:**

Manage grazing to maintain or improve watershed vegetation, biodiversity, and flood plain function. Maintain or improve riparian vegetative cover and structure to trap and hold sediments during run-off events to rebuild streambanks, restore/recharge aquifers, and dissipate flood energy. Promote deep-rooted herbaceous vegetation to enhance streambank stability. Where potential for woody shrub species (willows, dogwood, etc.) exists, promote their growth or expansion to aid in controlling access to streambanks, and to provide wildlife cover.

GUIDELINE #2:

Pastures and allotments will be periodically inventoried to determine their relative suitability for livestock grazing. Topography, slope, distance from water, or vegetation habitat types, wildlife, channel types, soil types, and other resource values must be considered when determining grazing potential. Specific areas could be excluded from grazing, fenced into separate management pastures, or managed more intensively.

GUIDELINE #3:

Management strategies for livestock grazing should produce sustainable hydrological, vegetative, and soil conditions. Thresholds for acceptable streambank alteration and vegetation utilization can be site-specific, and they should be the basis for establishing terms and conditions for allotments. These thresholds should be consistent with standards and

result from application of scientifically acceptable hydrological and biological principles. Each allotment must have a monitoring plan, and monitoring results should be critical input to grazing system design. Long-term analysis of trend shall be the primary monitoring information. Monitoring plans should address rangeland standards including hydrologic, vegetative, and soil conditions.

Long-term and short-term monitoring attributes may include:

Hydrologic

- Stream morphology; and
- Streambank alteration.

Vegetative

- Species composition;
- Plant density;
- Demographics;
- Stubble height; and utilization

Soils

- Percent bare ground;
- Compaction; and
- Pedestaling.

Self-monitoring by permittee should be encouraged, but with these sideboards:

- Permittee's data and BLM's data should be comparable;
- BLM must perform some level of compliance monitoring for each self monitored allotment to ensure the permittee's monitoring is being done and it is valid;
- There should be regular reporting of self-monitoring data; and
- When appropriate, monitoring should include the use of reference sites (such as exclosures).

Permittees and interested members of the public should be able to participate in the development of monitoring plans.

GUIDELINE #4:

Compatible seasons and duration of use, rest periods, stocking rates, structural facilities, and management activities, should be designed and implemented to ensure that standards are achieved.

GUIDELINE #5:

The development of springs and seeps or other projects affecting water and associated resources shall be designed to protect the ecological functions, processes and native species of those sites.

GUIDELINE #6:

Locate facilities (e.g. corrals, water developments) away from riparian areas and wetlands when possible.

GUIDELINE #7:

Supplement salt and minerals should not be placed adjacent to watering locations or in riparian-wetland areas so not adversely impact streambank stability, riparian vegetation, water quality, or other sensitive areas. Placement of salt in upland sites should consider critical winter wildlife habitat.

GUIDELINE #8:

Noxious weed control is essential and should include: cooperative agreements, public education, and integrated pest management (mechanical, biological, chemical). Butte RAC has addressed weeds in a Resolution dated May 8, 1996.

GUIDELINE #9:

Native species are preferred. Non-native species, where contributing to proper ecosystem function, are acceptable.

GUIDELINE #10:

Livestock management should utilize Best Management Practices for livestock grazing that meet or exceed those approved by the State of Montana in order to maintain, restore or enhance water quality.

GUIDELINE #11:

Grazing management practices should maintain or improve habitat for federally listed threatened, endangered, and sensitive plants and animals.

<p>1. The first section of the report discusses the background and objectives of the study. It highlights the importance of understanding the current state of the industry and the need for a comprehensive analysis.</p>	<p>2. The second section provides a detailed overview of the methodology used in the study. It describes the data sources, the analytical tools, and the steps taken to ensure the accuracy and reliability of the findings.</p>
<p>3. The third section presents the results of the study, organized into several key areas. It includes a comparison of the current state with previous studies and identifies the main trends and challenges.</p>	<p>4. The fourth section discusses the implications of the findings and offers recommendations for future research and industry practice. It emphasizes the need for continued monitoring and adaptation to changing conditions.</p>
<p>5. The fifth section provides a summary of the key findings and conclusions. It reiterates the main points of the study and highlights the most significant insights.</p>	<p>6. The sixth section includes a list of references and a glossary of terms. It provides a comprehensive list of the sources used in the study and defines the key terms used throughout the report.</p>
<p>7. The seventh section contains a list of appendices, which include additional data, charts, and tables. These appendices provide a more detailed look at the data used in the study.</p>	<p>8. The eighth section provides a final summary and a closing statement. It expresses the hope that the findings of the study will be useful to the industry and the academic community.</p>
<p>9. The ninth section includes a list of acknowledgments, thanking the individuals and organizations that provided support and assistance during the study.</p>	<p>10. The tenth section contains a list of footnotes and a list of figures. It provides additional information about the data and the analysis, and includes a list of the figures used in the report.</p>
<p>11. The eleventh section provides a list of abbreviations and a list of symbols. It defines the abbreviations and symbols used throughout the report to ensure clarity and consistency.</p>	<p>12. The twelfth section includes a list of references and a list of figures. It provides a comprehensive list of the sources used in the study and includes a list of the figures used in the report.</p>
<p>13. The thirteenth section provides a list of appendices, which include additional data, charts, and tables. These appendices provide a more detailed look at the data used in the study.</p>	<p>14. The fourteenth section provides a final summary and a closing statement. It expresses the hope that the findings of the study will be useful to the industry and the academic community.</p>
<p>15. The fifteenth section includes a list of acknowledgments, thanking the individuals and organizations that provided support and assistance during the study.</p>	<p>16. The sixteenth section contains a list of footnotes and a list of figures. It provides additional information about the data and the analysis, and includes a list of the figures used in the report.</p>
<p>17. The seventeenth section provides a list of abbreviations and a list of symbols. It defines the abbreviations and symbols used throughout the report to ensure clarity and consistency.</p>	<p>18. The eighteenth section includes a list of references and a list of figures. It provides a comprehensive list of the sources used in the study and includes a list of the figures used in the report.</p>

APPENDIX B

BEST MANAGEMENT PRACTICES

The publications referenced in this appendix are sources of “Best Management Practices” (BMPs). BMPs are measures that have been developed by agency, industry, scientific, and/or working groups as voluntary methods for reducing environmental impacts associated with certain classes of activity. BLM typically uses these measures as guidelines or “project design features” during implementation planning at the activity and/or project-specific levels.

The list included in this appendix is not limiting, but references the most frequently used sources. As new publications are developed, BLM may consider those BMPs. In addition, many BLM handbooks (such as BLM Manual 9113-Roads and 9213-Interagency Standards for Fire and Aviation Operation) also contain BMP-type measures for minimizing impacts. These BLM-specific guidance and direction documents are not referenced in this appendix.

Planning implications: Use of Best Management Practices is not mandatory, since individual measures may not be appropriate for use in every situation. They may be added, dropped or modified through plan maintenance.

NEPA implications: Only the wind energy development BMPs have been analyzed in a NEPA process. The use of other BMPs should be analyzed on a case-by-case basis in NEPA documents associated with projects on the public lands. These case-by-case analyses should not “tier to” the BMP publication as a way to dismiss environmental impacts (i.e., must still analyze and disclose the environmental considerations and effects associated with use of the BMP).

Montana Best Management Practices for Grazing

Developed by: Working group with representation from: MSU College of Agriculture, Society of American Fisheries, Montana Stockgrowers Association, Montana Woolgrowers Association, USDI Bureau of Land Management, USDA Forest Service, USDA Natural Resources Conservation Service, Montana Farm Bureau, and Montana Dept. of Natural Resources and Conservation.

Publication reference: N/A, first printed in 1999

Available From: Conservation Districts Bureau, DNRC, PO Box 201601, Helena MT 59620-1601 (406-444-6667).

Description: Describes BMPs for livestock grazing designed to protect and enhance water quality, soils, plant communities, and other rangeland resources. Explains how and why to use BMPs to manage upland rangeland, forested rangeland, and riparian areas; and describes how grazing BMPs fit into a grazing management plan.

Water Quality BMPs for Montana Forests

Developed by: Montana State University Extension Service

Publication reference: EB158, 2001

Available From: MSU Extension Forestry, 32 Campus Dr, Missoula MT 59812, OR MSU Extension Publications, PO Box 172040 Bozeman MT 59717

Description: Discusses methods for managing forest land while protecting water quality and forest soils. Intended for all forest land in Montana, including non-industrial private, forest industry, and state or federally-owned forests. These are preferred (but voluntary) methods that go beyond Montana State Law (Streamside Management Zones). Includes definitions, basic biological information, and BMPs for Streamside Management Zones; road design, use, planning and locating, construction, drainage, and closure; stream crossings, soil, timber harvesting methods, reforestation, winter planning, and clean-up.

Montana Placer Mining BMPs

Developed by: Montana Bureau of Mines and Geology
 Publication Reference: Special Publication 106, October 1993
 Available from: Montana Bureau of Mines and Geology, Main Hall, Montana College of Mineral Science and Technology, Butte MT 59701
 Description: Provides guidelines for planning, erosion control, and reclamation in arid to semi-arid, alpine, and subalpine environments, to prevent or decrease environmental damage and degradation of water quality.

BMPs for Fluid Minerals

Developed by: Bureau of Land Management
 Publication reference: n/a
 Available from: Online at: <http://www.blm.gov/bmp/>. Also see Washington Office IM No. 2004-194.
 Description: Uses information sheets and PowerPoint presentations to demonstrate measures that can be used to decrease the effects of fluid mineral development on visual and wildlife resources. Some measures are presented as "applicable to nearly all circumstances," and others are to be considered by individual field offices on a case-by-case basis. Also includes examples of proper and improper applications.

BMPs for Wind Energy

Developed by: Bureau of Land Management
 Publication reference: Draft Wind Energy Development Programmatic EIS (additional BMPs from the FEIS would also be incorporated)
 Available From: DEIS Chapter 2 (section 2.2.3.2) at <http://windeis.anl.gov/>
 Description: As part of the proposed action, BLM developed BMPs for each major step of the wind energy development process, including site monitoring and testing, plan of development preparation, construction, operation, and decommissioning. General BMPs are available for each step, and certain steps also include specific BMPs to address the following resource issues: wildlife and other ecological resources, Visual resources, Roads, Transportation, Noise, Noxious Weeds and Pesticides, Cultural/Historic Resources, Paleontological Resources, Hazardous Materials and Waste Management, Storm Water, Human Health and Safety, monitoring program, air emissions and excavation and blasting activities.

Montana Guide to the Streamside Management Zone Law

Note: The Montana Guide to the Streamside Management Zone Law is a field guide to compliance with State of Montana Law 77-5-301[1] MCA.

Developed by: Montana Department of Natural Resources and Conservation Service Forestry Bureau, in cooperation with Montana Department of Environmental Quality, Montana Logging Association, Montana Wood Products Association, Plum Creek Timber LP, USDA Forest Service, USDI Bureau of Land Management
 Publication reference: Revised August 2002
 Available From: Montana Department of Natural Resources and Conservation, 2705 Spurgin Road, Missoula MT 59801-3199, (406)542-4300, or local MT DNRC field office.
 Description: MT State Law (77-5-301[1] MCA). Complementary BMPs are found in the Water Quality BMPs for Montana Forests (also referenced in this appendix). Provides definitions, stream classifications, and guidelines on the seven forest practices prohibited by Montana law in SMZs (broadcast burning, operation of wheeled or tracked vehicles except on established roads, the forest practice of clearcutting, the construction of roads except when necessary to cross a stream or wetland; the handling, storage, application, or disposal of hazardous or toxic materials in a manner that pollutes streams, lakes, or wetlands, or that may cause damage or injury to humans, land, animals, or plants; the side casting of road material into a stream, lake, wetland, or watercourse; and the deposit of slash in streams, lakes, or other water bodies.

APPENDIX C

CULTURAL RESOURCES

Cultural Resource Use Categories

Taken from BLM MANUAL GUIDANCE – 8110.4
(see also IB No. 2002-101 – Cultural Resource Considerations in Resource Management Plans)

Categorizing Cultural Resources as to Uses

Categorizing cultural resources according to their potential uses is the culmination of the identification process and the bridge to protection and utilization decisions. Use categories establish what needs to be protected, and when or how use should be authorized. All cultural resources have uses, but not all should be used in the same way. Cultural resources can be allocated to the various recognized use categories even before they are individually identified. The clear advantage in doing this is that it allows Field Office managers to know in advance how to respond to conflicts that arise between specific cultural resources and other land uses. Relative to the national Programmatic Agreement, categorizing resources to uses provides a mechanism for the Field Office manager and the SHPO to confer and concur on how to handle most routine cases of conflict in advance, enabling the Field Office manager to put decisions into effect in the most appropriate and most timely manner.

Allocations to Use Categories.

Field Office managers shall allocate to appropriate use categories all cultural properties known and projected to occur in a plan area. Allocations are made in regional plans, local interdisciplinary plans, or project plans, as relevant and timely, and may be applied either to individual properties or to classes of similar properties. Appropriately qualified staff professionals recommend suitable uses for each cultural property or class of properties, considering the properties' characteristics, condition, setting, location, and accessibility, and especially their perceived values and potential uses. A cultural property may be allocated to more than one use category. When allocations have not been made in other planning decisions they should be made during the compliance process for land use authorizations, to allow Field Office managers to analyze needs and develop appropriate mitigation and treatment options. Allocations should be reevaluated and revised, as needed, when circumstances change or new data become available. Allocations should be consistent with historic context documents and State Historic Preservation Plans.

Definitions of Use Categories

A. Scientific Use. This category applies to any cultural property determined to be available for consideration as the subject of scientific or historical study at the present time, using currently available research tech-

niques. Study includes methods that would result in the property's physical alteration or destruction. This category applies almost entirely to prehistoric and historic archaeological properties, where the method of use is generally archaeological excavation, controlled surface collection, and/or controlled recordation (data recovery). Recommendations to allocate individual properties to this use must be based on documentation of the kinds of data the property is thought to contain and the data's importance for pursuing specified research topics. Properties in this category need not be conserved in the face of a research or data recovery (mitigation) proposal that would make adequate and appropriate use of the property's research importance.

B. Conservation for Future Use. This category is reserved for any unusual cultural property which, because of scarcity, a research potential that surpasses the current state of the art, singular historic importance, cultural importance, architectural interest, or comparable reasons, is not currently available for consideration as the subject of scientific or historical study that would result in its physical alteration. A cultural property included in this category is deemed worthy of segregation from all other land or resource uses, including cultural resource uses, that would threaten the maintenance of its present condition or setting, as pertinent, and will remain in this use category until specified provisions are met in the future.

C. Traditional Use. This category is to be applied to any cultural resource known to be perceived by a specified social and/or cultural group as important in maintaining the cultural identity, heritage, or well-being of the group. Cultural properties assigned to this category are to be managed in ways that recognize the importance ascribed to them and seek to accommodate their continuing traditional use.

D. Public use. This category may be applied to any cultural property found to be appropriate for use as an interpretive exhibit in place, or for related educational and recreational uses by members of the general public. The category may also be applied to buildings suitable for continued use or adaptive use, for example as staff housing or administrative facilities at a visitor contact or interpretive site, or as shelter along a cross-country ski trail.

E. Experimental Use. This category may be applied to a cultural property judged well-suited for controlled experimental study, to be conducted by BLM or others concerned with the techniques of managing cultural

properties, which would result in the property's alteration, possibly including loss of integrity and destruction of physical elements. Committing cultural properties or the data they contain to loss must be justified in terms of specific information that would be gained and how it would aid in the management of other cultural properties. Experimental study should aim toward understanding the kinds and rates of natural or human-caused deterioration, testing the effectiveness of protection measures, or developing new research or interpretation methods and similar kinds of practical management information. It should not be applied to cultural properties with strong research potential, traditional cultural importance, or good public use potential, if it would significantly diminish those uses.

F. Discharged from Management. This category is assigned to cultural properties that have no remaining identifiable use. Most often these are prehistoric and historic archaeological properties, such as small surface scatters of artifacts or debris, whose limited research potential is effectively exhausted as soon as they have been documented. Also, more complex archaeological properties that have had their salient information collected and preserved through mitigation or re-

search may be discharged from management, as should cultural properties destroyed by any natural event or human activity. Properties discharged from management remain in the inventory, but they are removed from further management attention and do not constrain other land uses. Particular classes of unrecorded cultural properties may be named and described in advance as dischargeable upon documentation, but specific cultural properties must be inspected in the field and recorded before they may be discharged from management.

G. Relationship between Evaluation and Allocation. Cultural properties are evaluated with reference to National Register criteria for the purpose of assessing their historical values and their public significance. Such evaluations should be carefully considered when cultural properties are allocated to use categories and decisions are made regarding the appropriateness of National Register nomination and/or long-term preservation. Although preservation and nomination priorities must be weighed on a case-by-case basis, the following table can serve as a general guide to illustrate the relationship between National Register evaluation and allocation to use categories.

APPENDIX D

FIRE MANAGEMENT ZONE DESCRIPTIONS

BACKGROUND

The Dillon Field Office is located in the southwestern corner of Montana. It includes approximately 910,000 acres of BLM lands. Grasslands and shrubs are the most common landcover categories. About 280,300 acres or 31 percent of the public lands are considered grasslands. About 440,500 acres or 48 percent of the public lands are considered shrublands. About 168,800 acres or 19 percent of the public lands are considered forestlands. About 4,400 acres or less than 1 percent of the public lands are considered riparian areas. The remainder of the area is made up of barren areas such as exposed rock or badlands.

The Dillon Field Office contains 17 fire management zones. It also contains ten WSAs (Ruby Mountains, Blacktail Mountains, East Fork Blacktail Deer Creek, Hidden Pasture Creek, Bell/Limekiln Canyons, Henneberry Ridge, Farlin Creek, Axolotl Lakes, Centennial Mountains, and Tobacco Root Tack on (Section 202)), and one Wilderness Area (Bear Trap Canyon).

BEAVERHEAD/JEFFERSON AND MADISON VALLEY

Area description: The Beaverhead/Jefferson area is a corridor of private agricultural land along the Beaverhead and Jefferson rivers. The area along with the Madison Valley, includes approximately 937,524 acres (4 percent BLM, 11 percent state, and 85 percent private). The Beaverhead/Jefferson includes approximately 500,919 acres (4 percent BLM, 16 percent state, and 82 percent private). The Madison area includes approximately 475,492 acres (5 percent BLM, 2 percent Forest Service, 7 percent state, and 86 percent private).

Wildland fire occurrence: Between 1980 and 1999, federal agencies responded to 25 fires in the Beaverhead/Jefferson area which burned an estimated 4,568 acres. Average fire size was 182.7 acres. Federal agencies have responded to 33 fires in the Madison Valley which burned an estimated 5,960 acres. Average fire size was 180 acres.

Interface: The majority of the population base of Beaverhead and Madison Counties lives within these areas. A large percentage of Beaverhead River drainage is irrigated for agricultural crops. As a result, wildfire risk is normally low during the growing season. Some portions of the Madison River drainage are also irrigated for crops, but it contains more dry land areas susceptible to wildfire. It also has a rapidly

growing urban interface. However, no priority interface areas with hazardous fuels buildup on public lands have been identified in this area.

Area concerns and constraints: Fire is generally not desired due to large amounts of private land and rural subdivisions.

Fire objective: Wildland fire is not desired due to large amount of private land and agricultural production along the Beaverhead and Jefferson rivers.

BEAVERHEAD MOUNTAINS

Area description: This area runs along the Continental Divide and contains primarily high elevation heavy conifer fuel types. The area includes approximately 951,650 acres (3 percent BLM, 3 percent state, 28 percent private, and 66 percent FS). BLM lands constitute a minor amount of Federal ownership along the west side of the Big Hole Valley.

Wildland fire occurrence: Between 1980 and 1999, federal agencies responded to 90 fires which burned an estimated 320 acres. Average fire size was 3.5 acres.

Interface: The towns of Wisdom and Jackson are the main concentrations of housing and are in defensible areas from wildfire. The remainder of the area is sparsely populated with isolated ranch operations and associated out buildings. Typical urban interface situations are uncommon. No priority interface areas with hazardous fuels buildup on public lands have been identified in this area.

Area concerns and constraints: Unplanned fire is likely to cause negative effects. High recreation use due to Continental Divide Trail, contains a Scenic Byway, and it is a wildlife migration corridor which provides important security and hiding cover. This entire area provides potential/occupied lynx habitat. The Lynx Conservation Strategy may modify or constrain salvage harvest and/or prescribed fire to protect lynx denning habitat.

Resource objectives: Restore and maintain healthy forest ecosystems with stocking density control.

Fire objectives: The use of fire as a management tool would primarily be designed to reach vegetation management objectives described above. Unplanned fire is likely to cause negative effects. Prescribed fire and other fuels management may be used to avoid or mitigate adverse impacts of wildland fire.

BIG SHEEP/MEDICINE LODGE BACK COUNTRY BYWAY

Area description: This area is primarily a sagebrush/grass fuel type. The area includes approximately 96,128 acres (48 percent BLM, 6 percent state, 40 percent private, and 6 percent FS).

Wildland fire occurrence: Between 1980 and 1999, federal agencies responded to 14 fires which burned an estimated 3,720 acres. Average fire size was 266 acres.

Interface: Interface areas are mostly scattered ranches and associated structures. The Medicine Lodge interface area is really two separate low priority interface areas with hazardous fuels buildup on public lands. They have low population density, low escaped fire potential, low to medium potential for loss of life or property from wildland fire, and relatively low community support for treating hazardous fuels.

Area concerns and constraints: Unplanned fire is likely to cause negative effects. This area contains high levels of public use for recreation and a large amount of private land.

Resource objectives: Maintain healthy grass/sagebrush plant community.

Fire objectives: Limit the use of fire as a management tool due to limited BLM ownership and heavy recreation use. Unplanned wildland fire is likely to cause negative effects. Prescribed fire and other fuels management may be used to avoid or mitigate adverse impacts of wildland fire.

CENTENNIAL

Area description: This area consists of open sagebrush/grass with numerous wetlands. The south end contains dense stands of conifers to the Continental Divide. North end is sagebrush dominated foothills. Frequent past fires have reduced sagebrush canopy cover in key winter range areas. The area includes approximately 505,027 acres (27 percent BLM, 17 percent state, 36 percent private, 8 percent National Wildlife Refuge, and 9 percent FS). It also contains the Centennial Mountains WSA (27,691 acres) which accounts for about one fifth of the BLM acreage in this fire management area.

Wildland fire occurrence: Federal agencies responded to 41 fires which burned more than 7,800 acres. Average fire size was 190 acres. Between 1980 and 1998 BLM responded to 10 fires that averaged about 410 acres.

Interface: Communities include Dell, Lima, Monida and Lakeview. There are also ranches and outbuildings scattered

throughout the area. Two priority interface areas with hazardous fuels buildup on public lands are Lakeview and Alaska Basin. Lakeview is considered to have medium population density, low to medium escaped fire potential, low potential for loss of life or property, and medium community support for treating hazardous fuels. Alaska Basin has low population density, medium escaped fire potential, low potential for loss of life or property, and community support for reducing hazardous fuels is unknown.

Area concerns and constraints: Loss of livestock forage on adjoining private land, cultural concerns, implementation of the Gravelly Landscape Plan, and coordination with Red Rock Refuge. This unit supports significant wildlife use on seasonal habitat and migrational corridors. The Centennial Mountains provide potential/occupied lynx habitat. The lynx Conservation Strategy may modify or constrain salvage harvest and/or prescribed fire to protect lynx denning habitat. Significant interstate movement of sage grouse, elk, wolverine, grizzly bear and wolf through this area emphasizes the need to maintain seasonal habitat and travel corridors. Sagebrush habitat has been substantially fragmented by private land vegetation treatments.

Resource objectives: Resource objects are to maintain healthy grass/sagebrush communities in the non-forested areas. In the forested portion of the Centennial Mountains, restore forest health conditions as outlined in the Gravelly Landscape Analysis (GLA). Specifically, the GLA stated that 700 acres of aspen should be restored, and the drier Douglas-fir habitat types should be restored to a savannah structure. In areas of extensive lodgepole pine, fire should be the primary means of establishing age class mix. In areas of subalpine fir, treatment should emphasize areas where there is enough lodgepole pine intermixed to restore earlier seral conditions or where there is sufficient whitebark pine seed source to re-establish this important species.

Fire objectives: Fire, subject to the constraints listed above, is desired to help manage the ecosystem. Fire/other methods may be used to open dense timber stands in the southern portion to move succession back to an early seral stage with increased aspen growth and to reduce conifers in riparian areas. Limit fire in the north portion of the valley to protect crucial sagebrush winter range.

BLACKTAIL MOUNTAINS

Area description: Approximately half the area consists of dense conifer stands at the upper elevations. The other half is a sagebrush/grass fuel type. The area includes approximately 34,566 acres (61 percent BLM, 13 percent state, and 26 percent private). The Blacktail Mountains WSA (17,497 acres) makes up about 80 percent of the BLM acreage in this Fire Management Area.

Wildland fire occurrence: Between 1980 and 1999, federal agencies responded to eight fires which burned an estimated 350 acres. Average fire size was 43.7 acres.

Interface: There is one ranch and several “cow camps” and outbuildings in the area. No interface areas with hazardous fuels buildup on public lands were identified as a priority.

Resource objectives: Mechanical forest management treatments are incompatible with WSA policy guidance. Low intensity fire (either unplanned or planned ignition) may be used to reduce current stocking levels of overcrowded conifer stands and re-establish earlier seral conditions. The Blacktail Mountains are part of a larger area identified in the GLA. Resource and fire objectives for grass/sagebrush are addressed in the Blacktail/Horse Prairie section.

Fire objectives: Fire, subject to the constraints listed above, is desired to help manage the ecosystem. Fire/other methods may be used to open the canopy of dense stands of conifers and to reestablish an earlier seral stage. Fire may be used at the conifer/sagebrush interface to reduce encroachment of young conifers into sagebrush on approximately 1,500 acres/year. Fire may be used on up to 300 acres to restore decadent aspen stands to earlier successional stages and reintroduce Douglas-fir savannah structures.

TENDOY MOUNTAINS

Area description: Approximately 70 percent of the area is sagebrush/grass fuel type. The other 30 percent of the area has dense conifers. The area includes approximately 131,655 acres (40 percent BLM, 2 percent state, 8 percent private, 50 percent FS). Hidden Pasture Creek WSA (15,509 acres) and Bell/Limekiln Canyon WSA (9,650 acres) account for about 45 percent of the BLM acreage.

Wildland fire occurrence: From 1978 to 1999, federal agencies have responded to 13 fires which burned an estimated 56 acres. Average fire size was 4.3 acres.

Interface: There are several ranches and outbuildings scattered throughout the area. No interface areas with hazardous fuels buildup on public lands were identified as a priority.

Area concerns and constraints: Protect remnant stands of Mountain Mahogany, protect scenic byway on west and south ends. Portions of the Tendoy Mountains provide potential/occupied lynx habitat. The lynx Conservation Strategy may modify or constrain salvage harvest and or prescribed fire to protect lynx denning habitat. The presence of major elk winter and calving ranges, and sage grouse breeding complexes and winter habitat emphasize the need to protect sagebrush habitat and security cover.

Resource objectives: Maintain healthy grass/sagebrush communities and restore forest health conditions in the Tendoy Mountains.

Fire objectives: Fire, subject to the constraints listed above, may be desired to help manage the ecosystem. Fire/other methods may be used on up to 500 acres to maintain the current interspersion of habitat types. Fire is desirable to restore Aspen and Bitterbrush communities.

BLACKTAIL/HORSE PRAIRIE

Area description: This area is primarily an open sagebrush/grass fuel type. It contains small isolated timber stands in low to mid elevation foothills. The area includes approximately 593,283 acres (40 percent BLM, 19 percent state, 39 percent private, 1 percent FS, and 1 percent Bureau of Reclamation). The Henneberry Ridge WSA (9,806 acres) accounts for less than five percent of the BLM acreage.

Wildland fire occurrence: From 1978 to 1999, federal agencies have responded to 26 fires which burned an estimated 14,300 acres. Average fire size was 548 acres. An estimated 5 percent of the area has burned since the early 1980s.

Interface: The town of Grant contains the main concentrations of housing and is in a defendable area from wildfire. The town has low population density, escaped fire potential is considered low, and the potential for loss of life or property is considered low. Community support for hazardous fuels reduction actions is considered low. The remainder of the area is sparsely populated with isolated ranch operations and associated outbuildings. Interface situations are uncommon. Donovan Ranch was identified as an interface area with low population density, low potential for escaped fire, and low potential for loss of life or property. Community support for actions to reduce hazardous fuels is unknown.

Area concerns and constraints: Adjoining private lands limit fire management opportunities and require close coordination and consultation with landowners. The Horse Prairie area supports several major sage grouse breeding complexes, antelope and elk winter habitat. Sagebrush habitats also support several sensitive sagebrush-dependant species. Significant areas of sagebrush habitat have been fragmented, modified or converted by vegetation treatments. Areas adjoining Beaverhead-Deerlodge National Forest provide potential/occupied lynx habitat. The lynx Conservation Strategy may modify or constrain salvage harvest and/or prescribed fire to protect lynx denning habitat.

Resource objectives: Maintain existing grass/sagebrush cover on public lands. Arrest the loss of this habitat to Douglas-fir encroachment where it interfaces with Douglas-fir habitat types on sagebrush lands east of Interstate 15.

Fire objectives: Fire, subject to the constraints listed above, may be used to help manage the ecosystem. Protect sagebrush communities due to high diversity of sagebrush-dependent wildlife species.

SWEETWATER/RUBY

Area description: Approximately 70 percent of this area is sagebrush/grass fuel type. The remaining 30 percent consists of mixed conifer fuel type. The area includes approximately 295,336 acres (27 percent BLM, 27 percent state, 46 percent private). The East Fork Blacktail Deer Creek WSA (6,230 acres) accounts for about seven percent of the BLM acreage.

Wildland fire occurrence: From 1978 to 1999, federal agencies have responded to 26 fires which burned an estimated 8,400 acres. Average fire size was 321.5 acres. An estimated 25 percent of the sagebrush areas have burned since the early 1980s.

Interface: The area is sparsely populated with isolated ranch operations and associated outbuildings. Interface situations are uncommon. No interface areas with hazardous fuels buildup on public lands were identified as a priority.

Area concerns and constraints: Limit fire in sagebrush areas not being affected by Douglas-fir encroachment. Limit wildfire on the Blacktail Game Range in the southeast portion of the area. Sagebrush habitats supporting sage grouse breeding complexes, and sage grouse and antelope seasonal use have been fragmented and modified by vegetation treatments in Sweetwater Basin.

Resource objectives: Limit additional wildland and prescribed fire in the grass/sagebrush vegetation type on public lands for the next five years. Use of fire in the conifer vegetation types as opportunities permit would be beneficial by creating earlier seral conditions in these stands. **NOTE:** Gravelly Landscape Analysis objectives across all public lands in the Ruby Mountains recommended treating 400 acres of aspen, 6,600 acres of sagebrush/year, and 1,000 acres of grass, all over 10 years.

Fire objectives: Fire, subject to the constraints listed above, may be desired to help manage the ecosystem. Protect sagebrush communities due to high diversity of sagebrush-dependent wildlife species. Limit the amount of fire on public grasslands (primarily composed of sagebrush) due to past fires and sagebrush control on private and public lands.

TOBACCO ROOT MOUNTAINS

Area description: Public lands in this unit are primarily on the outside fringe of the Tobacco Root Mountain Range. Approximately 50 percent of this area is sagebrush/grass fuel type. The remaining 50 percent consists of mixed conifer fuel type. The area includes approximately 289,867 acres (10 percent BLM, 2 percent state, 29 percent private, 59 percent FS).

Wildland fire occurrence: From 1978 to 1999, federal agencies have responded to 42 fires which burned an estimated 1,800 acres. Average fire size was 42.5 acres.

Interface: The town of Pony and growing subdivisions are relatively common along the east and southern flanks of the Tobacco Root Mountains. These are commonly intermixed with public lands. Interface is also increasing on private lands along the the Tobacco Root Mountains. South Meadow Creek and Strawberry Ridge are interface areas near the Tobacco Root Mountains. South Meadow Creek is considered to have low population density, medium escaped fire potential, low potential for loss of life or property, and medium level of community support for hazardous fuel reduction actions. Strawberry Ridge is considered to have low population density, low to medium escaped fire potential, low potential for loss of life or property, and medium level of community support for hazardous fuel reduction actions.

Area concerns and constraints: Limit fire along the south and east borders due to development of subdivisions. Major elk and mule deer winter habitat surrounds much of this unit on public and private lands. Maintaining seasonal habitats and security cover is a concern. Portions of the Tobacco Root Mountains provide potential/occupied lynx habitat. The lynx Conservation Strategy may modify or constrain salvage harvest and or prescribed fire to protect lynx denning habitat.

Resource objectives: Reintroduction of fire is desired along the west flank of the Tobacco Root Mountains where Rocky Mountain Juniper and Douglas-fir are encroaching and beginning to dominate both riparian areas and former grass/sagebrush areas. Forest health issues such as overstocked stands and associated loss of vigor would also be rectified by use of mechanical thinning and recycling of nutrients by fire.

Fire objectives: Fire, subject to the constraints listed above, may be desired to help manage the ecosystem. Fire/other methods may be used to restore dense timber stands to earlier seral stages and to open dense juniper stands, particularly in riparian areas.

GRAVELLY MOUNTAINS

Area description: Public lands in this unit are primarily on the Northern fringe of the Gravelly Mountain Range. Approximately 30 percent of this area is sagebrush/grass fuel type. The remaining 70 percent consists of mixed conifer fuel type. The area includes approximately 556,577 acres (6 percent BLM, 4 percent state, 13 percent private, 77 percent FS). The Axolotl Lakes WSA (7,804 acres) accounts for about one-fifth of the BLM acreage.

Wildland fire occurrence: From 1978 to 1999, federal agencies have responded to 52 fires which burned an estimated 1,500 acres. Average fire size was 28.3 acres.

Interface: The Alder Gulch Historic Mining District lies in the area's northern portion and there is increasing subdivision activity along the eastern portion of the area. Summit-Alder Gulch is considered to have medium to high population density, low to high escaped fire potential, low to medium potential for loss of life or property, and medium level of community support for hazardous fuel reduction actions.

Area concerns and constraints: These areas could be difficult to defend in a major wildfire event due to the prevailing wind direction. Significant elk and mule deer seasonal habitat and winter ranges occur in this unit, along with increasing use by grizzly bear and wolf. Locations of game ranges and winter sagebrush habitat. Areas adjoining Beaverhead-Deerlodge National Forest provide potential/occupied lynx habitat. The lynx Conservation Strategy may modify or constrain salvage harvest and or prescribed fire to protect lynx denning habitat. As a result of these concerns specific fire suppression decisions or prescribed fire opportunities will be made on a case-by-case basis with management staff input via a Resource Advisor.

Resource objectives: These are a direct outcome of the Gravelly Landscape Analysis completed in September 1999. These vegetation objectives are recommendations for all the public ownership and are the direct outcome of Desired Future Condition of vegetation tempered by public input over a 3 year process. Both fire and mechanical treatments could be used to achieve the following objectives across all public ownerships over a ten year period: 1) Restore 4,400 acres of Aspen/year, 2) Restore Douglas-fir savannah, multiple age lodgepole pine classes and promote whitebark pine in the subalpine fire habitat type group, and 3) Maintain a mix of sagebrush age classes through time by treating 2,800 acres/year.

Fire objectives: Fire, subject to the constraints listed above, is desired to help manage the ecosystem. Fire/other methods may be used to restore dense timber stands to earlier seral stages and to open dense stands of conifers.

EAST MADISON

Area description: The area is primarily the foothills on the west slope of the Madison Mountain Range. It consists of a scattered grass/timber fuel type and is characterized by steep terrain and topography. The area includes approximately 319,799 acres (3 percent BLM, 1 percent state, 24 percent private, 72 percent FS). The majority of the BLM ownership is in the northwest portion of this area in the Beartrap Wilderness Area. The remaining BLM land is in the southwestern portion of the area and are scattered tracts intermingled with larger private land and Forest Service lands. The Bear Trap Canyon WA (6,000 acres) makes up 54 percent of the BLM acreage in this area.

Wildland fire occurrence: From 1978 to 1999, federal agencies have responded to 70 fires which burned an estimated 8,000 acres. Average fire size was 114 acres.

Interface: Interface with private lands is high in the east portion of the Madison Valley. However, no interface areas with hazardous fuels buildup on public lands were identified as a priority.

Area concerns and constraints: The Lee Metcalf and the Bear Trap WSAs restricts the use of mechanical earthmoving equipment. Due to the configuration of BLM lands with other ownerships and the generally "flashy" fuels, use of prescribed "natural" fire is extremely difficult.

Fire objectives: Fire, subject to the constraints listed above, may be desired to help manage the ecosystem. Fire/other methods may be used to restore dense timber stands to earlier seral stages and to open dense stands of conifers.

SE FOOTHILLS

Area description: The area is south of the Pioneer Mountain Range. About 70 percent consists of a scattered grass/timber fuel type and the remaining 30 percent is conifer type consisting mainly of Douglas-fir, juniper, and limber pine. The area includes approximately 199,154 acres (45 percent BLM, 6 percent state, 33 percent private, 16 percent FS). The Farlin Creek WSA (1,139 acres) is adjacent to the 93,859 acre Forest Service East Pioneer proposed wilderness. The Farlin Creek WSA accounts for only one percent of the BLM acreage in the area.

Wildland fire occurrence: From 1978 to 1999, federal agencies have responded to 30 fires which burned an estimated 803 acres. Average fire size was 26.7 acres.

Interface: The townsites of Argenta and Polaris as well as growing subdivisions are found within the area. Argenta is

considered to have medium population density, low escaped fire potential, low potential for loss of life or property, and medium level of community support for hazardous fuel reduction actions. Birch Creek is also an nearby intermix area that is considered to have low population density, medium escaped fire potential, low potential for loss of life or property, and an unknown level of community support for hazardous fuel reduction actions.

Area concerns and constraints: A FS wilderness proposal in the northern part of the area may influence suppression efforts. Major elk and mule deer winter habitat surrounds much of this unit on public and private lands. Maintaining seasonal habitats and security cover is a concern. Portions of the Pioneer Mountains provide potential/occupied lynx habitat. The lynx Conservation Strategy may modify or constrain salvage harvest and or prescribed fire to protect lynx denning habitat. Sagebrush habitat on the south end of the unit supports sage grouse breeding and winter. Past sagebrush treatments and habitat fragmentation have reduced habitat availability and suitability. As a result of these concerns specific fire suppression decisions or prescribed fire opportunities will be made on a case by case basis with management staff input via a Resource Advisor.

Planning guidance: Specific vegetation goals and objectives were developed in the PLA (Pioneer Landscape Analysis).

Resource objectives: On Federal lands, the restoration of 25 percent (or 9,000 acres) of Douglas-fir savannah, reduction of 1/3 or 2,000 acres of Douglas-fir encroachment into sagebrush, restoration of aspen, Mountain Mahogany and riparian communities were all objectives outlined in the PLA.

Fire objectives: Fire, subject to the constraints listed above, may be desired to help manage the ecosystem. Use fire/other methods to limit the encroachment of Douglas-fir into existing sagebrush stands, to restore and improve stands of aspens (especially in drainages), and to change dense Douglas-fir stands back to savannah type communities.

PIONEER MOUNTAINS

Area description: The area includes the Pioneer Mountain range with the majority of lands in this zone administered by the Forest Service. The area is bisected from north to south by the Pioneer Mountains Scenic Byway. Forest types include lodgepole pine, dry site Douglas-fir, spruce with subalpine fir, and whitebark pine. The area includes approximately 558,567 acres (with less than 1 percent BLM, 2 percent state, 6 percent private, 91 percent Forest Service). BLM ownership is limited to small parcels of public land adjacent to Forest Service lands on the west face of the Pioneers.

Wildland fire occurrence: Not discussed due to limited amount of BLM land in this zone.

Interface: Interface situations are uncommon. No interface areas with hazardous fuels buildup on public lands were identified as a priority. The few scattered tracts of BLM lands adjacent to Forest Service lands on the west face lie several miles east of valley communities.

Area concerns and constraints: Wilderness Study Areas on Forest Service lands and the presence of the Pioneer Mountains Scenic Byway may influence suppression efforts. The forest interior provides secure habitat for carnivores like lynx and wolverine, which could constrain activities. Preserving the less developed character of the West Face may be an expectation of residents of the Big Hole Valley, and tourists visiting there.

Fire objective: Fire, subject to constraints, may be desired to help managed the ecosystem.

MCCARTNEY/ROCHESTER (ALSO IN THE BUTTE FIELD OFFICE)

Area description: The area is east of the Pioneer Mountain Range. About 70 percent consists of a scattered grass/timber fuel type and the remaining 30 percent is conifer type consisting of Douglas-fir, juniper, and limber pine. The area includes approximately 184,154 acres (47 percent BLM, 5 percent state, 37 percent private, and 11 percent FS). The area is also characterized by numerous roads from past mining activities.

Wildland fire occurrence: Between 1978 and 1999, federal agencies responded to 64 fires which burned an estimated 2,280 acres. Average fire size was 35.5 acres. Prescribed fires have been used on 2,000 acres in the McCarthy Mountain area since the 1980s.

Interface: This area contains isolated ranches, the community of Glen, and several fishing-related commercial operations.

Area concerns and constraints: The Humbug Spires WSA restricts the use of mechanical equipment. Fire management should be coordinated with the Forest Service. Protection of cultural resources (mining related) and private property requires careful consideration and consultation. The protection of mining-related cultural resources and private property are also concerns.

Resource objectives: Maintain/enhance lodgepole pine communities for a variety of size and age classes and stand structure. Protect the wilderness character of Humbug Spires WSA. Objectives would be similar to the Southeast Foot-

hills where aspen, Douglas-fir encroachment and Mountain Mahogany opportunities permit.

Fire objectives: Fire, subject to the constraints listed above, may be desired to help manage the ecosystem. Prescribed fire/other methods may be used to limit conifer encroachment into the McCarthy Mountain area.

BIG HOLE RIVER CORRIDOR (ALSO IN THE BUTTE FIELD OFFICE)

Area description: About 50 percent consists of open sagebrush/grass parks. Another 45 percent is Douglas-fir. Mountain mahogany is scattered throughout the area occurring on steep-rocky south and west facing slopes. Much of this is overtopped by Douglas-fir. The remaining 5 percent of the area contains drainages dominated by lodgepole pine. The area is characterized by steep topography and close proximity to the highway. The area includes approximately 47,729 acres (15 percent BLM, 3 percent state, 16 percent private, 66 percent FS). The area is also characterized by numerous roads from past mining activities.

Wildland fire occurrence: From 1978 to 1999, federal agencies have responded to 34 fires which burned an estimated 463 acres. Average fire size was 13.6 acres.

Interface: Both individual home site development and subdivision activity are increasing. No interface areas with hazardous fuels buildup on public lands were identified as a priority.

Area concerns and constraints: Steep topography and proximity to the highway and private land limits suppression options.

Resource objectives: Objectives would be similar to the Southeast Foothills where aspen, Douglas-fir encroachment and Mountain Mahogany opportunities permit.

Fire objectives: Fire, subject to the constraints listed above, may be desired to help manage the ecosystem. Fire/other methods may be used to limit the encroachment of Douglas-fir into open sagebrush parks and areas of mountain mahogany.

NORTH RUBYS

Area description: Consists of dense stands of Douglas-fir. Terrain is very steep. The area consists of approximately 24,226 acres in and around the Ruby Mountains WSA (57 percent BLM, 7 percent state, and 36 percent private).

Wildland fire occurrence: No fires have been reported in this area. However, forest mosaic stands indicate a history of multiple stand replacement fires.

Interface: There is little interface within the Ruby Mountains WSA. Private agricultural and forestlands surround the WSA along the southeast border. Agricultural land, much of which is irrigated during the growing season, surrounds the rest of the BLM lands.

Area concerns and constraints: Fire control would be difficult due to poor access and steep terrain. Watershed damage and erosion could be concerns with large fires.

Resource objectives: The GLA recommended restoring 200 acres of aspen over 10 years, restoring 2,000 acres of sagebrush being lost to Douglas-fir encroachment and restoring Douglas-fir savannah stands by killing the competing understory of conifers.

Fire objectives: Generally fire/other methods are desired to open dense conifer stands and to reduce heavy fuels.

APPENDIX E

EMERGENCY STABILIZATION AND REHABILITATION PROCEDURES

INTRODUCTION

The purpose and need of a normal fire rehabilitation plan is to streamline the emergency fire rehabilitation process to enable on-the-ground treatments to be completed within time frames consistent with the urgent nature of fire rehabilitation. The normal fire rehabilitation plan facilitates the orderly and timely rehabilitation of burned lands by delineating the procedures to be followed and treatments to be used after wildland fires that occur on the DFO.

Appropriate use of emergency fire rehabilitation funds includes implementing the following practices to:

- Protect life, property, and soil, water and/or vegetative resources.
- Prevent unacceptable onsite or offsite damage.
- Facilitate meeting land use plan objectives and other Federal laws.
- Reduce the invasion and establishment of undesirable or invasive species of vegetation.

Emergency fire rehabilitation funds are not used for rehabilitation of wildland fire suppression efforts; this includes rehabilitating firelines, helispots, fire camp, etc. Costs for rehabilitating wildland fire suppression efforts will be funded by the wildland fire project code.

The terms *rehabilitation* and *restoration* are often used synonymously, especially in relationship to the use of native species to revegetate burned areas. Rehabilitation is the “repair” of a wildland fire area utilizing native and/or nonnative plant species to obtain a stable plant community that will protect the burned area from erosion and invasion of weeds. Restoration is the use of a diverse mixture of only native species to obtain a plant community that is similar in appearance and function to the historic vegetation.

Total restoration of a burned area is not within the scope of the emergency fire rehabilitation program, although the use of native plants to rehabilitate burned areas is strongly encouraged. Native plants are to be used on those soils and ecological sites where they are, (1) adapted, (2) able to establish and survive with weed competition and periodic drought; (3) compatible with other land uses, and (4) reasonably priced relative to the land use and emergency fire rehabilitation plan objectives. The application of emergency fire rehabilitation practices should be consistent with the S&G’s in as much as the constraints of emergency fire rehabilitation policy will allow.

This plan guides emergency wildland fire rehabilitation efforts in areas of the DFO that meet one or more of the following criteria:

- Areas that are highly susceptible to accelerated soil erosion, either because of soil characteristics, steep topography, or recurrent high winds.
- Areas where native grasses and forbs cannot reasonably be expected to provide soil and watershed protection within two years following fire.
- Areas where unacceptable vegetation, such as noxious weeds or invasive annuals, may readily invade and become established following fire.
- Areas where shrubs are a crucial wildlife habitat component for greater sage-grouse, mule deer, elk, and pronghorn.

The process for implementing emergency fire rehabilitation activities through a site-specific plan development process is described as follows:

- 1) Following a wildland fire, the area manager, consulting with resource specialists, will decide if fire rehabilitation is needed. If fire rehabilitation is needed, an interdisciplinary team reviews the burn and selects the proper rehabilitation prescription from this plan. (If the proper prescription does not fall under the scope of this plan, refer to the “Emergency Fire Rehabilitation Handbook” [H-1742-1] for guidance. Generally, rehabilitation efforts not covered in this plan would require an environmental assessment.)
- 2) The prescription identifies the appropriate seed mixture, application rates, planting methods, and costs. The prescription also describes any additional treatments that may be necessary including shrub planting, erosion control structures, protection fencing, and grazing adjustments beyond the normally prescribed minimum two growing seasons rest period.
- 3) A budget is created that summarizes the rehabilitation costs by fiscal year. This budget is sent to the State Director for funding approval.
- 4) For all rehabilitation projects covered by this plan, a site-specific rehabilitation plan will be prepared that is tiered to this plan. Additionally, each rehabilitation project requires a normal fire rehabilitation plan treatment form.
- 5) Cultural and T&E species clearances will be completed prior to project implementation. Known populations of

T&E plants will be marked and that area restricted from heavy equipment use. Cultural sites discovered during clearances or previously known sites will be marked and avoided by ground disturbing equipment.

Due to the broad spectrum of situations encountered in emergency fire rehabilitation, several options of possible treatments, either separately or in combination, must be considered. The list of activities that may be considered are outlined below.

NATURAL REVEGETATION

In many cases, successful reestablishment of native species occurs if the perennial plant species are not killed as a result of the fire, or if viable and desirable seed or root mass is present. Generally, in these areas it would be necessary to rest the burned area from livestock grazing for at least two growing seasons. In some situations, the area may be closed to vehicles by issuing a temporary emergency closure. The only rehabilitation that may be necessary is repairing damaged fencing and/or construction of temporary fencing around the burned area until the native vegetation is successfully reestablished.

SEEDING WITH RANGELAND DRILLS OR AERIAL SEEDING

Seeding of burned areas would only be considered if the emergency fire rehabilitation team determines that the burned area would not successfully reestablish to a native perennial plant community in a reasonable amount of time (generally two growing seasons under normal precipitation). Seed mixtures should be designed for specific soil types. Parameters such as soil properties, erosion potential, aspect, elevation, intended use, potential plant community, threat to existing watershed, and seed cost and availability would be evaluated in selecting seed mixtures.

The use of native plants for rehabilitation is strongly encouraged and is both BLM emergency fire rehabilitation policy and a standard for meeting rangeland health objectives. That policy is tempered, however, by the availability of native seed at a reasonable cost, its adaptation to the area proposed for treatment, impacts of competition on seeding establishment, and land use plan requirements. There are many areas where one or more of these criteria cannot be met, and the only choice is between seeding nonnative, such as crested wheatgrass and noxious weeds becoming established in the disturbed areas. Given these situations, the use of nonnatives is allowed to biologically and physically stabilize the burned area until the earliest possible time when

the introduced grass seedlings can be restored (converted) to a more diverse native plant community. Where available, native seed should be used in combination with nonnatives to complete a diverse mix of species to meet particular land use objectives for the site.

Seeding guidelines:

- Native species will be utilized over nonnative species as appropriate and based on seed availability.
- A project inspector will monitor all phases of implementation.
- The area to be seeded will be rested from grazing for at least two growing seasons or until vegetation is successfully established. Livestock will be excluded by using fencing, closing specific pastures, or closing entire allotments.
- Only native species will be seeded in WSAs.
- Monitoring will determine the effectiveness of seeding and to indicate when grazing will resume.
- Use only certified weed-free sources and collect seed samples for an All States Noxious Weed Test. Seed nonnatives only in areas of the burn where high erosion or unacceptable vegetation is expected to occur. This may include, but not be limited to, roads, gullies, noxious weed areas, or cheatgrass sites. This will allow refugia for native species where they can reestablish without competition from nonnative species.
- If nonnative species are used, a preference should be given to species that are not invasive and can be replaced naturally by native shrubs and grasses. If this is inappropriate or is ineffective, a commitment should be made for long-term secondary restoration of a site following planting of nonnatives.

CONSTRUCTION OF EROSION AND SEDIMENT CONTROL STRUCTURES

Where the possibility of damage is great, structures, such as retention dams, or land treatments, such as contour furrowing, may be needed to control erosion, sediment yield, and flood waters. In most cases, these treatments would be used in combination with seeding. Gully check dams or plugs may be required where headcutting erosion is occurring. Gully treatment may also include broadcast seeding and chaining to establish perennial vegetation on the channel sides and bottom. Planning, design, and construction of erosion and sediment control structures and flood water retarding structures will be implemented in accordance with BLM Manual 1972, Water Control Structures. Any erosion and sediment control structures proposed within a WSA must comply with wilderness IMP.

CONSTRUCTION OF SUPPORT FACILITIES

Fences, gates, cattle guards, and other control features will be constructed or repaired as needed to further natural revegetation, and to protect seedings or other improvements created for rehabilitation. Follow BLM Manual Handbook H-1741-1 for fencing specifications. Any construction of support facilities proposed within a WSA must comply with wilderness guidelines.

FIRE REHABILITATION GUIDELINES FOR WILDERNESS STUDY AREAS

Rehabilitation following wildland fire in a WSA will comply with wilderness IMP (H-8550-1). When a proposed rehabilitation project addresses an area covering land both within and outside a WSA, it will be treated as two separate projects. The area outside the WSA will be treated in accordance with this guide. The area inside the WSA will be treated in accordance with the wilderness IMP referenced above.

Interested parties will be allowed a 30-day comment period on the proposed treatment in WSAs, unless it is not possible to do so because of emergency conditions (i.e., the 30-day comment period would result in missing the optimum period for treatment). If a full 30-day period would result in missing the optimum period for rehabilitation, key contacts would be notified for immediate comment, and a follow up copy of the treatment prescription would be forwarded.

Disturbance caused by fire suppression actions will be evaluated in WSAs. If it is determined that wilderness suitability is affected by the fire suppression disturbance, mitigation of the disturbance will occur prior to release of suppression resources. Costs associated with mitigating suppression actions will be covered by wildland fire suppression funds, not emergency fire rehabilitation funds.

The “minimum tool” will be applied to all fire rehabilitation projects within WSAs. Any rehabilitation actions must maintain an area’s suitability for preservation as wilderness. Fire rehabilitation should be accomplished using methods and equipment that causes the least damage to wilderness resources. The use of motorized vehicles and mechanical equipment will be minimized to the extent possible.

The appropriate species and methods for seeding will be considered on a case-by-case basis to determine if the proposed method meets the policy and guidelines for WSAs. Seed and planting will utilize native species, and will minimize cross-country use of motorized equipment. Seedings and plantings will be staggered or irregular so as to avoid a straight-line plantation appearance. Seed will be applied aurally unless the area to be rehabilitated is small, or ground application will not impair wilderness characteristics. Because the covering of seed greatly affects its successful germination, mechanized equipment may be considered to cover the seed after aerial application. If the burned area is determined to be crucial wildlife habitat, and shrub seed is not applied aurally, then seedlings may be hand planted.

APPENDIX F BIOLOGICAL EVALUATION FORM

Short Form Biological Evaluation for Special Status Fish and Wildlife Species

Project:

Step 1a. List of all Special Status Species that are known or suspected to occur on the DFO*	Step 1b. Current Management Status of the Species.	Step 1c. Does the species occur on this portion of the Field Office?	Step 2 Is the species or its habitat found in the greater Affected Area?	Step 3. Could this proposal have any effect?	Step 4. Are Irreversible or Irretrievable Resources involved?	Step 5. Alt 1 level of effect	Step 5. Alt 2 level of effect	Step 5. Alt 3 level of effect	Step 5. Alt 4 level of effect
Bald Eagle (<i>Haliaeetus leucocephalus</i>)	Threatened (MT); up for delisting								
Canada Lynx (<i>Lynx canadensis</i>)	Threatened								
Gray Wolf (<i>Canis lupus</i>)	Threatened, experimental								
Grizzly Bear (<i>Ursus arctos horribilus</i>)	Threatened (MT)								
Fluvial arctic grayling (<i>Thymallus arcticus</i>)	Candidate								
Fisher (<i>Martes pennanti</i>)	Sensitive								
North American Wolverine (<i>Gulo gulo luscus</i>)	Sensitive								
Northern Bog Lemming (<i>Synaptomys borealis</i>)	Sensitive								
Preble's Shrew (<i>Sorex preblei</i>)	Sensitive								
Pygmy Rabbit (<i>Brachylagus idahoensis</i>)	Sensitive								
Townsend's Big-eared Bat (<i>Plecotus townsendii</i>)	Sensitive								

Short Form Biological Evaluation - Page 2 of 5

Step 1a. List of all Special Status Species that are known or suspected to occur on the DFO	Step 1b. Current Management Status of the Species.	Step 1c. Does the species occur on this portion of the Field Office?	Step 2 Is the species or its habitat found in the greater Affected Area?	Step 3. Could this proposal have any effect?	Step 4. Are Irreversible or Irretrievable Resources involved?	Step 5. Alt 1 level of effect	Step 5. Alt 2 level of effect	Step 5. Alt 3 level of effect	Step 5. Alt 4 level of effect
Baird's Sparrow (<i>Ammodramus bairdii</i>)	Sensitive								
Black-backed Woodpecker (<i>Picoides arcticus</i>)	Sensitive								
Black Tern (<i>Chlidonias niger</i>)	Sensitive								
Boreal Owl (<i>Aegolius funereus</i>)	Sensitive								
Burrowing Owl (<i>Athene cucularia</i>)	Sensitive								
Columbian Sharp-tailed Grouse (<i>Pedioecetes phasianellus</i>)	Sensitive								
Common Loon (<i>Gavia immer</i>)	Sensitive								
Canvasback duck (<i>Aythya valisneria</i>)	Sensitive								
Ferruginous Hawk (<i>Buteo regalis</i>)	Sensitive								
Flammulated Owl (<i>Otus flammeolus</i>)	Sensitive								
Great Gray Owl (<i>Strix nebulosa</i>)	Sensitive								
Hairy woodpecker (<i>Picoides villosus</i>)	Sensitive								
Harlequin Duck (<i>Histrionicus histrionicus</i>)	Sensitive								
Loggerhead Shrike (<i>Lanius ludovicianus</i>)	Sensitive								

Short Form Biological Evaluation - Page 3 of 5

Step 1a. List of all Special Status Species that are known or suspected to occur on the DFO	Step 1b. Current Management Status of the Species.	Step 1c. Does the species occur on this portion of the Field Office?	Step 2 Is the species or its habitat found in the greater Affected Area?	Step 3. Could this proposal have any effect?	Step 4. Are Irreversible or Irretrievable Resources involved?	Step 5. Alt 1 level of effect	Step 5. Alt 2 level of effect	Step 5. Alt 3 level of effect	Step 5. Alt 4 level of effect
Long-billed Curlew (<i>Numenius americanus</i>)	Sensitive								
Mountain Plover (<i>Charadrius montanus</i>)	Sensitive								
Northern Goshawk (<i>Accipiter gentilis</i>)	Sensitive								
Peregrine Falcon (<i>Falco peregrinus anatum</i>)	Sensitive (delisted)								
Pileated Woodpecker (<i>Dryocopus pileatus</i>)	Sensitive								
Sage Grouse (<i>Centrocercus urophasianus</i>)	Sensitive								
Sage Sparrow (<i>Amphispiza belli</i>)	Sensitive								
Swainson's Hawk (<i>Buteo swainsoni</i>)	Sensitive								
Three-toed Woodpecker (<i>Picoides tridactylus</i>)	Sensitive								
Trumpeter Swan (<i>Cygnus buccinator</i>)	Sensitive								
White-faced Ibis (<i>Plegadis chihi</i>)	Sensitive								
Spotted frog (<i>Rana pretiosa</i>)	Sensitive								
Westslope cutthroat trout (<i>Onchorhynchus clarkii lewisii</i>)	Sensitive								

*A similar form and the list of Special Status Species Plants approved for Montana/Dakotas BLM will be used to consider SSS-Plants. No threatened or endangered plants are currently known to be located on BLM lands in the DFO.

Short Form Biological Evaluation - Page 4 of 5

Step 6. Are there any specific recommendations to avoid significant effects (if any)? These are mitigation measures needed to avoid determinations of: LAA, LJ, WIFV. If so, state the location of the narrative describing these recommendations:

Step 7. Documentation: This short form is intended to follow a seven-step process to provide basic biological evaluations. Judgments must not be arbitrary but should be reasoned. This form provides a "road map" of that reasoning and assumes the judgments are drawn from numerous sources. Any species-specific impacts should be discussed in the NEPA document.

The signature below certifies that:

1. The wildlife biologist has reviewed the proposed action and its alternatives, but may or may not have provided input to alternative design, depending on the issues.
2. The wildlife biologist has an understanding of the specific conditions found in the affected area. Column 1a lists all possible Special Status Species in the Dillon Field Office. Column 1b identifies the species' current management status. Column 1c indicates whether there are no records (N/A), or whether the species is considered a Transient (T) or Resident (R) (for our purposes, resident includes migratory species that fulfill a portion of their life history here). Step 2 is satisfied by field visits (or enough knowledge of local conditions from previous visits) resulting in enough information to determine if the area is potential habitat for species listed in Step 1. Extensive surveys are not necessary if the conservative approach is taken that: "suitable habitat" means the potential for occupancy.
3. The wildlife biologist has an understanding of the species habitat needs and other attributes important to the determination. This can be a combination of literature review, professional experience, and consultation with others.
4. The wildlife biologist has assimilated the above information in making the "determinations" (i.e. final judgments about the scientific significance of the effects).

Signed _____ Date _____

Printed name and title: _____

Short Form Biological Evaluation - Page 5 of 5 - Definitions of Abbreviations

N/A – “Not Applicable.” Indicates this species does not occur in the project area or that the project would have no bearing on its potential habitat. These species were removed from detailed analysis after field review of existing and potential habitats and consideration of distribution records.

FEDERALLY LISTED SPECIES

NE - No Effect

***LAA** - May Effect - Likely to Adversely Affect (formal consultation required)

NLAA - May Effect, Not Likely to Adversely Affect (informal consultation - concurrence with determination - required)

BE - Beneficial Effect (informal consultation - concurrence with determination - required)

SPECIES PROPOSED FOR LISTING

NE - No Effect

NLJ - Not likely to Jeopardize the continued existence of the species or result in the destruction or adverse modification of proposed critical habitat

***LJ** - Likely to Jeopardize the continued existence of the species or result in the destruction or adverse modification of proposed critical habitat

SENSITIVE SPECIES

NI - No Impact

MIH - May Impact Individuals or Habitat, but will not likely contribute to a trend towards federal listing or cause a loss of viability to the population or species.

***WIFV** - Will Impact Individuals or habitat with a consequence that the action may contribute to the need for federal listing or cause a loss of viability to the population or species.

BI - Beneficial Impact

* triggers formal consultation process

revised 1/21/04

APPENDIX G

CONSERVATION ACTIONS FOR WESTSLOPE CUTTHROAT TROUT

BACKGROUND

The BLM entered into a Memorandum of Understanding (MOU) and Conservation Agreement (Agreement) with a number of agencies and private organizations in May of 1999. The purpose of the MOU and Agreement is to expedite implementation of conservation measures for westslope cutthroat trout (*Oncorhynchus clarkii lewisi*) in Montana through a collaborative and cooperative effort among resource agencies, conservation and industry organizations, resource users, and private land owners. The goals, objectives and conservation actions described below will be incorporated into activities under the jurisdiction of BLM.

CONSERVATION AND RESTORATION GOAL OVERVIEW

The management goal for westslope cutthroat trout in Montana is to ensure the long-term self-sustaining persistence of the subspecies within each of the five major river drainages they historically inhabited in Montana (Clark Fork, Kootenai, Flathead, upper Missouri, and Saskatchewan), and to maintain the genetic diversity and life history strategies represented by the remaining local populations.

The following objectives are identified in the MOU and Conservation Agreement:

- Protect all genetically pure Westslope Cutthroat Trout populations;
- Protect partially hybridized (>90% pure) populations;
- Ensure the long-term persistence of the WCT within their native range;
- Provide technical information, administrative assistance, and financial resources to assure compliance with the listed objectives and encourage conservation of WCT; and
- Design and implement an effective monitoring program by the year 2002 to document persistence and demonstrate progress towards the management goal.

CONSERVATION ACTIONS

Restoration and recovery actions that address threats to WCT can be grouped into the general categories of fisheries management, habitat management, genetics/population management, and administration, evaluation and information management. In some instances, actions to achieve long-term beneficial effects may cause short-term degradation such as increased sediment during stream channel restoration projects. However, long-term benefits ultimately will offset any short-term impacts.

Since BLM manages habitat rather than species or populations, conservation actions most applicable to BLM management identified in the MOU and Conservation Agreement come under the heading of habitat management recommendations. These include:

- Maintain and protect WCT habitat from degradation by achieving compliance with existing habitat protection laws, policies, and guidelines.
- Restore physical integrity of degraded habitat where logistically and technically feasible.
- Achieve compliance with water quality standards and develop TMDLs for water quality impaired streams (streams listed on the DEQ 303(d) impaired water bodies list) that are priority WCT habitat.
- Restore and maintain hydrologic conditions (flow, timing, duration) to mimic natural processes where necessary to meet Agreement objectives.
- Operate dams to minimize impacts where necessary to meet Agreement objectives.
- Identify, monitor, and maintain existing barriers to keep introduced species at bay; install new barriers where necessary to prevent invasion of introduced species.
- Identify and document fishless streams/reaches above natural barriers as potential introduction/expansion locations.
- Determine effectiveness of existing habitat protection regulations and BMPs.

APPENDIX G CYCLOSTOMUS ALBIVENTRIS (WHITE-BELLIED CYCLOPOD)

CONSERVATION STATUS

The white-bellied cyclopod is a small, translucent, water-dwelling crustacean. It is found in a variety of aquatic environments, including streams, rivers, and lakes. The species is considered to be of low conservation concern due to its wide distribution and common occurrence in many aquatic habitats.

While the white-bellied cyclopod is not currently at risk of extinction, it is important to monitor its populations and habitats to ensure its long-term survival. This includes protecting its natural habitats from degradation and maintaining water quality.

DESCRIPTION

The white-bellied cyclopod is a small, translucent, water-dwelling crustacean. It has a rounded, oval-shaped body with a slightly flattened appearance. The body is primarily white or light-colored, with a darker, brownish or blackish, patterned band running along the sides. The head is small and rounded, with two large, prominent eyes. The antennae are short and thick. The legs are long and thin, with the front legs being slightly longer than the others. The tail is short and rounded.

The white-bellied cyclopod is a generalist feeder, consuming a variety of small organisms, including algae, bacteria, and other small crustaceans. It is also known to feed on organic matter and detritus. The species is typically found in shallow, slow-moving water, where it can easily find food. It is a common species in many aquatic environments, and its populations are generally stable.

REPRODUCTION

The white-bellied cyclopod reproduces asexually, with females laying eggs that develop into young. The eggs are small and round, and are typically laid in clusters. The young are small and translucent, and resemble the adults. They are typically found in the same habitats as the adults, and their populations are generally stable.

ECOLOGY

The white-bellied cyclopod is a generalist feeder, consuming a variety of small organisms, including algae, bacteria, and other small crustaceans. It is also known to feed on organic matter and detritus. The species is typically found in shallow, slow-moving water, where it can easily find food. It is a common species in many aquatic environments, and its populations are generally stable.

The white-bellied cyclopod is a generalist feeder, consuming a variety of small organisms, including algae, bacteria, and other small crustaceans. It is also known to feed on organic matter and detritus. The species is typically found in shallow, slow-moving water, where it can easily find food. It is a common species in many aquatic environments, and its populations are generally stable.

APPENDIX H

ACQUISITION CRITERIA

INTRODUCTION

Acquisition of lands or interests in lands may be by such methods as exchange, purchase, donation, or public agency jurisdictional transfer.

Lands located in or adjacent to Category 1 will have priority for acquisition providing they meet one or more of the acquisition criteria listed below.

Exchange would be used as the preferred method of acquisition. Direct purchase would be limited to cases where no practical alternatives exist and high public values would be acquired.

Lands would be considered for acquisition if one of more of the following criteria is met and acquisition would:

- Facilitate access to public lands and resources
- Maintain or enhance the manageability of public lands and resources
- Maintain or enhance important public values and uses, especially

- o Special Status Species plant, animal and fish habitats
- o Significant cultural resources
- o Significant recreational opportunities
- o Traditional plant use areas or other properties important to Native Americans
- Maintain or enhance local social and economic conditions
- Facilitate implementation of other goals and objectives in the RMP

Avoid the following when considering acquisition proposals:

Acquiring lands or interests in lands that present management problems that outweigh the expected benefits of such an acquisition, including but not limited to:

- presence of hazardous materials
- abundance of noxious weeds
- access situation is inadequate for managing the property for the purpose(s) for which it would be obtained, etc.
- acquisition of small, isolated tracts

APPENDIX H ACQUISITION CRITERIA

INTRODUCTION

The purpose of this document is to provide a clear and concise overview of the acquisition criteria for the project. This document is intended to be used as a reference for all project team members and to ensure that all acquisition activities are conducted in a consistent and transparent manner.

The acquisition criteria are based on the following principles:

- Fairness: All potential suppliers must be given an equal opportunity to compete for the contract.
- Transparency: The acquisition process must be open and transparent, with all decisions and actions clearly documented.
- Efficiency: The acquisition process must be efficient and cost-effective, with minimal delays and administrative burden.
- Quality: The acquisition process must ensure that the highest quality goods and services are acquired for the project.

The acquisition criteria are organized into the following sections:

- General Requirements: These requirements apply to all acquisitions and include the basic principles of fairness, transparency, efficiency, and quality.
- Specific Requirements: These requirements are specific to the type of goods or services being acquired and are based on the project's needs and objectives.
- Evaluation Criteria: These criteria are used to evaluate the proposals received from potential suppliers and to select the most suitable supplier for the contract.

The acquisition criteria are intended to be used as a guide for all project team members and to ensure that all acquisition activities are conducted in a consistent and transparent manner. It is the responsibility of the project team to ensure that the acquisition criteria are followed and that the acquisition process is fair, transparent, efficient, and cost-effective.

- The acquisition criteria are based on the following principles:
- The acquisition criteria are organized into the following sections:
- The acquisition criteria are intended to be used as a guide for all project team members and to ensure that all acquisition activities are conducted in a consistent and transparent manner.

The purpose of this document is to provide a clear and concise overview of the acquisition criteria for the project. This document is intended to be used as a reference for all project team members and to ensure that all acquisition activities are conducted in a consistent and transparent manner.

The acquisition criteria are based on the following principles:

- Fairness: All potential suppliers must be given an equal opportunity to compete for the contract.
- Transparency: The acquisition process must be open and transparent, with all decisions and actions clearly documented.
- Efficiency: The acquisition process must be efficient and cost-effective, with minimal delays and administrative burden.
- Quality: The acquisition process must ensure that the highest quality goods and services are acquired for the project.

The acquisition criteria are organized into the following sections:

- General Requirements: These requirements apply to all acquisitions and include the basic principles of fairness, transparency, efficiency, and quality.
- Specific Requirements: These requirements are specific to the type of goods or services being acquired and are based on the project's needs and objectives.
- Evaluation Criteria: These criteria are used to evaluate the proposals received from potential suppliers and to select the most suitable supplier for the contract.

The acquisition criteria are intended to be used as a guide for all project team members and to ensure that all acquisition activities are conducted in a consistent and transparent manner. It is the responsibility of the project team to ensure that the acquisition criteria are followed and that the acquisition process is fair, transparent, efficient, and cost-effective.

APPENDIX I **PUBLIC LANDS AVAILABLE FOR DISPOSAL** **(CATEGORY 3)**

<u>Legal Description (Principal Meridian Montana)</u>			<u>Acreage</u>
T. 1N., R. 3W.,	Section 32:	Lot 8	0.17
		Lot 9	7.35
		Lot 10	0.003
		Lot 11	0.008
		Lot 15	0.008
		Lot 17	1.14
T. 1S., R. 1W.,	Section 7:	Lot 6	2.29
	Section 17:	Lot 6	0.08
	Section 18:	Lot 6	5.44
		Lot 8	0.02
		Lot 14	5.95
		Lot 15	0.25
		Lot 16	0.67
		Lot 17	0.01
		Lot 25	32.45
		Lot 26	3.64
T. 3S., R. 1W.,	Section 3:	Lot 1	43.02
		Lot 2	43.04
	Section 6:	Lot 13	11.11
		Lot 14	0.54
		Lot 15	0.01
	Section 7:	Lot 6	18.68
		Lot 7	2.10
	S1/2 SW1/4 NE1/4		20.00
	SE1/4 SE1/4 SW1/4 NW1/4		2.50
	NE1/4 SE1/4 SE1/4 NW1/4		2.50
	Section 10 & 11: Segregated Survey		57.48 (estimate)
	Section 11:	Lot 1	39.85
	Section 18:	Segregated Survey within Lot 8	1.21 (estimate)
	Section 25:	NE1/4 SE1/4	40.00
	Section 31:		9.10 (GIS Computed)
	That portion of the N1/2 bounded by the area within Patent #33168 and #24180 on the east, #24121 on the south, and #19127 and #38232 on the west.		
T. 4S., R. 1W.,	Section 32:	Lot 4	1.16
		Lot 5	1.21
		Lot 8	0.59
		Lot 10	0.02
		Lot 11	20.79
	Section 35:	SW1/4 SW1/4	40.00
	Section 2:	SW1/4 NE1/4 and NW1/4 SE1/4	80.00

T. 8S., R. 1W.,	Section 33:		121.38	
	That portion of the NE1/4 excluding the area within Patent #374294 and #374295			
T. 9S., R. 1W.,	Section 4:	Lot 1	47.34	
T. 2.S., R. 2W.,	Section 36:	Lot 1	11.34	
		Lot 2	22.44	
		N1/2 N1/2 SE1/4	40.00	
T. 3S., R. 2W.,	Sections 1, 2, 12 and 13: All segregated surveys		238.26	(GIS Computed)
	Section 13:	Lot 1	10.39	
T.4S., R.2W.,	Section 10:	Lot 2	17.74	
		Lot 3	20.90	
		Lot 4	10.78	
		Lot 17	2.30	
		S1/2 SW1/4 SE1/4	20.00	
	Section 35:	SE1/4 NW1/4	40.00	
T. 5S., R. 2W.,	Section 18:	S1/2 SE1/4	80.00	
T.13S., R. 2W.,	Section 17:	NE1/4 NE1/4	40.00	
T. 2S., R. 3W.,	Section 14:		0.90	(GIS Computed)
	That portion of the NW1/4 bounded by the area within Patent #19133 on the north, #6802 on the east, and #40163 on the west.			
	Section 15:	Lot 3	0.07	
		Lot 4	0.28	
		Lot 5	0.70	
		Lot 6	0.21	
		Lot 7	0.02	
		Lot 9	0.56	
		Lot 10	0.13	
	That portion of the W1/2 bounded by the area within Patent #34359 on the northeast, #18505 on the northwest, #40223 on the southwest, and #33479 on the southeast.			
			0.43	(GIS computed)
	Section 23:	Lot 7	24.79	
	That portion of the S1/2 bounded by the area within Patent #26937 on the north and south, and #879848 and #508907 on the east.			
			0.49	(GIS computed)
T. 6S., R. 3W.,	Section 1:	S1/2 SW1/4	80.00	
	Section 2:	Lot 2	41.30	
	Section 7:	Lot 5	9.24	
	Section 8:	Lot 1	21.87	
		Lot 2 unpatented portion	13.55	(estimate)
		NW1/4 NE1/4 SW1/4	10.00	
	Section 13:	SW1/4 SW1/4	40.00	
	Section 14:	S1/2 NE1/4	80.00	
	Section 17:	SW1/4 NW1/4 NE1/4	10.00	
	Sections 29 and 32:		21.60	(GIS Computed)
	Segregated survey bounded by the area within Patent #1058925 in Section 29 and bounded by the area within Patent #1067936 in Section 32.			

T. 4S., R. 4W.,	Section 19:	W1/2 NW1/4 SE1/4	15.46	(GIS computed)
		excluding the area lying within Patent #934430		
	Section 31:	SE1/4	160.00	
T. 6S., R. 4W.,	Section 13:	S1/2 S1/2 NW1/4 NE1/4	10.00	
	Section 14:	N1/2 SW1/4 NW1/4 NE1/4	5.00	
		S1/2 S1/2 N1/2 NE1/4	20.00	
		SE1/4 NE1/4	40.00	
		SE1/4 SE1/4	40.00	
	Section 24:	W1/2 NW1/4	80.00	
T. 3S., R. 5W.,	Section 3:	Lot 14	0.06	
T. 4S., R. 5W.,	Section 13:	NW1/4 SE1/4	40.00	
T. 7S., R. 6W.,	Section 21:	Lot 21	0.06	
		Lot 22	7.15	
		Lot 23	1.69	
		Lot 24	0.29	
	Section 28:	Lot 7	3.61	
T. 9S., R. 6W.,	Section 27:	SW1/4 SW1/4	40.00	
T. 12S., R. 6W.,	Section 4:	NW1/4 SE1/4	40.00	
T. 13S., R. 6W.,	Section 7:	NE1/4 SW1/4	40.00	
T. 4S., R. 7W.,	Section 30:	SE1/4 SE1/4 SE1/4	10.00	
	Section 32:	SW1/4 SW1/4	40.00	
T. 6S., R. 7W.,	Section 34:	NW1/4 NE1/4	40.00	
T. 7S., R. 7W.,	Section 2:	NE1/4 SE1/4	40.00	
	Section 26:	SE1/4 SW1/4	40.00	
	Section 27:	NW1/4 SE1/4	40.00	
	Section 35:	NW1/4 NW1/4	40.00	
T. 8S., R. 7W.,	Section 20:	SW1/4 SW1/4	40.00	
T. 3S., R. 8W.,	Section 6:	Lot 3	39.65	
		Lot 4	32.74	
		Lot 5	32.48	
		SE1/4 NW1/4	40.00	
	Section 19:	NE1/4 SW1/4 and NW1/4 SE1/4	80.00	
	Section 30:	NE1/4 SW1/4	40.00	
T. 4S., R. 8W.,	Section 2:	Lot 1	46.42	
	Section 29:	SW1/4 NW1/4 NW1/4 and W1/2 SE1/4 SE1/4	30.00	
T. 12S., R. 8W.,	Section 26:	NW1/4 NE1/4	40.00	
	Section 35:	SE1/4 NE1/4	40.00	
T. 14S., R. 8W.,	Section 9:	NW1/4 SE1/4	40.00	
T. 3S., R. 9W.,	Section 1:	Lot 3	39.39	
		S1/2 N1/2	160.00	
	Section 12:	E1/2 NE1/4 and NE1/4 SE1/4	120.00	
T. 7S., R. 9W.,	Section 14:	Lot 4	37.30	
	Section 17:	NE1/4 SW1/4	40.00	
T. 9S., R. 9W.,	Section 21:	NW1/4 NE1/4	40.00	
T. 12S., R. 9W.,	Section 34:	NE1/4 NE1/4	40.00	
T. 14S., R. 9W.,	Section 25:	SE1/4 NW1/4	40.00	
T. 6S., R. 10W.,	Section 29:	Lot 11	0.06	
		Lot 12	0.02	
		That portion of the SW1/4 bounded by the area within Patent # 47031 on the east, #10972 on the south, and #357006 on the west.	0.01	(estimate)

	Section 30:	Lot 7	1.05	
		Lot 11	0.11	
		Lot 12	0.23	
T. 9S., R. 10W.,	Section 20:	NE1/4 NW1/4	40.00	
	Section 27:	W1/2 SW1/4	80.00	
T. 10S., R. 10W.,	Section 23:	SW1/4 NE1/4	40.00	
T. 14S., R. 10W.,	Section 10:	E1/2 SW1/4 SE1/4	20.00	
T. 7S., R. 11W.,	Section 33:	Lot 2	0.13	
T. 5S., R. 12W.,	Section 33:	Lot 1	17.55	
		Lot 2	0.89	
		Lot 3	0.15	
T. 6S., R. 12W.,	Section 8:		1.8	(GIS computed)
	That portion of the NW1/4 bounded by the areas within Patent #876062 on the east, #1006928 on the north, and #259621 and #536141 on the west.			
T. 10S., R. 12W.,	Section 19:	Lot 1	38.37	
	Section 31:	Lot 2	38.15	
		Lot 3	38.42	
T. 5S., R. 14W.,	Section 20:	SE1/4 NE1/4	40.00	
	Section 32:	SE1/4 SW1/4	40.00	
T. 9S., R. 14W.,	Section 1:	Lot 1	39.87	
T. 3S., R. 16W.,	Section 3:	NE1/4 NE1/4	40.00	
T. 3S., R. 1E.,	Section 5:	Segregated survey bounded by Lots 5 & 6	11.60	(GIS computed)
	Section 8:	Segregated survey bounded by Lots 14, 15, and the area within Patent #22932.	3.10	(GIS computed)
		Lot 16	0.53	
		Lot 18	40.63	
T. 8S., R. 1E.,	Section 28:	N1/2 N1/2	160.00	
T. 14S., R. 1E.,	Section 23:	NW1/4 NE1/4	40.00	
T. 2S., R. 2E.,	Section 34:	Lot 2	0.36	

APPENDIX J

EXISTING WITHDRAWAL DESCRIPTIONS

A withdrawal is a formal action that sets aside, withholds, or reserves Federal lands by administrative order or statute for public purposes. The effect of a withdrawal is to accomplish one or more of the following:

- Segregates (closes) Federal land to the operation of all or some of the public land laws and/or mineral laws
- Transfers total or partial jurisdiction of Federal land between Federal agencies
- Dedicates Federal land for a specific public purpose

Withdrawals can be categorized into three major types including:

- Congressional - legislative withdrawals made by Congress in the form of public laws. Examples include designation for wild and scenic rivers or wilderness
- Administrative – withdrawals made by the President, Secretary of Interior, or other officers of the executive branch of the Federal Government. Examples include stock driveways and public water reserves
- Federal Power Act – power project withdrawals established under the Federal Power Act of June 10, 1920. These withdrawals are automatically created upon the filing of an application for hydroelectric power development with the Federal Energy Regulatory Commission (FERC)

The following existing withdrawals are depicted on Map 16 in the Approved Plan.

BLM Recreation Sites: These include several administrative withdrawals for the Deadwood Gulch, Shearing Pen, Red Mountain, Ennis Lake, Ruby Reservoir, Ruby Creek and South Madison recreation sites as well as the Bear Trap Canyon Recreation Area. All of these sites are withdrawn from surface disposal and mining, but not from mineral leasing. The Bear Trap Canyon Recreation Area is also withdrawn from mineral leasing.

Public Water Reserves: These include a number of administrative withdrawal actions over the years for spring areas set aside for public use. These areas are scattered throughout the planning area and are withdrawn from surface disposal and nonmetalliferous mining, but not from metalliferous mining and mineral leasing.

BLM Protective Withdrawals: These include two administrative withdrawals on lands acquired for wetland, riparian, recreation, and wildlife values. One is located along the Beaverhead River about eleven miles south of Dillon, and the other is located in the Axolotl Lakes area about five

miles southeast of Virginia City. The properties are withdrawn from surface disposal and mining, but not from mineral leasing.

Reservoir Site Reserve: This consists of a single administrative withdrawal for Lima Reservoir located in the southern portion of the planning area near the Montana-Idaho border. The lands are withdrawn from surface disposal and nonmetalliferous mining, but not from metalliferous mining and mineral leasing.

USFS Administrative Sites: These are administrative withdrawals for U.S. Forest Service administrative sites located outside Forest Service boundaries including the Wisdom, Jackson, Bloody Dick, and Madison River (Ennis Horse Pasture) sites. The Wisdom and Madison River (Ennis Horse Pasture) sites are withdrawn from surface disposal and mining, while the Jackson and Bloody Dick sites are withdrawn from surface disposal and nonmetalliferous mining. None of these sites is withdrawn from mineral leasing.

Bureau of Reclamation: There are two separate reclamation withdrawals for the Clark Canyon Project located at or in the general vicinity of Clark Canyon Reservoir southwest of Dillon. The lands are withdrawn from surface disposal and mining, but not from mineral leasing.

Air Navigation Site: This is a single administrative withdrawal for an air navigation site located about twelve miles southwest of Dillon. It's withdrawn from surface disposal and mining, but not from mineral leasing.

Power Site Reserves and Classifications: There are numerous powersite reserves and classifications within the planning area. These are administrative withdrawals that protect water/power development potential and are located in three general areas including along portions of the Big Hole River about 15 miles north of Dillon, along the Red Rock River in the general vicinity of Lima Reservoir, and along the Madison River. Generally speaking, these sites are withdrawn from surface disposal only.

FERC Power Projects: There are two main FERC Power Project withdrawals affecting BLM lands within the planning area. One withdrawal is for FERC Project No. 2188, a hydropower development on the Madison River about eleven miles northeast of Ennis. The second withdrawal is for FERC Project No. 9482, a hydropower project on Wisconsin Creek and Noble Fork about five miles northeast of Sheridan. These withdrawals are administered by FERC.

Lands included in an application for hydroelectric power development with FERC are automatically segregated from surface disposal. At the time FERC issues a license or preliminary permit, the lands are automatically closed to location and entry under the mining laws, but are still available for mineral leasing.

Lee Metcalf Wilderness–Bear Trap Unit: This is a Congressional withdrawal located along the Madison River and adjacent public lands between Ennis Lake on the south and the Warm Springs recreation site on the north. The lands are withdrawn from surface disposal, mining, and mineral leasing.

APPENDIX K

OIL AND GAS STIPULATIONS AND LEASE NOTICES

STIPULATIONS

Resource: Sage Grouse Winter/Spring Range

Stipulation: Timing Limitation. No activity from December 1 through May 15 within winter and spring range for sage grouse.

Objective: To protect sage grouse winter range from disturbance during the winter/spring season, and to facilitate long-term maintenance of wildlife populations.

Exception: An exception to this stipulation may be granted by the authorized officer in consultation with FWP, if the operator submits a plan that demonstrates that impacts from the proposed action are minimal or can be adequately mitigated.

Modification: The boundaries of the stipulated area may be modified if the authorized officer determines that portions of the area no longer contain sage grouse winter/spring range. The dates for the timing restriction may be modified if new information indicates that the December 1 through May 15 dates are not valid for the leasehold.

Waiver: This stipulation may be waived if the authorized officer determines that the entire leasehold sage grouse winter/spring range, or if in coordination with FWP, determines that the area is not critical for sage grouse.

Resource: Sage Grouse Strutting Grounds (Leks)

Stipulation: No Surface Occupancy. Activity is prohibited within 1/4 mile of sage grouse leks.

Objective: To protect sage grouse strutting grounds and leks to maintain regional sage grouse populations.

Exception: An exception to this stipulated area may be modified if the authorized officer determines that portions of the area can be occupied without adversely affecting sage grouse leks.

Modification: The boundaries of the stipulated area may be modified if the authorized officer determines that portions of the area can be occupied without adversely affecting sage grouse leks.

Waiver: The stipulation may be waived if the authorized officer, in consultation with FWP, determines that the entire leasehold can be occupied without adversely affecting sage grouse leks.

Resource: Sage Grouse Breeding Habitat

Stipulation: Timing Limitation. Activity is restricted from March 1 through June 30 in nesting and early brood-rearing habitat (defined as within three miles of leks).

Objective: To protect sage grouse leks and breeding habitat necessary for long-term maintenance of regional sage grouse populations.

Exception: An exception to this stipulation may be granted by the authorized officer if the operator submits a plan that demonstrates that impacts from the proposed action are minimal or can be adequately mitigated.

Modification: The boundaries of the stipulated area may be modified if the authorized officer determines that portions of the area can be occupied without adversely affecting sage grouse leks.

Waiver: This stipulation may be waived if the authorized officer, in consultation with FWP, determines that the entire leasehold can be occupied without adversely affecting sage grouse leks or the surrounding breeding habitat.

Resource: **State Game Ranges (4)**

Stipulation: No Surface Occupancy. Activity is prohibited within the boundary of State Game Ranges administered by FWP.

Objective: To protect FWP elk winter range necessary for long-term maintenance of regional elk populations.

Exception: None.

Modification: None.

Waiver: None.

Resource: **Big Game Winter/Spring Range**

Stipulation: Timing Limitation. No activity from December 1 through May 15 within winter range for wildlife.

Objective: To protect mule deer, elk, antelope, and moose winter range from disturbance during the winter/spring season, and to facilitate long-term maintenance of wildlife populations.

Exception: An exception to this stipulation may be granted by the authorized officer in consultation with FWP, if the operator submits a plan that demonstrates that impacts from the proposed action are minimal or can be adequately mitigated.

Modification: The boundaries of the stipulated area may be modified if the authorized officer, in consultation with FWP, determines that portions of the area no longer contain wildlife winter/spring range. The dates for the timing restriction may be modified if new wildlife use information indicates that the December 1 through May 15 dates are not valid for the leasehold.

Waiver: This stipulation may be waived if the authorized officer, in consultation with FWP, determines that the entire leasehold no longer contains winter/spring range for wildlife.

Resource: **Elk Calving/Big Game Birthing Areas**

Stipulation: Timing Limitation. Activity is prohibited from April 1 through June 30 in big game birthing areas.

Objective: To protect mule deer, elk, antelope, and moose birthing areas from disturbance and facilitate long-term maintenance of wildlife populations.

Exception: An exception to this stipulation may be granted by the authorized officer if the operator submits a plan that demonstrates that impacts from the proposed action are acceptable or can be adequately mitigated.

Modification: The boundaries of the stipulated area may be modified if the authorized officer determines that portions of the area no longer contain birthing habitat for big game species. The dates for the timing restriction may be modified if new wildlife use information indicates that the dates are not valid for the leasehold.

Waiver: This stipulation may be waived if the authorized officer, in consultation with FWP, determines that the entire leasehold no longer contains big game birthing areas.

<u>Resource:</u>	Bighorn Sheep Yearlong Range
Stipulation:	Timing Limitation. Activity is prohibited from November 1 through June 30 in bighorn rutting, winter and lambing habitat.
Objective:	To protect bighorn rutting, winter and lambing habitat from disturbance and facilitate long-term maintenance of bighorn sheep populations.
Exception:	An exception to this stipulation may be granted by the authorized officer if the operator submits a plan that demonstrates that impacts from the proposed action are minimal or can be adequately mitigated.
Modification:	The boundaries of the stipulated area may be modified if the authorized officer determines that portions of the area no longer contain rutting, winter and lambing habitat for bighorn sheep. The dates for the timing restriction may be modified if new wildlife use information indicates that the November 1 through June 30 dates are not valid for the leasehold.
Waiver:	This stipulation may be waived if the authorized officer, in consultation with FWP, determines that the entire leasehold no longer contains bighorn sheep rutting, winter or lambing areas.
<u>Resource:</u>	Bighorn Sheep Core Areas
Stipulation:	No Surface Occupancy. Activity is prohibited within the bighorn sheep core areas in the Hidden Pasture area and the Greenhorn Mountains Reintroduction Area.
Objective:	To protect bighorn sheep yearlong habitat necessary for long-term maintenance of the Tendoy and Greenhorn Mountains bighorn sheep populations.
Exception:	An exception to this stipulation may be granted by the authorized officer, in consultation with FWP, if the operator submits a plan which demonstrates that impacts from the proposed action are minimal or can be adequately mitigated.
Modification:	The boundaries of the stipulated area may be modified if the authorized officer, in consultation with FWP, determines that portions of the HMP/Reintroduction area can be occupied without adversely affecting bighorn sheep use.
Waiver:	This stipulation may be waived if the authorized officer, in consultation with FWP, determines that the entire leasehold can be occupied without adversely affecting bighorn sheep use in the HMP or reintroduction areas.
<u>Resource:</u>	Bald Eagle Nest Sites/Breeding Habitat
Stipulation:	No Surface Occupancy. Activity is prohibited within 1/2 mile of bald eagle nest sites and within bald eagle nesting habitat in riparian areas.
Objective:	To protect bald eagle nesting sites and/or breeding habitat in accordance with the Endangered Species Act and the Montana Bald Eagle Management Plan.
Exception:	An exception may be granted by the authorized officer if the operator submits a plan which demonstrates that the proposed action will not affect the bald eagle or its habitat. If the authorized officer determines that the action may have an adverse affect, the operator may submit a plan demonstrating that the impacts can be adequately mitigated. This plan must be approved by BLM in consultation with the USFWS.
Modification:	The boundaries of the stipulated area may be modified if the authorized officer, in consultation with USFWS, determines that portions of the area can be occupied without adversely affecting bald eagles nest sites or nesting areas.

Waiver: This stipulation may be waived if the authorized officer, in consultation with USFWS, determines that the entire leasehold can be occupied without adversely affecting bald eagle nest sites or nesting habitat.

Resource: **Bald Eagle Nest Sites/Breeding Habitat**

Stipulation: Timing Limitation. No activity is allowed from February 1 through August 31 in a one mile radius around bald eagle nest sites.

Objective: To protect bald eagle nesting site and/or breeding habitat in accordance with the Endangered Species Act and the Montana Bald Eagle Management Plan.

Exception: An exception may be granted by the authorized officer if the operator submits a plan which demonstrates that the proposed action will not affect the bald eagle or its habitat. If the authorized officer determines that the action may have an adverse affect, the operator may submit a plan demonstrating that the impacts can be adequately mitigated. This plan must be approved by BLM in consultation with the USFWS.

Modification: The boundaries of the stipulated area may be modified if the authorized officer, in consultation with USFWS, determines that portions of the area can be occupied without adversely affecting bald eagle nest sites or nesting habitat.

Waiver: This stipulation may be waived if the authorized officer, in consultation with USFWS, determines that the entire leasehold can be occupied without adversely affecting bald eagle nest sites or nesting habitat.

Resource: **Raptor Breeding Territories (Golden eagle, Prairie falcon, Swainson's hawk)**

Stipulation: Timing Limitation. No activity from March 1 through July 31, within 1/2 mile of raptor nest sites which have been active within the past five years.

Objective: To protect reproductive potential of breeding habitat for special status raptors.

Exception: An exception to this stipulation may be granted by the authorized officer if the operator submits a plan that demonstrates the impacts from the proposed action are minimal or can be adequately mitigated.

Modification: The boundaries of the stipulated area may be modified if the authorized officer determines that portions of the area no longer are within one mile of raptor nest sites. The dates for the timing restriction may be modified if new information indicates that the dates are not valid for the leasehold.

Waiver: This stipulation may be waived if the authorized officer determines that the entire leasehold no longer is within one mile of nest sites.

Resource: **Waterfowl Production/Molting Areas**

Stipulations: Timing Limitation. No activity permitted from April 1 through August 31 within 1/2 mile of waterfowl production and molting areas.

Objective: To protect waterfowl production and molting areas from disturbance and facilitate long-term maintenance of waterfowl populations.

Exception: An exception to this stipulation may be granted by the authorized officer if the operator submits a plan that demonstrates that impacts from the proposed action are minimal or can be adequately mitigated.

Modification:	The boundaries of the stipulated area may be modified if the authorized officer determines that portions of the area no longer provides for waterfowl production or molting. The dates for the timing restriction may be modified if new wildlife use information indicates that the dates are not valid for the leasehold.
Waiver:	This stipulation may be waived if the authorized officer determines that the entire leasehold no longer provides waterfowl production or molting habitat.
<u>Resource:</u>	NAWCA/IMWJV Wetland Projects
Stipulation:	No Surface Occupancy. Activity is prohibited within 1/2 mile of NAWCA/IMWJV Wetland Projects.
Objective:	To protect wetland habitat areas and adjacent nesting areas acquired/developed through NAWCA/IMWJV partnerships necessary for long-term maintenance of regional populations of waterfowl and wetland dependent species.
Exception:	An exception to this stipulation may be granted by the authorized officer if the operator submits a plan that demonstrates that impacts from the proposed action are minimal or can be adequately mitigated.
Modification:	The boundaries of the stipulated area may be modified if the authorized officer determines that portions of the area can be occupied without adversely affecting wetland habitat and dependent species.
Waiver:	None.
<u>Resource:</u>	Peregrine Falcon Nest Sites/Breeding Habitat
Stipulation:	No Surface Occupancy. Activity is prohibited within one mile of peregrine falcon nest sites.
Objective:	To protect peregrine falcon nesting sites and/or breeding habitat.
Exception:	An exception may be granted by the authorized officer if the operator submits a plan that demonstrates that the proposed action will not affect the peregrine falcon or its habitat. If the authorized officer determines that the action may have an adverse affect, the operator may submit a plan demonstrating that the impacts can be adequately mitigated. This plan must be approved by BLM in consultation with USFWS.
Modification:	The boundaries of the stipulated area may be modified if the authorized officer, in consultation with USFWS, determines that portions of the area can be occupied without adversely affecting peregrine falcon nest sites or breeding habitat.
Waiver:	This stipulation may be waived if the authorized officer, in consultation with USFWS, determines that the entire leasehold can be occupied without adversely affecting peregrine falcon nest sites or breeding habitat.
<u>Resource:</u>	Ferruginous Hawks
Stipulation:	No Surface Occupancy. Activity is prohibited within 1/2 mile of ferruginous hawk nest sites.
Objective:	To maintain the reproductive potential of ferruginous hawk nest sites.
Exception:	An exception to this stipulation may be granted by the authorized officer if the operator submits a plan that demonstrated that the impacts from the proposed action are minimal or can be adequately mitigated.

Modification:	The boundaries of the stipulated area may be modified if the authorized officer determines that portions of the area can be occupied without adversely affecting the production potential of ferruginous hawk nest sites.
Waiver:	This stipulation may be waived if the authorized officer determines that the entire leasehold can be occupied without adversely affecting the production potential of ferruginous hawk nest sites.
<u>Resource:</u>	Ferruginous Hawk Breeding Territories
Stipulation:	Timing Limitation. No activity is permitted from March 1 to August 31 within one mile of hawk nest sites that have been active within the past five years.
Objective:	To protect reproductive potential of breeding habitat for special status raptors.
Exception:	An exception to this stipulation may be granted by the authorized officer of the operator submits a plan that demonstrates the impacts from the proposed action are minimal or can be adequately mitigated.
Modification:	The boundaries of the stipulated area may be modified if the authorized officer determines that portions of the area no longer are within one mile of raptor nest sites. The dates for the timing restriction may be modified if new information indicates that the dates are not valid for the leasehold.
Waiver:	This stipulation may be waived if the authorized officer determines that the entire leasehold no longer is within one mile of ferruginous nest sites.
<u>Resource:</u>	Threatened, Endangered, and Special Status Species
Stipulation:	The lease area may now or hereafter contain plants, animals, or their habitats determined to be threatened, endangered, or other special status species. BLM may recommend modifications to exploration and development proposals to further its conservation and management objective to avoid BLM-approved activity that will contribute to a need to list such a species or their habitat. BLM may require modifications to or disapprove proposed activity that is likely to result in jeopardy to the continued existence of a proposed or listed threatened or endangered species or result in the destruction or adverse modification of a designated or proposed critical habitat. BLM will not approve any ground-disturbing activity that may affect any such species or requirements of the Endangered Species Act as amended, 16 U.S.C. § 1531 <i>et seq.</i> , including completion of any required procedure for conference or consultation.
Objective:	Avoid BLM-approved activity that will contribute to a need to list a species or their habitat as threatened or endangered.
Exception:	None.
Modification:	None.
Waiver:	None.
<u>Resource:</u>	Westslope Cutthroat Trout Habitat (99-100% pure)
Stipulation:	No Surface Occupancy. No activity allowed within 1/2 mile from centerline of stream containing known populations of 99-100% genetically pure westslope cutthroat trout.
Objective:	To ensure healthy aquatic habitat exists in drainages important to the viability of Upper Missouri River Basin Westslope Cutthroat Trout.

Exception:	An exception may be granted after a site assessment is conducted and if the operator can demonstrate in a surface use plan of operations that adverse effects can be eliminated and activities would not affect sensitive trout populations. Apply the following mitigation measures: A) No net increase in sediment over existing condition; and B) No adverse effects on water quality and quantity.
Modification:	None.
Waiver:	A waiver may be granted if the Montana Department of Fish, Wildlife, and Parks determines the stream is no longer considered important to the viability of the species.
<u>Resource:</u>	Westslope Cutthroat Trout Habitat (90 up to 99% pure)
Stipulation:	Controlled Surface Use. Activities within 1/2 mile of streams containing 90 up to 99% genetically pure westslope cutthroat trout may be relocated, require special design, or require on and off site mitigation measures to prevent impacts to sensitive trout populations.
Objective:	To prevent sensitive aquatic habitat and trout populations from being impacted.
Exception:	An exemption may be granted after a site assessment is conducted and if the operator can demonstrate in a surface use plan of operations that adverse effects can be eliminated and activities would not affect sensitive trout populations. Apply the following mitigation measures: A) No net increase in sediment over existing condition. B) No adverse effects on water quality and quantity.
Modifications:	None
Waiver:	A waiver may be granted if the Montana Department of Fish, Wildlife and Parks determines the stream is no longer considered important to the viability of the species.
<u>Resource:</u>	Fluvial and Adfluvial Arctic Grayling Habitat
Stipulation:	No Surface Occupancy. Activities within 1/2 mile from centerline of occupied or influencing habitat, including the North Fork of the Big Hole River, the Big Hole, the Beaverhead and Ruby Rivers, and tributaries to Upper Red Rock Lake are prohibited.
Objective:	To ensure healthy aquatic habitat exists along rivers and tributaries important to the viability of fluvial and adfluvial arctic grayling.
Exception:	An exception may be granted if the Montana Department of Fish, Wildlife and Parks determines the Ruby and Beaverhead Rivers are no longer viable recovery sites. The following mitigation measures would apply: A) No net increase in sediment over existing condition; and B) No adverse effects on water quality or quantity.
Modification:	None.
Waiver:	None.
<u>Resource:</u>	Class 1 Fisheries
Stipulation:	No Surface Occupancy. Activity is prohibited within 1/2 mile from the centerline of Class 1 fishery streams (Blue Ribbon trout streams).
Objective:	To ensure healthy aquatic habitat are maintained along Class 1 fisheries.

Exception:	An exception may be granted if Montana Department of Fish, Wildlife, and Parks modify the Class 1 fisheries rating. Application of the following mitigation measures apply: A) No net increase in sediment over existing condition; and B) No adverse effects on water quality and quantity.
Modification:	None.
Waiver:	None.
<u>Resource:</u>	Developed Recreation Sites
Stipulation:	No Surface Occupancy. Surface occupancy and use is prohibited within 1/2 mile of developed recreation sites. Currently developed recreation sites include: Axolotl Lakes cabin and fishing access, Deadwood Gulch campground, Big Sheep Creek Back Country Byway, Maiden Rock boat launch, East Fork Blacktail Deer Creek Campground, Ney Ranch Recreation Site, Palisades Recreation Site, Red Mountain Day Use, Red Mountain Campground, Warm Springs Day Use, Bear Trap Wilderness Trailhead, Bear Trap Boat Launch, Fall Creek Day Use, Trail Creek Day Use, Kobayashi Beach, Ruby Creek Campground, Klutes Landing, and Shoshone Ridge.
Objective:	To recognize and protect the public's opportunity for quality recreation experiences at those sites developed for that purpose. Since BLM recreation sites are generally developed to support the use of the surrounding lands, the one half mile buffer offers some protection for perpetuating those opportunities for which the site was developed, as well as protecting capital investments at the site.
Exception:	An exception may be granted if a site is moved or eliminated.
Modification:	The list of developed recreation sites may be modified if development is removed, or if a currently undeveloped site is developed in the future.
Waiver:	A waiver may be granted if a site is moved or eliminated.
<u>Resource:</u>	Special Recreation Management Areas (SRMAs)
Stipulation:	Controlled Surface Use. Operations within SRMAs must be conducted within a manner that minimizes encounters and conflicts with recreation users. Proposed activities may not alter or depreciate important recreational values located outside of developed areas but within the SRMA boundary.
Objective:	To prevent user conflicts and incompatible uses in areas with high recreational values and significant amounts of recreational activity.
Exception:	An exception to this stipulation may be granted by the authorized officer if the operator submits a plan demonstrating the impacts to recreation values and recreation users are acceptable or can be adequately mitigated.
Modification:	The area affected by this stipulation may be modified by the authorized officer if the boundaries of the SRMA are changed.
Waiver:	None.
<u>Resource:</u>	Vehicle Use Restrictions
Stipulation:	Controlled Surface Use. Oil and gas activities will comply with all motorized vehicle use and travel plan restrictions, including seasonal restrictions and areas closed to motorized travel.
Objective:	To prevent degradation of various resource values protected by travel plan limitations and motorized vehicle use restrictions.

Exception:	An exception to this stipulation may be granted by the authorized officer if the operator submits a plan demonstrating the impacts to values being protected through vehicle use restrictions can be adequately mitigated.
Modification:	None.
Waiver:	None.
<u>Resource:</u>	Cultural Resource Inventory Requirement
Stipulation:	<p>Controlled Surface Use. An inventory of those portions of the leased lands subject to proposed disturbance may be required prior to any surface disturbance to determine if cultural resources are present and to identify needed mitigation measures. Prior to undertaking any surface-disturbing activities on the lands covered by this lease, the lessee or operator shall:</p> <ol style="list-style-type: none"> 1. Contact the Surface Management Agency (SMA) to determine if a cultural resource inventory is required. If an inventory is required, then; 2. The SMA will complete the required inventory; or the lessee or operator, at their option, may engage the services of a cultural resource consultant acceptable to the SMA to conduct a cultural resource inventory of the area of proposed surface disturbance. The operator may elect to inventory an area larger than the standard ten-acre minimum to cover possible site relocation which may result from environmental or other considerations. An acceptable inventory report is to be submitted to the SMA for review and approval no later than that time when an otherwise complete application for approval of drilling or subsequent surface-disturbing operation is submitted. 3. Implement mitigation measures required by the SMA. Mitigation may include the relocation of proposed lease-related activities or other protective measures such as data recovery and extensive recordation. Where impacts to cultural resources cannot be mitigated to the satisfaction of the SMA, surface occupancy on that area must be prohibited. The lessee or operator shall immediately bring to the attention of the SMA any cultural resources discovered as a result of approved operations under this lease, and shall not disturb such discoveries until directed to proceed by the SMA.
Objective:	Compliance with Section 106 of the National Historic Preservation Act is required for all actions which may affect cultural properties eligible to the National Register of Historic Places. Section 6 of the Oil and Gas Lease Terms (Form 3100-11) requires that operations be conducted in a manner that minimizes adverse impacts to cultural and other resources.
Exception:	No exceptions will be granted.
Modification:	No modifications will be granted.
Waiver:	No waivers will be granted.
<u>Resource:</u>	NRHP Eligible Properties/Districts
Stipulation:	No Surface Occupancy. Occupancy and use is prohibited within, and for a distance of 300 feet from the boundaries of cultural properties and archaeological/historic districts determined to be eligible or potentially eligible to the National Register of Historic Places. This includes cultural properties designated for conservation use, scientific use, traditional use, public use, and experimental use. Defined archaeological districts include: Everson Creek/Black Canyon Quarry Complex; Muddy Creek Archaeological District; Lower Beartrap Canyon Archaeological District; and Beaverhead Rock.
Objective:	To protect significant cultural properties and archaeological districts and their settings, and to avoid disturbance or inadvertent impacts to these resources.
Exception:	An exception to this stipulation may be granted by the authorized officer if the lessee or operator submits a plan which demonstrates that the adverse impacts to cultural properties eligible for the National Register of Historic Places, can be mitigated through data recovery, extensive recordation,

or other acceptable means. Where impacts to cultural resources cannot be mitigated to the satisfaction of the Surface Managing Agency, surface occupancy of that area must be prohibited.

Modification: The boundaries of the stipulated area may be modified if the authorized officer determines that portions of the designated site or district can be occupied without adversely affecting the cultural resource values for which the site or area was designated eligible.

Waiver: No waivers will be granted.

Resource: **Traditional Cultural Properties**

Stipulation: No Surface Occupancy. Activity is prohibited within 1/2 mile of the boundaries of cultural properties determined to be of particular importance to Native American groups, determined to be Traditional Cultural Properties, and/or designated for traditional use. Such properties include (but are not limited to) burial locations, pictograph/petroglyph sites, vision quest locations, plant gathering locations, and areas considered sacred or used for religious purposes.

Objective: To avoid disturbance and to protect archaeological properties of known significance to Native American groups, as well as traditional cultural properties, and the setting in which they occur.

Exception: An exception to this stipulation may be granted by the authorized officer if the lessee or operator submits a plan which demonstrates that operations will be designed and/or located in such a manner as to have a minimal impact to the natural setting and characteristics of the immediate area and that adverse impacts to these traditional cultural properties can be mitigated in consultation with, and to the satisfaction of, affected Indian Tribes or Native American Groups.

Modification: No modifications will be granted.

Waiver: No waivers will be granted.

Resource: **Paleontological Resource Inventory Requirement**

Stipulation: Controlled Surface Use. In areas known to have a high potential for containing significant paleontological resources, the Lessee may be required to conduct a paleontological inventory prior to any surface disturbance. If inventory is required, the Lessee must engage the services of a qualified paleontologist, acceptable to the Surface Managing Agency, to conduct the inventory. An acceptable inventory report is to be submitted to the BLM for review and approval at the time a surface-disturbing plan of operations is submitted.

Objective: To preserve and protect significant vertebrate fossils and paleontological locales.

Exception: An exception may be granted if the area has already been inventoried for paleontological resources.

Modification: No modifications will be granted

Waiver: No waiver will be granted.

Resource: **Known Paleontological Resources/Locales**

Stipulation: No Surface Occupancy. Surface occupancy and use is prohibited within known paleontological sites/locales.

Objective: To preserve and protect significant vertebrate fossils and paleontological locales.

Exception: An exception to this stipulation may be granted by the authorized officer if the lessee or operator submits a plan which demonstrates that the adverse impacts to significant paleontological resources can be mitigated through recovery and extensive recordation. Where impacts to paleontological

resources cannot be mitigated to the satisfaction of the Surface Managing Agency, surface occupancy on that area must be prohibited.

Modification: The boundaries of the stipulated area may be modified if the authorized officer determines that portions of the designated paleontological site/locale can be occupied without adversely affecting the resource values.

Waiver: No waiver will be granted.

Resource: **VRM Class II, III & IV Areas**

Stipulation: Controlled Surface Use. All surface disturbing activities and construction of semi-permanent and permanent facilities may require special design including location, painting, and camouflage to blend with the natural surroundings and meet the visual quality objectives for each respective class.

Objective: To control the visual impacts of activities and facilities within acceptable levels.

Exception: None.

Modification: None.

Waiver: None.

Resource: **Special Status Plant Habitats**

Stipulation: Controlled Surface Use. A field inspection will be conducted for special status plant species by the lessee prior to any surface disturbance. A list of special status plant species will be provided to the lessee at the time of the lease. Plant species on the list are subject to change over time as new information becomes available. Plant inventories must be conducted at a time of year when the target species are actively growing and flowering. An acceptable report must be provided to the BLM documenting the presence or absence of special status plants in the area proposed for surface disturbing activities. The findings of this report may result in restrictions to the operator's plans or may preclude use and occupancy.

Objective: Protect and conserve rare plants, associated plant communities and the habitat that supports them.

Exception: An exception may be granted if BLM determines that the portion of the lease identified for surface disturbing activities does not support special status plant species or provide potential habitat for these species.

Modification: The boundaries of the area to be inventoried for special status plants may be modified if BLM determines that a large portion of the lease identified for surface disturbing activities doesn't support special status plant species or provide potential habitat for these species.

Waiver: The field inspection and plant inventory may be waived by the authorized officer if he/she determines that the subject lease occurs in an area with no known populations of special status plant species and that the area doesn't provide habitat for those species.

Resource: **Known or Discovered Special Status Plants or Populations**

Stipulation: No Surface Occupancy. Surface occupancy and use is prohibited within 1/4 mile of special status plant populations.

Objective: Protect and conserve rare plants, associated plant communities and the habitat that supports them.

Exception: Justification for an exception is not apparent at this time.

Modification:	The boundaries of the no surface occupancy area may be modified if BLM determines that land within 1/4 mile of the special status plant population does not provide potential habitat for those species.
Waiver:	Justification for a waiver is not apparent at this time.
<u>Resource:</u>	Wetlands, Floodplains, and Riparian Areas
Stipulation:	No Surface Occupancy. Activity is prohibited within wetlands, floodplains, and riparian areas.
Objective:	To maintain riparian/wetland functions and water quality.
Exception:	An exception to this stipulation may be granted by the authorized officer if the operator submits a plan that demonstrates that impacts from the proposed action are minimal or can be adequately mitigated.
Modification:	None.
Waiver:	None.
<u>Resource:</u>	Active Mass Movement Areas
Stipulation:	No Surface Occupancy. Use and occupancy is prohibited on areas of active mass movement (landslides).
Objectives:	To prevent potential damage to pipelines, well heads, and other facilities from landslides in areas of active mass movement.
Exception:	An exception may be granted if the operator can demonstrate in a plan of operations that adverse effects can be minimized and activities safely conducted.
Modification:	The area affected by this stipulation may be modified by the authorized officer if it is determined that portions of area are not subject to mass movement. This stipulation may be modified by the authorized officer if the lessee provides a detailed engineering design and geologic analysis and a mitigation plan.
Waiver:	This stipulation may be waived by the authorized officer if it is determined that none of the leasehold is subject to mass movement.
<u>Resource:</u>	Slopes $\geq 30\%$
Stipulation:	Controlled Surface Use. Prior to surface disturbance on slopes greater than 30 percent, an engineering/reclamation plan must be approved by the authorized officer. Such plan must demonstrate how the following will be accomplished: <ul style="list-style-type: none"> • Site productivity will be restored. • Surface runoff will be adequately controlled. • Off site areas will be protected from accelerated soil erosion. • Surface disturbing activities will not be conducted during extended wet periods
Objective:	To maintain soil productivity and provide necessary protection to prevent excessive soil erosion on steep slopes.
Exceptions:	An exception may be granted if the operator can demonstrate in a plan of operations that adverse effects can be minimized and activities safely conducted.

Modification:	The area affected by this stipulation may be modified by the authorized officer if it is determined that portions of area do not include slopes over 30 percent, or the operator can demonstrate in a plan of operations that adverse effects can be minimized.
Waiver:	This stipulation may be waived by the authorized officer if it is determined that none of the leasehold contains slopes greater than 30 percent.
<u>Resources:</u>	Designated National Historic Trails – Lewis and Clark and Nez Perce Trail (Nee Me Poo Trail)
Stipulation:	No Surface Occupancy. Surface occupancy and use is prohibited within 1/2 mile of designated National Historic Trails. Designated National Historic Trails include the Lewis and Clark Trail and the Nez Perce (Nee Me Poo) Trail.
Objective:	To preserve and protect designated National Historic Trails and the natural setting in which they occur.
Exception:	No exceptions will be granted.
Modification:	No modifications will be granted.
Waiver:	No waivers will be granted.
<u>Resource:</u>	Continental Divide National Scenic Trail
Stipulation:	No Surface Occupancy. Surface occupancy and use is prohibited within 1/2 mile of the Continental Divide National Scenic Trail.
Objective:	To preserve and protect the existing scenic character of the landscape along the trail.
Exception:	None.
Modification:	None.
Waiver:	None.
<u>Resource:</u>	R&PPs and 2920 Authorizations
Stipulations:	No Surface Occupancy. Surface occupancy and use is prohibited on Recreation and Public Purposes leases and patents and on leases and permits authorized under regulations found at 43 CFR 2920.
Objective:	To protect developed facilities and commercial, recreational, and public uses and prevent incompatible uses on existing authorized areas.
Exception:	An exception to this stipulation may be granted by the authorized officer if the operator submits a plan demonstrating that impacts from the proposed action are acceptable or can be adequately mitigated in coordination with the holder of the land use authorization.
Modification:	The area affected by this stipulation may be modified by the authorized officer if the land use authorization boundaries are modified.
Waiver:	This stipulation may be waived by the authorized officer if all land use authorizations within a leasehold have been terminated, cancelled or relinquished.

NOTICES

Cultural Resources

An inventory of the leased lands may be required prior to surface disturbance to determine if cultural resources are present and to identify needed mitigation measures. Prior to undertaking any surface-disturbing activities on the lands covered by this lease, the lessee or operator shall:

1. Contact the Surface Management Agency (SMA) to determine if a cultural resource inventory is required. If an inventory is required, then;
2. The SMA will complete the required inventory; or the lessee or operator, at their option, may engage the services of a cultural resource consultant acceptable to the SMA to conduct a cultural resource inventory of the area of proposed surface disturbance. The operator may elect to inventory an area larger than the standard ten-acre minimum to cover possible site relocation which may result from environmental or other considerations. An acceptable inventory report is to be submitted to the SMA for review and approval no later than that time when an otherwise complete application for approval of drilling or subsequent surface-disturbing operation is submitted.

3. Implement mitigation measures required by the SMA. Mitigation may include the relocation of proposed lease-related activities or other protective measures such as data recovery and extensive recordation.

The lessee or operator shall immediately bring to the attention of the Surface Management Agency any cultural resources or any other objects of scientific interest discovered as a result of approved operations under this lease, and shall leave such discoveries intact and undisturbed until directed to proceed by the SMA.

Authorities: Compliance with Section 106 of the National Historic Preservation Act is required for all actions which may affect cultural properties eligible to the National Register of Historic Places. Section 6 of the Oil and Gas Lease Terms (Form 3100-11) requires that operations be conducted in a manner that minimizes adverse impacts to cultural and other resources.

Paleontological Resources

The lessee or operator shall immediately bring to the attention of the Surface Management Agency (SMA) any paleontological resources or any other objects of scientific interest discovered as a result of approved operations under this lease, and shall leave such discoveries intact and undisturbed until directed to proceed by the SMA.

APPENDIX L

BUREAU OF RECLAMATION LEASE NOTICE AND STIPULATIONS

Form 3109-1
(December 1972)
(formerly 3103-1)

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

LEASE STIPULATIONS BUREAU OF RECLAMATION

The lessee agrees to maintain, if required by the lessor during the period of this lease, including any extension thereof, an additional bond with qualified sureties in such sum as the lessor, if it considers that the bond required under Section 2(a) is insufficient, may at any time require:

(a) to pay for damages sustained by any reclamation homestead entryman to his crops or improvements caused by drilling or other operations of the lessee, such damages to include the reimbursement of the entryman by the lessee, when he uses or occupies the land of any homestead entryman, for all construction and operation and maintenance charges becoming due during such use or occupation upon any portion of the land so used and occupied;

(b) to pay any damage caused to any reclamation project or water supply thereof by the lessee's failure to comply fully with the requirements of this lease; and

(c) to recompense any nonmineral applicant, entryman, purchaser under the Act of May 16, 1930 (46 Stat. 367), or patentee for all damages to crops or to tangible improvements caused by drilling or other prospecting operation, where any of the lands covered by this lease are embraced in any nonmineral application, entry, or patent under rights initiated prior to the date of this lease, with a reservation of the oil deposits, to the United States pursuant to the Act of July 17, 1914 (38 Stat. 509).

As to any lands covered by this lease within the area of any Government reclamation project, or in proximity thereto, the lessee shall take such precautions as required by the irrigation under such project or to the water supply thereof; *provided* that drilling is prohibited on any constructed works or right-of-way of the Bureau of Reclamation, and *provided, further*, that there is reserved to the lessor, its successors and assigns, the superior and prior right at all times to construct, operate, and maintain dams, dikes, reservoirs, canals, wasteways, laterals, ditches, telephone and telegraph lines, electric transmission lines, roadways, appurtenant irrigation structures, and reclamation works, in which construction, operation, and maintenance, the lessor, its successors and assigns, shall have the right to use any or all of the lands herein described without making compensation therefor, and shall not be responsible for any damage from the presence of water thereon or on account of ordinary, extraordinary, unexpected, or unprecedented floods. That nothing shall be done under this lease to increase the cost of, or interfere in any manner with, the construction, operation, and maintenance of such works. It is agreed by the lessee that, if the construction of any or all of said dams, dikes, reservoirs, canals, wasteways, laterals, ditches, telephone or telegraph lines, electric transmission lines, roadways, appurtenant irrigation structures or reclamation works across, over, or upon said lands should be made more expensive by reason of the existence of the improvements and workings of the lessee thereon, said additional expense is to be estimated by the Secretary of the Interior, whose estimate is to be final and

binding upon the parties hereto, and that within thirty (30) days after demand is made upon the lessee for payment of any such sums, the lessee will make payment thereof to the United States, or its successors, constructing such dams, dikes, reservoirs, canals, wasteways, laterals, ditches, telephone and telegraph lines, electric transmission lines, roadways, appurtenant irrigation structures, or reclamation works, across, over, or upon said lands; *provided, however*, that subject to advance written approval by the United States, the location and course of any improvements or works and appurtenances may be changed by the lessee; *provided, further*, that the reservations, agreements, and conditions contained in the within lease shall be and remain applicable notwithstanding any change in the location or course of said improvements or works of lessee. The lessee further agrees that the United States, its officers, agents, and employees, and its successors and assigns shall not be held liable for any damage to the improvements or workings of the lessee resulting from the construction, operation, and maintenance of any of the works hereinabove enumerated. Nothing in this paragraph shall be construed as in any manner limiting other reservations in favor of the United States contained in this lease.

THE LESSEE FURTHER AGREES That there is reserved to the lessor, its successors and assigns, the prior right to use any of the lands herein leased, to construct, operate, and maintain dams, dikes, reservoirs, canals, wasteways, laterals, ditches, telephone and telegraph lines, electric transmission lines, roadways, or appurtenant irrigation structures, and also the right to remove construction materials therefrom, without any payment made by the lessor or its successors for such right, with the agreement on the part of the lessee that if the construction of any or all of such dams, dikes, reservoirs, canals, wasteways, laterals, ditches, telephone and telegraph lines, electric transmission lines, roadways, or appurtenant irrigation structures across, over, or upon said lands or the removal of construction materials therefrom, should be made more expensive by reason of the existence of improvements or workings of the lessee thereon, such additional expense is to be estimated by the Secretary of the Interior, whose estimate is to be final and binding upon the parties hereto, and that within thirty (30) days after demand is made upon the lessee for payment of any such sums, the lessee will make payment thereof to the United States or its successors constructing such dams, dikes, reservoirs, canals, wasteways, laterals, ditches, telephone and telegraph lines, electric transmission lines, roadways, or appurtenant irrigation structures across, over, or upon said lands or removing construction materials therefrom. The lessee further agrees that the lessor, its officers, agents, and employees and its successors and assigns shall not be held liable for any damage to the improvements or workings of the lessee resulting from the construction, operation, and maintenance of any of the works herein above enumerated. Nothing contained in this paragraph shall be construed as in any manner limiting other reservations in favor of the lessor contained in this lease.

To insure against the contamination of the waters of the _____ Reservoir,
_____, Project, State of _____, the lessee agrees that
the following further conditions shall apply to all drilling and operations on lands covered by this lease,
which lie within the flowage or drainage area of the _____ Reservoir, as such area
is defined by the Bureau of Reclamation:

1. The drilling sites for any and all wells shall be approved by the Superintendent,
Bureau of Reclamation, _____ Project, _____ before
drilling begins. Sites for the construction of pipe-line rights-of-way or other authorized facilities shall also
be approved by the Superintendent before construction begins.

2. All drilling or operation methods or equipment shall, before their employment, be
inspected and approved by the Superintendent of the _____ Project,
_____, and by the supervisor of the U.S. Geological Survey having jurisdiction over the area.

GPO 854-703

GP-135
(02/91)

SPECIAL STIPULATION - BUREAU OF RECLAMATION

To avoid interference with recreation development and/or impacts to fish and wildlife habitat and to assist in preventing damage to any Bureau of Reclamation dams, reservoirs, canals, ditches, laterals, tunnels, and related facilities, and contamination of the water supply therein, the lessee agrees that the following conditions shall apply to all exploration and developmental activities and other operation of the works thereafter on lands covered by this lease:

1. Prior to commencement of any surface-disturbing work including drilling, access road work, and well location construction, a surface use and operations plan will be filed with the appropriate officials. A copy of this plan will be furnished to the Regional Director, Great Plains Region, Bureau of Reclamation, P.O. Box 36900, Billings, MT 59107-6900, for review and consent prior to approval of the plan. Such approval will be conditioned on reasonable requirements needed to prevent soil erosion, water pollution, and unnecessary damages to the surface vegetation and other resources, including cultural resources, of the United States, its lessees, permittees, or licensees, and to provide for the restoration of the land surface and vegetation. The plan shall contain provisions as the Bureau of Reclamation may deem necessary to maintain proper management of the water, recreation, lands structures, and resources, including cultural resources, within the prospecting drilling, or construction area.

Drilling sites for all wells and associated investigations such as seismograph work shall be included in the above-mentioned surface use and operation plan.

If later explorations require departure from or additions to the approved plan, these revisions or amendments, together with a justification statement for proposed revisions, will be submitted for approval to the Regional Director, Great Plains Region, Bureau of Reclamation, or his authorized representative.

Any operations conducted in advance of approval of an original, revised, or amended prospecting plan, or which are not in accordance with an approved plan constitute a violation of the terms of this lease. The Bureau of Reclamation reserves the right to close down operations until such corrective action, as is deemed necessary, is taken by the lessee.

2. No occupancy of the surface of the following excluded areas is authorized by this lease. It is understood and agreed that the use of these areas for Bureau of Reclamation purposes is superior to any other use. The following restrictions apply only to mineral tracts located within the boundary of a Bureau of Reclamation project where the United States owns 100 percent of the fee mineral interest.

- a. Within 500 feet on either side of the centerline of any and all roads or highways within the leased area.
- b. Within 200 feet on either side of the centerline of any and all trails within the leased area.
- c. Within 500 feet of the normal high-water line of any and all live streams in the leased area.
- d. Within 400 feet of any and all recreation developments within the leased area.
- e. Within 400 feet of any improvements either owned, permitted, leased, or otherwise authorized by the Bureau of Reclamation within the leased area.
- f. Within 200 feet of established crop fields, food plots, and tree/shrub plantings within the leased area.
- g. Within 200 feet of slopes steeper than a 2:1 gradient within the leased area.
- h. Within established rights-of-way of canals, laterals, and drainage ditches within the leased area.
- i. Within a minimum of 500 feet horizontal from the centerline of the facility or 50 feet from the outside toe of the canal, lateral, or drain embankment, whichever distance is greater, for irrigation facilities without clearly marked rights-of-way within the leased area.
- j. Providing that appropriate environmental compliance measures can be ensured, and providing further that Reclamation project works and other public interests can be protected, Reclamation may consider, on a case-by-case basis, waiving the requirement specified in Section 2 hereof. **HOWEVER, LESSEES ARE ADVISED THAT OBTAINING SUCH A WAIVER CAN BE A DIFFICULT, TIME CONSUMING, AND COSTLY PROCESS WITH NO GUARANTEE THAT RECLAMATION WILL GRANT THE REQUESTED WAIVER.**

3. No occupancy of the surface or surface drilling will be allowed in the following areas. In addition to, no directional drilling will be allowed that would intersect the subsurface zones delineated by a vertical plane in these areas. The following restrictions apply only to mineral tracts located within the boundary of a Bureau of Reclamation project where the United States owns 100% of the fee mineral interest.

a. Within 1,000 feet of the maximum water surface, as defined in the Standard Operating Procedures (SOP), of any reservoirs and related facilities located within the leased area.

b. Within 2,000 feet of dam embankments and appurtenance structures such as spillway structures, outlet works, etc.

c. Within one-half (1/2) mile horizontal from the centerline of any tunnel within the leased area.

d. Providing that appropriate environmental compliance measures can be ensured, and providing further that Reclamation project works and other public interests can be protected. Reclamation may consider, on a case-by-case basis, waiving the requirements specified in Section 3 hereof. HOWEVER, LESSEES ARE ADVISED THAT OBTAINING SUCH A WAIVER CAN BE A DIFFICULT, TIME CONSUMING, AND COSTLY PROCESS WITH NO GUARANTEE THAT RECLAMATION WILL GRANT THE REQUESTED WAIVER.

4. The distances stated in items 2 and 3 above are intended to be general indicators only. The Bureau of Reclamation reserves the right to revise these distances as needed to protect Bureau of Reclamation facilities.

5. The use of explosives in any manner shall be so controlled that the works and facilities of the United States, its successors and assigns, will in no way be endangered or damaged. In this connection, an explosives use plan shall be submitted to and approved by the Regional Director, Great Plains Region, Bureau of Reclamation, or his authorized representative.

6. The lessee shall be liable for all damage to the property of the United States, its successors and assigns, resulting from the exploration, development, or operation of the works contemplated by this lease, and shall further hold the United States, its successors and assigns, and its officers, agents, and employees, harmless from all claims of third parties for injury or damage sustained or in any way resulting from the exercise of the rights and privileges conferred by this lease.

7. The lessee shall be liable for all damage to crops or improvements of any entryman, nonmineral applicant, or patentee, their successors and assigns, caused by or resulting from the drilling or other operations of the lessee, including reimbursement of any entryman or patentee, their successors and assigns, for all construction, operation, and maintenance charges becoming due on any portion of their said lands damaged as a result of the drilling or other operations of the lessee.

8. In addition to any other bond required under the provisions of this lease, the lessee shall provide such bond as the United States may at any time require for damages which may arise under the liability provisions of sections six (6) and seven (7) above.

APPENDIX M

PROCEDURES IN OIL AND GAS RECOVERY

GEOPHYSICAL OPERATIONS

Oil and gas geophysical exploration activities include data acquisition by use of ground vehicle or aircraft. Data is acquired to determine if a structure exists which might contain oil or gas. Geophysical exploration does not include core drilling for subsurface geologic information or well drilling for oil and gas. A federal oil and gas lease is not required before conducting geophysical operations. Information from geophysical exploration can lead oil companies or others to request that lands be offered for lease, or assist in the selection of drill sites on existing leases.

Existing road systems are used where available. Roads may be cleared of vegetation and loose rocks to improve access for trucks if that action is allowed by the permit. Blading and road construction for seismic operations are not usually allowed so that environmental impacts are minimized. In areas with rugged terrain or without access roads, and certain seasons of the year, seismic work is conducted by helicopter rather than by ground vehicles. Other geophysical operations that do not cause additional surface disturbance include remote sensing, gravity prospecting, and aeromagnetic surveying.

Procedures and Regulations

Notification Process - Geophysical operations on public lands are reviewed by the BLM. Exploration on public lands requires review and approval following the procedures in 43 CFR Subparts 3150, 3151, and 3154. In the Dillon Field Office, the Field Manager is authorized to approve geophysical operations. The responsibilities of the geophysical operator and the Field Manager during geophysical operations are described below.

Geophysical Operator - The operator is required to file a Notice of Intent to Conduct Oil and Gas Exploration Operations (form 3150-4) for operations on public lands administered by the BLM. Maps (preferably 1:24,000 scale topographic maps) showing the location of the proposed lines and access routes must accompany the Notice of Intent.

When the Notice of Intent is filed, the authorized officer may request a prework conference or field inspection. Special requirements or procedures that are identified by the authorized officer are included in the Terms and Conditions for Notice of Intent to Conduct Geophysical Exploration (form 3150-4 and a copy of the state requirements). Any changes in the original Notice of Intent must be submitted

in writing to the authorized officer. Written approval must be secured before activities proceed.

Bonding of the operator is required. A copy of proof of satisfactory bonding shall accompany the Notice of Intent. Proper bonding may include a \$5,000 individual, \$25,000 statewide, or \$50,000 nationwide geophysical exploration bond. In lieu of an exploration bond, a statewide or nationwide oil and gas drilling bond may be used if it contains a rider for geophysical exploration.

The operator is required to comply with applicable federal, state, and local laws such as Federal Land Policy and Management Act of 1976, the National Historic Preservation Act of 1966, and the Endangered Species Act of 1973, as amended. Operators may be required to submit an archeological evaluation if dirt work is contemplated, or if there is reason to believe that significant cultural resources may be adversely affected.

When geophysical operations have been completed, the operator is required to file a Notice of Completion (form 3150-5) including certification that all terms and conditions of the approved Notice of Intent have been fulfilled. The operator must also submit a map that shows the actual line location, access route, and other survey details.

BLM Field Manager (authorized officer) - The authorized officer is required to contact the operator within five working days after receiving the Notice of Intent to explain the terms of the notice, including the "Terms and Conditions for Notice of Intent to Conduct Geophysical Exploration," current laws, and BLM-administrative requirements. At the time of the prework conference or field inspection, written instructions or orders are given to the operator. The authorized officer is responsible for the examination of resource values to determine appropriate surface protection and reclamation measures. The authorized officer is required to make a final inspection following filing of the Notice of Completion. When reclamation is approved, obligation against the operator's bond is released. The BLM has 30 days after receipt of the Notice of Completion to notify the operator whether the reclamation is satisfactory or if additional reclamation work is needed. Bonding liability will automatically terminate within 90 days after receipt of the Notice of Completion unless the authorized officer notifies the operator of the need for additional reclamation work.

State Standards - Geophysical operators register with the state through the County Clerk and Recorder's office. State regulations include requirements for shothole locations, drilling techniques, plugging techniques, and reclamation.

Mitigation - When a geophysical Notice of Intent is received, restrictions may be placed on the application to protect resource values or to mitigate impacts. Many of these requirements may be the same as the oil and gas lease stipulations adopted in the RMP. Other less restrictive measures may be used when impacts to resource values will be less severe. This is due in part to the temporary nature of geophysical exploration. The decisions concerning the level of protection required are made on a case-by-case basis when a Notice of Intent is received.

LEASING PROCESS

Federal oil and gas leasing authority is found in the 1920 Mineral Leasing Act, as amended, for public lands and the 1947 Acquired Lands Leasing Act, as amended, for acquired lands. Leasing of federal oil and gas is affected by other acts such as National Environmental Policy Act of 1969, the Wilderness Act of 1964, National Historic Preservation Act of 1966, the Endangered Species Act of 1973, Federal Land Policy and Management Act of 1976, and the Federal Onshore Oil and Gas Leasing Reform Act of 1987.

Regulations governing federal oil and gas leasing are contained in 43 CFR Part 3100 with additional requirements and clarification found in Onshore Operating Orders and Washington office manuals, handbooks and instruction memorandums.

The lease grants the right to explore, extract, remove, and dispose of oil and gas deposits that may be found in the leased lands. The lessee may exercise the rights conveyed by the lease subject to the lease terms and attached stipulations, if any.

Lease rights may be subject to lease stipulations and permit approval requirements. Stipulations and permit requirements describe how lease rights are modified. Lease constraints or requirements may also be applied to applications for permit to drill on existing leases provided the constraints or requirements are within the authority reserved by the terms and conditions of the lease. The stipulations and conditions of approval must be in accordance with laws, regulations, and lease terms. The lease stipulations and permit conditions of approval allow for management of federal oil and gas resources in concert with other resources and land uses.

The BLM planning process is the mechanism used to evaluate and determine where and how federal oil and gas resources will be made available for leasing. In areas where oil and gas development may conflict with other resources, the areas may be closed to leasing. Areas where oil and gas development could coexist with other land uses or resources will be open to leasing. Leases in these areas will be issued with standard lease terms or with added stipulations based

upon decisions in the land use document. Added stipulations are a part of the lease only when environmental and planning records demonstrate the necessity for the stipulations (modifications of the lease).

Currently, leases are issued as either competitive leases or noncompetitive leases with 10-year terms. The competitive leases will be sold to the highest qualified bidder at an oral auction. Tracts that receive no bid at the sale are available for the filing of noncompetitive offers for two years following the sale. All offers filed the day after the sale (referred to as day-after-the-sale filings) are considered simultaneously filed. This means that if there is more than one offer filed for a specific parcel the day after the sale, a drawing must be held to determine the priority on multiple offers. Noncompetitive offers filed after that time are on a first-come first-served basis. If there are no offers filed for a parcel for the two-year period after the sale, the lands must be nominated again for competitive leasing. Rental payments for these leases will be \$1.50 per acre for the first 5 years and \$2.00 per acre thereafter until production is established. The royalty rate for leases issued following the 1987 Oil and Gas Leasing Reform Act is 12-1/2 percent. Minimum royalty is the same amount as the rental.

Future interest leases are available for entire or fractional mineral estates that have not reverted to federal ownership. These are minerals that are reserved by the grantor for a specific period of time in warranty deeds to the United States. Any future interest leases may be obtained only through the competitive bidding process and are made effective the date of vesting of the minerals with the United States.

Plan Maintenance

New information may lead to changes in existing resource inventories. New use areas and resource locations may be identified or use areas and resource locations that are no longer valid may be identified. These resources usually cover small areas requiring the same protection or mitigation as identified in this plan. Identification of new areas or removal of old areas that no longer have those resource values will result in the use of the same lease stipulation identified in this plan. These areas will be added to the existing data inventory without a plan amendment. In cases where the changes constitute a change in resource allocation outside the scope of this plan, a plan amendment would be required.

Lease Stipulations

Certain resources in the planning area require protection from impacts associated with oil and gas activities. The specific resource and the method of protection are contained in lease stipulations. Lease stipulations are usually no surface occupancy, controlled surface use, or timing limitation.

A notice may also be included with a lease to provide guidance regarding resources or land uses. While the actual wording of the stipulations may be adjusted at the time of leasing, the protection standards described will be maintained.

Controlled Surface Use

Use or occupancy is allowed (unless restricted by another stipulation), but identified resource values require special operational constraints that may modify the lease rights. Controlled surface use is used for operating guidance, not as a substitute for the no surface occupancy or timing stipulations.

No Surface Occupancy

Use or occupancy of the land surface for fluid mineral exploration or development is prohibited in order to protect identified resource values. The no surface occupancy stipulation includes stipulations which may have been worded as No Surface Use and Occupancy,” “No Surface Disturbance,” “Conditional No Surface Occupancy,” and “Surface Disturbance or Occupancy Restriction (by location).”

Timing Limitation (Seasonal Restriction)

Prohibits surface use during specified times to protect identified resource values. This stipulation does not apply to the operation and maintenance of production facilities unless the findings of analysis demonstrate the continued need for such mitigation and that less stringent, project-specific mitigation measures would be insufficient.

PERMITTING

The lessee may conduct lease operations after lease issuance. Before beginning construction or drilling a well, the lessee must have an approved Application for Permit to Drill, including requirements for surface and subsurface operations. Many other lease operations, including surface and subsurface, must be approved by a Sundry Notice. When a well is no longer useful, the well is plugged and the surface reclaimed. Well plugging and reclamation operations are approved by a Sundry Notice, although verbal approval for plugging may be given for a well that was drilled but not completed for production. The period of bond liability is terminated after all wells covered by the bond are properly plugged and the surface reclaimed. The lands may then become available for future leasing.

Proposed drilling and associated activities must be approved before beginning operations. The operator must file an Application for Permit to Drill with the BLM Great Falls

Oil and Gas Field Station. A copy of the application will be posted in the Field Station and Dillon Field Office, and if applicable, in the office of the Surface Management Agency for a minimum of 30 days for review by the public. After 30 days, the application can be approved in accordance with (a) lease stipulations, (b) Onshore Oil and Gas Orders, and (c) Onshore Oil and Gas regulations (43 CFR Part 3160) if it is administratively and technically complete.

Evidence of bond coverage for lease operations must be submitted with the application. Bond amount must not be less than a \$10,000.00 lease bond, a \$25,000.00 statewide bond or a \$150,000.00 nationwide bond.

Pre-drill on-site inspections will be conducted for all wells. The inspection makes possible selection of the most feasible well site and access road from environmental, geological, and engineering points of view. Surface use and reclamation requirements are developed during the on-site inspection that is usually conducted within 15 days after receipt of the Notice of Staking or Application for Permit to Drill. For operations proposed on privately-owned surface, if the operator after a good-faith effort is unable to reach an agreement with the private surface owner, the operator must post a bond to cover loss of crops and damages to tangible improvements prior to approval of the Application for Permit to Drill.

Conditions of approval implement the lease stipulations and are part of the permit when environmental and field reviews demonstrate the necessity for operating constraints or requirements. A surface restoration plan is part of an approved permit, either an Application for Permit to Drill or Sundry Notice that includes surface-disturbing activities.

The authorized officer will act on the application in one of two ways:

Approves the application (a) as submitted or (b) with appropriate modifications or conditions of approval; or

Returns the application and (a) advises the lessee or operator of the reasons for disapproval or (b) advises the lessee or operator of the reason why final action has been delayed and the date such final action is expected.

For drilling operations on lands with state or private mineral ownership, the lessee must meet the requirements of the mineral owner and the state regulatory agency. The BLM does not have jurisdiction over nonfederal minerals; however, the BLM has surface management responsibility in situations of BLM surface over nonfederal mineral ownership.

APPLICATION FOR PERMIT TO DRILL

Applications for Permit to Drill are approved for the Dillon Field Office by the supervisor of the Great Falls Oil and Gas Field Station. The approved Application for Permit to Drill includes Conditions of Approval, and Informational Notices that cite the regulatory requirements from the Code of Federal Regulations, Onshore Operating Orders and other guidance.

Conditions of Approval

Conditions of approval are mitigation measures that implement restrictions in light of site-specific conditions. General guidance for conditions of approval is found in the BLM and U.S. Forest Service brochure entitled "Surface Operating Standards for Oil and Gas Exploration and Development" (USDI, BLM 1989c) and BLM Manual 9113 entitled "Roads".

The following mitigation measures may be applied to approved permits as conditions of approval. The listing is not all-inclusive, but presents some possible conditions of approval that may be used in the planning area. The wording of the condition of approval may be modified or additional conditions of approval may be developed to address specific conditions.

1. Surface Conditions:

- a. The access road on the BLM surface will not be bladed unless prior BLM approval is obtained.
- b. The operator will be responsible for weed control on the access road, well location, and pipeline for the life of the well.
- c. The operator will clean the undercarriage of all rigs prior to entering onto the leasehold to reduce the chances for noxious weed infestations.
- d. Topsoil is to be removed and stockpiled. Operator will be required to cover the topsoil pile to prevent the loss of topsoil to wind erosion. Operator must cover the topsoil with a biodegradable mesh fabric that allows water and air to circulate through the topsoil. Operator cannot cover the topsoil with any type of impermeable fabric.
- e. Rehabilitation of upland sites following disturbance would use the plant species listed below for seeding. The species used for rehabilitation would vary depending on the adjacent habitat conditions, site potential, soils and precipitation. Species not in the following list could be added if site conditions

warrant, species availability changes or if there are large acreages are involved.

- f. All permanent structures will be painted the neutral color of Sand Beige (5Y 6/3), Desert Brown (10YR 6/3), Carlsbad Canyon (2.5Y 6/2) or Slate Gray (5Y 6/1) as displayed in the Standard Environmental Color chart (available at the BLM office) or other acceptable color approved by the authorized officer to blend in with the surrounding landscape.
- g. If the well is a dry hole, Operator will be required to fence the entire disturbed area of the location to allow the seedings and vegetation to re-establish. This fencing must be stock tight and must remain in place until the BLM requests otherwise.

2. Downhole Conditions:

- a. Surface casing shall have centralizers on each of the bottom three joints and shall be cemented back to surface.
- b. BOP system shall be consistent with Onshore Oil and Gas Order No. 2, 2M system.
- c. The operator shall obtain verbal approval prior to initiating side-tracking operations. At the time of approval, the operator must identify the proposed azimuth, kick-off point, inclination rate (angle build rate), and the estimated closure or horizontal length to be drilled. All wellbore paths, i.e. different orientations of bottom hole locations, require prior approval.
- d. The operator shall have sufficient weighting materials and loss circulation materials on location in the event of a pressure kick or in the event of loss circulation.

3. Informational Notice:

- a. Approval of this APD does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease, which would entitle the applicant to conduct operations thereon.
- b. The lessee shall comply with applicable laws and regulation; with the lease terms, Onshore Oil and Gas Orders; NTL's; and with other orders and instructions of the authorized officer.
- c. A complete copy of the approved APD must be on the well site and available for reference during the construction and drilling phase.

Rehabilitation Species List			
Common Name	Scientific Name	4 Code	6 Code
12 to 14 inch precipitation zone			
western wheatgrass	<i>Pascopyrum smithii</i>	PASM	PASSMI
bluebunch wheatgrass	<i>Pseudoroegneria spicata</i>	PSSP6	PSESPI
thickspike wheatgrass	<i>Elymus macrourus</i>	ELMA7	ARGDAS
slender wheatgrass	<i>Elymus trachycaulus</i>	ELTR7	ELYTRA
green needlegrass	<i>Nassella viridula</i>	NAVI4	STIVIR
needle and thread	<i>Hesperostipa comata</i>	HECO26	STICOM
blue flax	<i>Linum perenne</i>	LIPE2	LINPER
scarlet globemallow	<i>Sphaeralcea coccinea</i>	SPCO	SPHCOC
Woods' rose	<i>Rosa woodsii</i>	ROWO	ROSWOO
15 to 19 precipitation zone			
basin wildrye	<i>Leymus cinereus</i>	LECI4	LEYCIN
bluebunch wheatgrass	<i>Pseudoroegneria spicata</i>	PSSP6	PSESPI
slender wheatgrass	<i>Elymus trachycaulus</i>	ELTR7	ELYTRA
Idaho fescue	<i>Festuca idahoensis</i>	FEID	FESIDA
sheep fescue	<i>Festuca ovina</i>	FEOV	FESovi
Sandberg bluegrass	<i>Poa secunda</i>	POSE	POASEC
blue flax	<i>Linum perenne</i>	LIPE2	LINPER
Woods' rose	<i>Rosa woodsii</i>	ROWO	ROSWOO

d. Any deviation from the terms of this APD requires prior approval.

e. This drilling permit is valid for either 1 year from the approval date or until lease expiration, whichever occurs first.

f. Each drilling, producing or abandoned well shall be identified with the operator's name, the lease serial number, the well number, and the surveyed description of the well (either footages or the quarter section, the section, township and range). All markings must be legible, and in a conspicuous place.

e. Notify this office at least 6 hours prior to plugging for verbal plugging orders.

BLM Representative – Great Falls Field Station
Office Telephone No. (406) 791-7700:

After hours and weekend contacts are:

Petroleum Engineer Technician
Petroleum Engineer
Environmental Specialist
Field Station Supervisor

4. Notification Requirements:

- Notify this office at least 12 hours before beginning dirt work.
- Notify this office verbally at least 6 hours before the well is spudded.
- Notify this office verbally at least 6 hours prior to running/cementing casing.
- Notify this office verbally at least 6 hours prior to conducting BOP tests.

5. Plugging Requirements:

- Prior approval for abandonment must be obtained. Initial approval for abandonment during drilling operations may be verbal but must be followed by written notification on Form 3160-5, in triplicate.
- Upon completion of the approved plugging, the operator will cut the casing off four feet below reclaimed ground level and a 1/4" x 12" x 12" plate (with a 1/8" weep hole) shall be welded onto a fitting to be screwed into a collar either welded or screwed to the production casing. **The standard aboveground dry hole marker in accordance with 43 CFR 3162.6(d) has been waived by the**

Great Falls Field Station. Pits must be fenced until dry or pumped and then filled in and recontoured unless otherwise approved by the Field Station Supervisor.

- c. The following minimum information shall be permanently placed on the plate: "Fed" or "Ind" as applicable; "Lease Number, Operator, Well Number, and Location by quarter/quarter, Section, Township, and Range."

6. Reports and Notifications:

- a. All submitted information not marked "CONFIDENTIAL INFORMATION" is subject to public disclosure in accordance with 43 CFR 3100.4.
- b. Production Startup Notification is required not later than the 5th business day after any well begins production on which royalty is due anywhere on a lease site or allocated to a lease site, or resumes production in the case of a well which has been off production for more than 90 days, the operator shall notify the authorized officer by letter or sundry notice, Form 3160-5, or orally to be followed by a letter or sundry notice, of the date on which such production has begun or resumed.

7. Hazardous Materials:

- a. Operators and their contractors are to ensure all production, use, storage, transport, and disposal of hazardous materials resulting from the proposed project is in accordance with all applicable Federal, State and local laws, regulations and guidelines, existing or hereafter enacted or promulgated that effect the management of hazardous material, as defined in this paragraph. Hazardous material means any substance, pollutant, or contaminant listed as a hazardous substance under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980, as amended, 42 USC 9601 et seq., and its regulations (found at 40 CFR 302). The definition of hazardous substances under CERCLA includes "hazardous waste" defined in the Resource Conservation and Recovery Act (RCRA) of 1976, as amended, 42 USC 6901 et seq., and its regulations. The term also includes any extremely hazardous substances defined by 40 CFR 355, and any nuclear or byproduct material defined by the Atomic Energy Act of 1954, as amended, 42 USC 2011 et seq. The term does not include petroleum, including crude oil or any fraction thereof not otherwise listed or designated as a hazardous substance under CERCLA section 101 (14), 42 USC 9601 (14), or natural gas.

- b. Only drilling mud, drilling fluids, cuttings, native soils, cementing materials and/or approved pit solidifying materials will be placed in the reserve or working pits.
- c. Nonexempt wastes will not be mixed with exempt wastes.
- d. No hazardous materials will be used in the drilling and construction of wellsites and access roads. Commercial preparations, which may contain hazardous materials may be used in production operations and will be transported with the project area. These materials will be handled in an appropriate manner to minimize potential for leaks or spills to the environment. Other waste disposal methods and locations should be described on the APD or SN and approved by the BLM prior to disposal.

8. Environmental Obligations and Disposal of Produced Water:

- a. The Operator is required to take all necessary steps to prevent any death of a migratory bird in pits or open vessels associated with the drilling, testing, completion, or production of this well. The death of any migratory bird found in such a pit or open vessel is a violation of the Migratory Bird Treaty Act and is considered a criminal act. Any deaths of migratory birds attributable to pits or open vessels associated with drilling, testing, completing, or production operations must be reported to this office and the United States Fish and Wildlife Service within 24 hours.
- b. The BLM may require that the pit be designed or the open vessel be covered to deter the entry of birds in any facility associated with drilling, testing, completing, or production of this well. Fencing, screening, and netting of pits may be required as a means to deter bird entry. These conditions would most likely be imposed to prevent the entry of migratory birds if oil is left in pits or open vessels after the cessation of drilling or completion operations, if water disposal pits consistently receive oil, or if pits or open vessels are used repeatedly for emergency situations which result in the accumulation of oil.
- c. Voluntary pit fencing, screening, and netting, or sealing vessels is encouraged thus avoiding potential instances that may result in the death of a migratory bird.
- d. With BLM approval, water produced from newly completed wells may be temporarily disposed of

into unlined pits for up to 90 days. During this initial period, application for the permanent disposal method must be made in accordance with Onshore Order No. 7.

9. Paleontological/Cultural Stipulations:

Paleontological and archaeological field checks by BLM personnel or other authorized personnel will occur prior to disturbance as deemed appropriate by the BLM. A BLM-approved archaeologist or paleontologist will conduct monitoring during surface-disturbing activities. Paleontological or cultural resource sites will be avoided or mitigated as necessary prior to disturbance. Any cultural or paleontological resource discovered by an operator or any person working on his/her behalf will be reported immediately to the BLM, and all operations that may further disturb such resources will be suspended until written authorization to proceed is issued by the BLM authorized officer. An evaluation of the discovery will be made by the BLM to determine appropriate actions to prevent the loss of significant resources.

CONSTRUCTION

Construction of the access road and the well site is necessary before drilling operations begin. The extent of surface disturbance necessary for construction depends on the terrain, depth of the well, drill rig size, circulating system, and safety standards.

The depth of the drill test determines the size of the work area necessary, the need for all-weather roads, water requirements, and other needs. The terrain influences the construction problems and the amount of surface area to be disturbed. Reserve pit size may vary because of well depth, drill rig size, or circulating system.

Access roads to well sites in the planning area usually consist of running surfaces 14 to 18 feet wide that are ditched on one or both sides. Many of the roads constructed will follow existing roads or trails. New roads might be necessary because existing roads are not at an acceptable standard. For example, a road may be too steep so that realignment is necessary.

Roads can be permanent or temporary, depending on the success of the well. The initial construction can be for a temporary road; however, it is designed so that it can become permanent if the well produces. Not all temporary roads constructed are immediately rehabilitated when the drilling stops. A temporary road is often used as access to other drill sites. The main roads and temporary roads require graveling to be maintained as all-weather roads. This is especially important in the spring. Access roads may be

required to cross public lands to a well site located on private or state lands. The portion of the access road on public land would require a BLM right-of-way.

Approximately 3-1/2 acres would be impacted by well site construction. The area is cleared of large vegetation, boulders, or debris. Then the topsoil is removed and saved for reclamation. A level area is then constructed for the well site, which includes the reserve pit.

The well pad is constructed by bulldozers and motor scrapers. The well pad is flat (to accommodate the drill rig and support equipment) and large enough to store all the equipment and supplies without restricting safe work areas. The drill rig must be placed on "cut" material rather than on "fill" material to provide a stable foundation for the rig. The degree of cutting and filling depends on terrain; that is, the flatter the site, the less dirt work is required.

Hillside locations are common, and the amount of dirt work varies with the steepness. A typical well pad will require a cut 10 feet deep against the hill and a fill 8 feet high on the outside. It is normal to have more cut than fill to allow for compaction, and any excess material is then stockpiled. Eventually, when the well is plugged and abandoned, excavated material is put back in its original place.

Reserve pits are normally constructed on the well pad. Usually the reserve pit is excavated in "cut" material on the well pad. The reserve pit is designed to hold drill cuttings and used drilling fluids. The size and number of pits depends on the depth of the well, circulating system and anticipated down hole problems, such as excess water flows.

The reserve pit can be lined with a synthetic liner to contain pit contents and reduce pit seepage. Not all reserve pits are lined; however, BLM can require a synthetic liner based upon factors such as soils, pit locations, ground water and drilling mud constituents. The operator can elect to line the reserve pit without that requirement.

An adequate supply of water is required for drilling operations and other uses. The sources of water can be a water well at the drill site or remote sources such as streams, ponds, or wells. The water is transported to the site by truck or pipeline. Pipelines are normally small diameter surface lines. The operator must file for and obtain all necessary permits for water from the state of Montana. On public lands, an operator must have the BLM's permission before surface water can be used.

DRILLING OPERATIONS

As drilling progresses for a vertical well, the hole is drilled; pipe is placed in the hole to maintain the integrity of the hole. The first string of pipe is the conductor pipe, which

stabilizes the hole near the surface. The second string of pipe placed in the hole is for surface casing, which is set deep enough to reach a competent zone below the deepest usable freshwater aquifer.

The surface casing is set and cemented in the hole by pumping cement between the casing and the well bore wall. Surface casing acts as a safety device to protect freshwater zones from drilling fluid contamination. To prevent the well from "blowing-out" in the event the drill bit hits a high-pressure zone, blowout preventers are mounted on top of the surface casing. If high-pressure zones are encountered that cannot be controlled with mud additives, the blowout preventers can be closed to effectively seal the well.

After the surface casing is set, a smaller drill bit that fits inside the surface casing is installed and drilling resumes. Depending on well conditions, additional strings of casing called intermediate casing may be installed and cemented into place. Conditions resulting in the need for intermediate casing include freshwater zones and sloughing formation zones. Casing prevents the flow of freshwater into the wellbore, and conversely prevents drilling fluids from infiltrating porous formations with low internal pressures. Casing also prevents mixing of waters from different formations (interformational mixing) where water within the formations is of differing quality.

All cementing operation plans are reviewed to assure cement is placed at the appropriate depths and a sufficient quantity is utilized to effectively seal all freshwater-bearing formations from contamination by interformational mixing or migration of fluids.

If no oil or gas is encountered, the well is plugged with cement and abandoned in accordance with state and federal requirements. If the well is a producer, casing is set and cemented in place.

Directional drilling may be used where the drill site cannot be located directly over the drilling target. There are limits to both the degree that the wellbore can be deviated from the vertical and the horizontal distance the well can be drilled away from the well site.

Horizontal wells are drilled similarly to directional wells, except that the bottomhole location of the well is not a single point, but rather a lateral horizontal section. They are drilled to increase the recovery oil and gas reserves from vertically fractured reservoirs, or reservoirs with directional permeability.

PRODUCTION AND DEVELOPMENT

Production

Production begins when a well yields oil or gas in commercial quantities. If formation pressure is sufficient to raise oil to the surface, the well is completed as a flowing well. A pumping unit is installed if the formation pressure is not sufficient to bring the oil to the surface.

When the well is completed as a free-flowing well, an assembly of valves and special connections known as a "Christmas tree" (so called because of its many branch-like fittings) is installed on top of the casing to regulate the flow of the well. Later, when the natural pressure declines, the Christmas tree can give way to a simple wellhead arrangement of valves and a pumping unit to lift the oil artificially. Many pumping units are "beam" style pumps that are powered by electric motors or gasoline engines.

Most gas wells produce by natural flow and do not require pumping. Surface use at a flowing well is usually a small area containing a gas well Christmas tree, a dehydrator, a produced water pit, and a meter house. Separators, condensate tanks, and compressors may be included. Some gas wells require continuous water pumping as water entering the well chokes off the gas flow.

Development

Development can take years and include from one or two wells to more than a hundred wells per field. However, the reasonably foreseeable development scenario for this planning document only forecasts two additional wells per field. Roads to producing wells are upgraded to all-weather roads as necessary. Pipelines, electrical transmission lines, separators, dehydrators, sump pits, and compressor stations soon follow. Sometimes oil and gas processing facilities are built in or adjacent to the field.

Further Seismic Testing

More detailed seismic work can be done to achieve better definition of the petroleum reservoir. Diagonal seismic lines can be required to tie the previous seismic work to the discovery well. The discovery well can be used to conduct studies to correct the previous seismic work and provide more accurate subsurface data.

Spacing Requirements

A well spacing pattern must be established before development drilling begins. Information considered in establishment of a spacing pattern includes data from the discovery

well on porosity, permeability, pressure, composition, and depth of formations in the reservoir; well production rates and type (predominantly oil or gas); and the economic effect of the proposed spacing on recovery. The state of Montana establishes well spacing patterns for both exploratory and development wells which the BLM generally adopts. The state specifies the minimum distance from lease lines or government survey lines for bottom hole location of the wellbore depending upon depth of the well. The spacing regulations determine the acres assigned to each well. Spacing unit size is established to provide for the most efficient and economic recovery of oil or gas from a reservoir. Well spacing ranges from 40 acres to 640 acres. Wells deeper than 11,000 feet can be no closer than 1,650 feet to other producing wells below 11,000 feet. Only one producing well per formation is allowed in each 40, 80, 160, 320, and 640-acre unit. Figures A and B show the different spacing patterns for oil and gas wells and the minimum distance from spacing unit boundaries to the well that are generally applied in Montana.

Drilling of Development Wells

The procedures used in drilling development wells are the same as those used for wildcat wells, but usually with less subsurface sampling, testing, and evaluation. The rate at which development wells are drilled in a field depends on factors such as whether the field is developed on a lease basis or unitized basis, the probability of profitable production, the availability of drilling equipment, lease requirements, and the degree to which limits of the field are known.

Some fields go through several development phases, the first resulting from the original discovery and others from later discovery. A field can be considered fully developed and produce for several years, and then a well may be drilled to a deeper or shallower pay zone. Discovery of a new pay zone in an existing field is a "pool" discovery (as distinguished from a new field discovery). A pool discovery may lead to the drilling of additional wells, often from the same drilling pad as existing wells.

Inspections

Geophysical operations and lease operations are inspected to determine compliance with approved permits, to resolve conflicts or correct problems and to determine effectiveness and need of lease stipulations. All inspections are documented. Operators are required to correct problems or violations.

Surface Requirements

Field development activities that cause surface disturbance include access roads, well sites, production facility sites, flow line and utility line routes and waste disposal sites.

Surface uses in a gas field will be less than in an oil field, because gas wells are usually drilled on larger spacing units. The spacing pattern of 640 acres per well, which is common in gas fields, will require only one well per section and might require only 1/2 mile of access roads and pipelines. Production facilities include separation and storage equipment. Separation equipment is required when production includes a combination of oil, gas or water and storage equipment is required for holding liquids prior to sales.

Flow Lines

Oil and gas are transferred from the well to storage facilities through small diameter (<6 inches) flow lines. Flow lines can be on the surface, buried or elevated. Produced water, gas or polymerized liquid is transferred from storage facilities to injection wells for secondary recovery.

Separating, Treating, and Storage

Any water or gas associated with produced oil is separated from the oil before it is placed in storage tanks. The treating facilities are located at a storage tank battery. Low-pressure petroleum that must be pumped from the well is treated in a single separation. High-pressure, flowing petroleum can require several stages or separation, with a pressure reduction accompanying each stage.

Produced gas is sold when there is sufficient volume, necessary transportation, a market, and it is economical. Generally, if the volume of produced gas is too low for sales, it is used as fuel for well pump engines and heating fuel for the treaters. If the volume of produced gas exceeds fuel requirements on the lease but gas sales are not possible, the gas can be flared or vented into the atmosphere when authorized by permit in accordance with state and federal regulations.

When water is produced with the hydrocarbons, it is separated before the gas is removed. In primary operations, where natural pressures or gravity causes the petroleum in the reservoir to flow to the wellbores, the degree of mixing is high enough to require chemical and heat treatment to separate the oil and water. In secondary production, where water injection or other methods are used to force additional petroleum to the wellbore, the oil and water often are not highly emulsified. In this case, the oil and water can be separated by gravity in a tall settling tank. Produced water can be disposed of by injection into the subsurface, surface evaporation or beneficial purposes such as water for livestock or irrigation.

Produced water from oil and gas operations is normally disposed of by subsurface injection or in surface pits. Regardless of the method of disposal, it must be acceptable to the BLM, in accordance with the requirements of Onshore Oil

Figure A
Gas Well Spacing Section Plat

640 Acre Spacing

SOURCE: Montana Oil & Gas Commission

Area in which well should be drilled

Well
Depth
(feet)

0>

Minimum Well
Distance
(feet)

990

Figure B
Oil Well Spacing Section Plat

SOURCE: Montana Oil & Gas Commission

Area in which well should be drilled

Well Depth (feet)	Spacing (acre)	Nearest Boundary (feet)	Topographic Tolerance (feet)	Minimum Well Distance (feet)
0-6,000	40 & 80	330	75	255
6,000 - 11,000	160	660	150	510
11,001 - >	320	660	none	none

For the 320 acre spacing (1,650 well tolerance) and the 80 acre spacing the drilling unit will be delineated either N-S or E-W

and Gas Order No. 7, titled "Disposal of Produced Water." Disposal of produced water by injection wells requires permits from the Montana Board of Oil and Gas Conservation. When produced water is disposed underground, it is introduced or injected under pressure into a subsurface horizon containing water of equal or poorer quality. Produced water may be injected into the producing zone from which it originated to stimulate oil production. Dry holes or depleted wells are commonly converted for saltwater disposal and occasionally new wells are drilled for this purpose.

The law and regulations require that all injection wells be permitted under the Underground Injection Control program. Under the Underground Injection Control approval process, the disposal well must be pressure tested to ensure the integrity of the casing. The disposal zone must also be isolated by use of tubing and mechanical plug called a packer. The packer seals off the inside of the casing and only allows the injected water to enter the disposal zone. The tubing and packer are also pressure tested to ensure their integrity. These pressure tests confirm isolation of the disposal zone from possible usable water zones.

The oil is transported to storage tanks through flow lines after separation from any water or gas. Storage tanks are usually located on the lease either at the producing well or at a central production facility. The number and size of tanks are dependent upon the type and amount of production on the lease.

ABANDONMENT

When drilling wells are unsuccessful or production wells are no longer useful, the well is plugged, equipment is removed from the well site or production facility site, and the site is abandoned. The well bore is secured by placing cement plugs to isolate hydrocarbon-producing formations from contaminating other mineral or water bearing formations. The site and roads are then restored as near as possible to original contours. Topsoil is replaced and the recontoured areas are seeded. Reclamation of access roads and well sites on privately owned surface is completed according to the surface owner's requirements.

Rehabilitation requirements generally are made a part of the Application for Permit to Drill. Upon completion of abandonment and rehabilitation operations, the lessee or operator notifies the Great Falls Oil and Gas Field Station that the location is ready for inspection. Final abandonment will not be approved until the required surface reclamation work has been completed to the satisfaction of the BLM or surface owner. The period of bond liability for the well site is terminated after approval of final abandonment.

Reclamation of the reserve pit is part of the well site reclamation process. Reserve pit reclamation includes removal

of fluids to a disposal well or commercial pit and burial of solids in the pit. Solids should not be buried until dry and then covered with a minimum of 6 feet of native soil. Any pit liner may be buried in place. Methods such as solidification or dewatering may be used to help dry the solids.

REGULATIONS, LAWS, AND SPECIAL PROCEDURES

Unit and Communitization Agreements

Unit and *communitization* agreements can be formed in the interest of conservation and to allow for the orderly development of oil and gas reserves.

A unit agreement provides for the recovery of oil and gas from the lands as a single consolidated entity without regard to separate lease ownerships. An exploratory unit is used for the discovery and development of the field in an orderly and efficient manner. Paying and nonpaying well determinations are made for each well drilled. If the well is nonpaying as defined by the agreement, the production is allocated on a lease basis. If the well is a paying unit well, a participating area is formed and the production is allocated to all interest owners in the participating area based on surface area.

A secondary unit is formed after the field has been defined and enhanced recovery techniques are being utilized. Secondary recovery techniques include water injection, natural gas injection, or carbon dioxide injection. Injection is initiated to maintain the reservoir pressure to maintain oil production. The agreement provides for the allocation of production among all the interest owners.

A communitization agreement combines two or more leases (federal, state, or fee) that otherwise could not be independently developed in conformity with established well spacing patterns. The leases within the spacing unit share in the costs and benefits of the well drilled in the spacing unit. Therefore, unit and communitization agreements can lessen the amount of damage to the environment and save dollars by eliminating unnecessary wells, roads, pipelines, and lease equipment.

Drainage Provisions

Federal oil and gas leases include a clause that the lessee must protect the leased area from drainage by off-lease wells. The regulations at 43 CFR 3162-2-9(b) state that the lessee/operating rights owner has an obligation to notify the BLM if drainage is occurring. If the lessee/operating rights owner has an interest in the draining well, he must notify the BLM within 60 days after completion of a drill stem, production, pressure analysis, or flow tests of the well. However, if the

lessee/operating rights owner has no interest in the well, he must notify the BLM within 60 days after well completion or first production reports for the draining well are filed with either BLM, State Oil and Gas Commissions, or regulatory agencies and are publicly available. The lessee/operating rights owner must inform BLM of his plan to either protect the lease from the drainage, or demonstrate that a protective well would not be economic. The lessee has the option of drilling a protective well on lease or paying compensatory royalty for the lost oil or gas. The lessee also has the options of submitting data showing that drainage is not occurring or relinquish the portion of the lease subject to drainage after payment of compensatory royalty for drainage that did occur. The objective of the drainage program is to prevent the loss of federal oil and gas due to drainage by requiring the drilling of protective wells and, where appropriate, to assess compensatory royalty for such losses.

Drilling Access With No Surface Occupancy Stipulations on Oil Leases

No surface occupancy stipulations can restrict the development potential of a federal oil and gas lease. The no surface occupancy stipulations can limit the area that can be developed by restricting the amount of surface acreage available for occupancy. No surface occupancy restrictions often do not affect access to oil and gas resources unless there are blocks of contiguous land with no surface occupancy stipulation or the drilling depth is presumed to be shallow. The drilling access area is that area under a no surface occupancy lease or lease parcel that can be accessed by the well bore from a surface location outside of the areas (see Figure C).

Lands near the outer boundary of a lease affected by a no surface occupancy stipulation can theoretically be developed by directional drilling. The BLM cannot assume that a prudent operator would use new technology such as horizontal drilling to access an entire lease area. Although the technology might allow exploration, the expense might make the venture uneconomical. However, BLM can assume that an operator might be willing to directionally drill wells using equipment and drilling techniques that make the venture economical. For a directionally drilled well, a maximum deviation of approximately five degrees is a commonly used rule of thumb for how much a vertical hole can be economically deviated using a standard drilling rig.

A “directional drilling accessibility” concept has been developed for leases affected by no surface occupancy stipulations. Shallow wells in Montana, less than 6,000 feet deep, can be deviated up to 1/8 mile and have the angle of deviation remain reasonably close to five degrees. This will place the bottom hole location in the center of a 40-acre tract.

Because these wells are commonly spaced on a 40-acre basis, all spacing units within 1/4 mile of the outer boundary of the lease can be tested. Wells between 6,000 and 11,000 feet deep can also be deviated up to 1/4 mile. This will place the bottom hole location of the well the maximum allowable distance from the lease line for a well of this depth. Because these wells are spaced on a 160-acre basis, all spacing units within 1/2 mile of the exterior boundary of the lease can be tested.

Wells in Montana, with a total depth greater than 11,000 feet, are normally spaced on a 320-acre basis. These wells can be deviated up to 1/4 mile using the above criteria. Using this distance, all spacing units within 1/2 mile of the outer boundaries of an affected lease can be tested.

Split Estate

Part of the area included in the planning area contains lands known as split estate lands. These are lands where the surface ownership is different from the mineral ownership. Management of federal oil and gas resources on these lands is somewhat different from management on lands where both surface and mineral ownership is federal. On split estate lands where the surface ownership is private, the BLM places necessary restrictions and requirements on its leases and permit approvals and works in cooperation with the surface owner. BLM has established policies for the management of federal oil and gas resources in accordance with federal laws and regulations.

The BLM does not have the legal authority to regulate how private surface is managed. BLM does have the statutory authority to require measures by lessees to avoid or minimize adverse impacts that may result from federally authorized mineral lease activities. These measures, in the form of lease stipulations or permit conditions of approval, are intended to protect or preserve the privately owned resources and prevent adverse impacts to adjoining lands, not to dictate management to the surface owner.

The term split estate can also refer to lands where the surface ownership is federal and the mineral ownership is private. In this situation, BLM is the surface owner, and works in cooperation with the proponent and the state regulatory agency that approves private mineral applications. BLM has responsibilities in this situation under the previously mentioned statutes; however, BLM does not have the authority to approve or disapprove the mineral owner's actions. The mineral estate owner usually has the right to enter the land and use the surface that is necessary and reasonable for mineral development through either a reserved or an outstanding right contained in the deed.

Figure C
Directional Drilling Accessibility Concept

APPENDIX N

STANDARD OPERATING PROCEDURES FOR MINERAL MATERIAL SITES

Before establishing a new community pit, free use area, collection area or exclusive sale, a Plan of Operation and a Reclamation Plan will be prepared. The appropriate NEPA analysis will also be completed.

When appropriate and necessary a reclamation bond will be collected.

Reclamation and management of the site will when appropriate consist of the following:

- Suitable topsoil, subsoil, or underlying soil parent material that is suitable for plant growth will be removed and stored for site restoration.
- Topcover stockpiles will be stabilized in order to prevent erosion and dust.
- The area will be fenced to exclude livestock, promote revegetation, increase safety and reduce theft.
- A weed control plan will be developed or weed control will be addressed in the Plan of Operation.
- Purchasers of material will be warned of potential weed seeds.
- The pit walls will not exceed a safe working angle.
- Reclaimed slopes will not exceed 2.5:1 (h:v).
- Disturbed areas will be reclaimed to blend as closely as possible with natural contours.
- Final blending to natural contours should be considered and incorporated into the Plan of Operation.
- Stockpiled topcover will be replaced as soon as practically possible.
- Disturbed areas will be scarified (where necessary) and reseeded as soon as possible in order to reduce erosion, dust and visual effects.
- Measures may need to be taken to reduce visual effects. Visual effects should be considered and incorporated into the Plan of Operation.
- A seed mix approved by BLM and appropriate for the area will be used.
- Erosion controls will be incorporated into the Plan of Operation.
- If dust becomes excessive, measures will be taken to reduce the hazard.
- The site will be returned to as close as possible to the "Post Mining Land Use"
- All remaining litter or trash shall be removed from the site.

APPENDIX N STANDARD OPERATING PROCEDURE FOR MINERAL MATERIALS

1. The purpose of this procedure is to provide a standard method for the collection, processing, and analysis of mineral materials.	
2. This procedure applies to all mineral materials collected from the field or laboratory.	
3. The procedure is divided into three main sections: Collection, Processing, and Analysis.	
4. The Collection section describes the methods for collecting mineral materials from the field or laboratory.	
5. The Processing section describes the methods for processing mineral materials for analysis.	
6. The Analysis section describes the methods for analyzing mineral materials.	
7. The procedure is designed to be used by all personnel involved in the collection, processing, and analysis of mineral materials.	
8. The procedure is subject to change without notice.	
9. The procedure is approved by the Director of the Department of Mineral Resources.	
10. The procedure is effective as of the date of approval.	

APPENDIX O

BLM ROAD AND TRAIL MAINTENANCE LEVELS

INTRODUCTION

Transportation system roads and trails are classified by maintenance levels specified in BLM Manual Handbook H-9113-2. Any changes or updates to maintenance levels will be incorporated into this planning guidance.

Road Maintenance Levels

<i>Maintenance Level</i>	<i>Assignment Criteria</i>	<i>Minimum Maintenance Standard</i>
Level 1	This level is 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.	Emphasis is given to maintaining drainage and runoff patterns as needed to protect adjacent lands. Grading, brushing, or slide removal is not performed unless roadbed drainage is being adversely affected, causing erosion. Closure and traffic restrictive devices are maintained.
Level 2	This level is 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.	Drainage structures are to be inspected within a 3-year period and maintained as needed. Grading is conducted as necessary to correct drainage problems. Brushing is conducted as needed to allow administrative access. Slides may be left in place provided they do not adversely affect drainage.
Level 3	This level is assigned to roads where management objectives require the road to be open seasonally or year-round for commercial, recreation, or high volume administrative access. Typically, these roads are natural or aggregate surfaced, but may include low use bituminous surfaced roads. These roads have 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.	Drainage structures are to be inspected at least annually and maintained as needed. Grading is conducted to provide a reasonable level of riding comfort at prudent speeds for the road conditions. Brushing is conducted as needed to improve sight distance. Slides adversely affecting drainage would receive high priority for removal, otherwise they will be removed on a scheduled basis.
Level 4	This level is assigned to roads where management objectives require the road to be open all year (except may be closed or have limited access due to snow conditions) and to connect major administrative features (recreation sites, local road systems, administrative sites, etc.) 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.	The entire roadway is maintained at least annually, although a preventative maintenance program may be established. Problems are repaired as discovered.
Level 5	This level is 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.	The entire roadway is maintained at least annually and a preventative maintenance program is established. Problems are repaired as discovered. These roads may be closed or have limited access due to snow conditions.

BLM Trail Maintenance Levels

<i>Maintenance Level</i>	<i>Assignment Criteria</i>	<i>Minimum Maintenance Standard</i>
Level 1	These trails are closed to motorized and non-motorized use. This level is the minimum maintenance required to protect adjacent lands and resource values. The objectives may be to remove these trails from the trail system.	Emphasis is given to maintaining drainage and runoff patterns as needed to protect adjacent lands. Brushing and removal of hazards is not performed unless trail drainage is being adversely affected, causing erosion. Closure devices are maintained.
Level 2	Low use trail with little or no contact between parties. Little or no visitor use management. Visitors may encounter obstructions like brush and deadfall.	Trail would require condition surveys once every year. Repairs will be done at the beginning of the season to prevent environmental damage and maintain access. Emphasis is given to maintaining drainage and mitigating hazards. The trail may be signed "Not Regularly Maintained". Major repair may not be done for several seasons.
Level 3	Moderate use trail with visitor use on a seasonal/and or peak use period with frequent contact between parties. Trail management is conducted with occasional visitor use patrols. Visitors are not likely to encounter obstructions.	The trail shall require a minimum of one condition survey 1 to 2 times per season. Major repairs shall be completed annually. Maintenance shall be scheduled two to three times per season, if required, to repair the trail for environmental damage and to maintain access. Trail is kept in good condition.
Level 4	High use trail used during specific times of the year with high frequencies of contact between parties. Regularly scheduled visitor use patrol and management.	Scheduled maintenance shall occur frequently during the use season (three or four times per season). Trail condition and accessibility for persons with disabilities is a major concern. Significant repairs shall be completed as within 10 workdays.
Level 5	A special high use trail with routine visitor use patrols and management.	Has a scheduled maintenance program. Trail condition and accessibility for persons with disabilities is a major concern. Significant repairs shall be completed within 2-3 workdays.

APPENDIX P

MOTORIZED ROUTE DESIGNATION PRINCIPLES

The Dillon Area Travel Management Subgroup of the Western Montana Resource Advisory Council developed and used the following principles to develop travel recommendations during development of the Dillon Resource Management Plan. BLM will continue to use the same principles when making adjustments to motorized route designations during plan implementation.

- Those routes that are open for motorized and/or non-motorized travel should be designated and signed as such;
- To determine the status of a given route, the BLM should consider environmental sensitivity and damage, weeds, wildlife habitat, enforcement concerns, and access to US Forest Service (USFS) lands;
- Riparian and sensitive areas should be protected;
- For motorized travel, loop routes are preferred to dead end routes;
- Game retrieval using motorized vehicles should be prohibited off roads;
- Except for designated play areas, motorized vehicle cross country travel is prohibited;
- Routes should be designated and signed as motorized or non-motorized;
- Motorized wheeled cross-country travel to a campsite must be limited to within 300 feet of roads and trails;
- Existing road designations may be changed pursuant to land management objectives;
- The travel management plan should include a weed mitigation program;
- The travel map should be as simple as possible;
- The travel management plan should be flexible about the location of new roads needed to provide access to new activities as long as the total road mileage is not increased; and
- BLM roads not accessible to the public should be closed except for BLM lease and administrative and emergency use.

APPENDIX Q

MANAGEMENT OF WILDERNESS STUDY AREAS IF RELEASED

Note: Areas identified for non-motorized recreational emphasis will only allow motorized access at the level approved through route designations and will not favor management activities that encourage increased motorized recreational use.

AXOLOTL LAKES

Semi-Primitive Non-Motorized Summer Recreation Use
Motorized and Non-Motorized Winter Use
VRM Class II
Land Adjustment Category 1
Locatable Minerals—Available
Oil and Gas—NSO
Other Leasable Minerals—Available
Saleable Minerals—Available
ROWs—Available

BELL/LIMEKILN CANYON

Semi-Primitive Non-Motorized Recreation
VRM Class II
Land Adjustment Category 2
Locatable Minerals—Available
Oil and Gas—Available
Other Leasable Minerals—Available
Saleable Minerals—Available
ROWs—Available

BLACKTAIL MOUNTAINS

Semi-Primitive Non-Motorized
VRM Class II
Land Adjustment Category 1 for lands recommended for wilderness
Land Adjustment Category 2 for lands not recommended for wilderness
Locatable Minerals—Available
Oil and Gas—NSO
Other Leasable Minerals—Not Available
Saleable Minerals—Not Available
ROWs—Available

CENTENNIAL MOUNTAINS

Semi-Primitive Non-Motorized
VRM Class II
Land Adjustment Category 1
Locatable Minerals—Available
Oil and Gas—NSO

Other Leasable Minerals—Not Available
Saleable Minerals—Not Available
ROWs—Available

EAST FORK BLACKTAIL DEER CREEK

Semi-Primitive Non-Motorized
VRM Class II
Land Adjustment Category 2
Locatable Minerals—Available
Oil and Gas—NSO
Other Leasable Minerals—Available
Saleable Minerals—Not Available
ROWs—Available

FARLIN CREEK

Semi-Primitive Non-Motorized
VRM Class III
Land Adjustment Category 2
Locatable Minerals—Available
Oil and Gas—Available
Other Leasable Minerals—Available
Saleable Minerals—Available
ROWs—Available

HENNEBERRY RIDGE

Emphasize Mountain Biking, Hiking
VRM Class III
Land Adjustment Category 2
Locatable Minerals—Available
Oil and Gas—Available
Other Leasable Minerals—Available
Saleable Minerals—Available
ROWs—Available

HIDDEN PASTURE CREEK

Semi-Primitive Non-Motorized Recreation
VRM Class III
Land Adjustment Category 2
Locatable Minerals—Available
Oil and Gas—Available
Other Leasable Minerals—Available
Saleable Minerals—Available except for Big Sheep Creek area within 1/4 mile of river
ROWs—Available

RUBY MOUNTAINS

Semi-Primitive Non-Motorized Recreation

VRM Class II

Land Adjustment Category 1 for lands recommended for wilderness

Land Adjustment Category 2 for lands not recommended for wilderness

Locatable Minerals—Available

Oil and Gas—NSO in lands recommended for wilderness

Other Leasable Minerals— Not available in lands recommended for wilderness

Saleable Minerals— Not available in lands recommended for wilderness

ROWs— Not available in lands recommended for wilderness

APPENDIX R

MIGRATORY BIRD CONSERVATION

The BLM Dillon Field Office will use the following considerations, conservation strategies and priority species lists to implement migratory bird conservation in southwestern Montana. Management actions should focus on providing a variety of habitat characteristics that support successful breeding by migratory birds. This generally requires providing properly functioning habitats with the appropriate vegetation diversity, density and structure based on site potential to support nesting, security and foraging. Vegetation modification actions that reduce the capability of habitats to support these needs, such as prescribed fire, timber harvest, and livestock grazing, need to be evaluated for potential adverse impacts, particularly if they occur during the spring or early summer. The timing and intensity of these actions, as well as the type of habitat and bird species present, may substantially influence the level of impact to migratory birds. Such impacts have been considered to represent “take” under FWS regulations and have management implications. BLM’s goal is to implement management during project level activities that does not adversely affect migratory bird populations.

BLM MIGRATORY BIRD CONSERVATION STRATEGY

Non-game migratory birds are the primary species of concern under migratory bird conservation. Whereas waterfowl and migratory game birds are cooperatively managed by individual states and the USFWS with flyway-specific population and habitat goals and objectives, there has been less emphasis on developing and implementing management strategies to protect populations and habitat for other migratory birds, particularly neotropical migrants. These are species of songbirds, shorebirds and raptors that typically breed in North America but winter in Latin America. Because of these long-range migrations, it is important that quality habitats are adequately distributed along their migration routes to successfully reach their breeding and nesting grounds. It is also essential to provide sufficient quantities of suitable breeding habitat to maintain viable populations.

BLM’s Nongame Migratory Bird Habitat Conservation Plan (1992) provides the foundation for proactive habitat management on behalf of nongame birds that migrate to the tropics or use neotropical habitats. The overall intent is to reverse the decline in some bird populations and to implement this proactive program for other migratory species. The plan addresses goals for Inventory and Monitoring, Habitat Management, Research and Studies, Training, Education, Outreach and Communication, Domestic Partnerships, and International Partnerships. Habitat management

goals, management opportunities and recommended strategies from the plan include:

Goal

Restore, maintain, and enhance populations of nongame bird species through habitat management.

Recommended strategies

1. Prioritize breeding and migratory habitat for all nongame bird species so that management focus is on habitats of highest importance.
 - a. Prioritize the importance of each habitat type based upon bird use and total acreage present. This requires that each State possess a habitat and species inventory that will allow such ranking. The detail and resolution of the detail of the inventories will vary among States depending on what data is available. Coordination within the BLM and with its partners will be important in this process. A given habitat type may be rare on public land in one State, yet common in an adjacent state or on a nearby area. Thus specifying priorities will require not only good resource data but also good communication with other partners.
 - b. Complete a “gap analysis” to determine areas having high nongame bird habitat values that need increased management emphasis... The resolution of this analysis may be at different levels depending on the resource and management objectives, and executed at the level of the continent when identifying stopover habitats for long-distance migrants. The analysis may also be employed at the resource area level to identify needed breeding habitat ensuring a minimum, viable population of a particular species.
2. Consolidate areas under BLM administration with high nongame bird habitat values or potential.
 - a. When inventory and monitoring efforts have identified habitat with high bird values, attempt to combine such land as identified in Resource Management Plans via exchange or other suitable means. If voluntary exchange and/or acquisition is not possible, use easements Memoranda of Understanding or other methods to consolidate habitats into units of greater ecological value. This is especially important where such actions could provide landscape linkages supplying a bridge between large blocks already under management for nongame birds.
3. Restore degraded habitats to a condition consistent with nongame bird habitat objectives, emphasizing maintenance and enhancement of natural biological diversity.

- a. Promote viable nongame bird populations and natural biological diversity by implementing and/or continuing habitat restoration programs such as improved livestock management, prescribed burning, clearing of exotic vegetation, tree and shrub planting, seeding, fencing and erosion control structures.
 - b. Develop and implement management practices for riparian wetland and other areas that take into consideration impacts on nongame bird habitats. It is important for biologists and managers to pay close attention to how various management actions affect these species and their habitats. Research and experience will contribute to the future definition of "best management practices" for those species and their habitats.
4. Incorporate nongame bird management goals in resource Management Plans and activity plans as they are developed or amended.
 - a. Demonstrate that the BLM is a major player in species recovery by taking a prominent role in implementing specific recovery plans for Federally listed nongame birds that occur on public lands.
 - b. Develop and implement HMPs for all Federally listed and candidate species of nongame birds that are not covered by recovery plans.
 5. Use the National Environmental Policy Act (NEPA) process to identify possible mitigation measures to avoid adverse impacts on nongame bird species and habitats.
 - a. Continue to apply the NEPA process in all management plans and decisions as a standard operating procedure. In many cases, several species will be involved and each species may have rather different behavior and biological requirements.

OTHER CONSERVATION PLAN OBJECTIVES

In addition to the Migratory Bird Conservation Plan, several other national strategy plans for bird conservation were developed in the 1990's for shorebirds, raptors, and waterfowl. The North American Wetland Conservation Act (NAWCA) provides the primary funding source for Joint Venture projects that can now be implemented for all bird species and their habitats, based on national priorities. The objectives for all of these plans are similar:

- 1) Determine population status and trends and identify their habitats on the public lands,
- 2) Restore, maintain and enhance populations through habitat management,
- 3) Conduct research and studies to obtain knowledge needed for informed decision-making for on-the-ground management of the importance of birds and their value to our natural heritage.

- 4) Develop a broad awareness and understanding of the importance of birds and their value to our natural heritage,
- 5) Build on existing relationships and create new partnerships to foster conservation programs, and
- 6) Establish international relationships to enhance hemispheric conservation programs for migratory species.

PRIORITY SPECIES OF CONCERN

Many of the high priority bird species identified in bird conservation plans are not currently included on BLM special status species lists. It is the intent of BLM to work with the bird conservation initiatives and the Partners in Flight prioritization process to identify where special status species recognition is warranted (see BLM Manual Supplement 6840). BLM sensitive species lists are reviewed periodically at the state level and should ensure coordination with the USFWS and Partners in Flight priority bird lists.

USFWS provides a list of Birds of Conservation Concern for specific geographic areas. The Dillon Field Office is included in the Northern Rockies Bird Conservation Region (BCR10) which recognizes the following priority species:

Swainson's hawk	Sanderling
Ferruginous hawk	Wilson's phalarope
Golden eagle	Yellow-billed cuckoo
Peregrine falcon	Flammulated owl
Prairie falcon	Black swift
Yellow rail	Lewis' woodpecker
American golden-plover	Willamson's sapsucker
Snowy plover	Red-naped sapsucker
Mountain plover	White-headed woodpecker
Solitary sandpiper	Loggerhead shrike
Upland sandpiper	Pygmy nuthatch
Whimbrel	Virginia's warbler
Long-billed curlew	Brewer's sparrow
Marbled godwit	McCown's longspur

Partners in Flight lists are developed nationally, regionally and by individual states through specific plans. The Montana Bird Conservation Plan identifies numerous priority species for grassland, shrubland, forest, riparian and wetland habitats with reasons for concern, management issues and recommendations, and population and habitat objectives. The following are considered as Priority 1 species in the MBC plan:

Common loon	Flammulated owl
Trumpeter swan	Burrowing owl
Harlequin duck	Black-backer woodpecker
Sage grouse	Olive-sided flycatcher
Piping plover	Brown creeper
Mountain plover	Sprague's pipit
Interior least tern	Baird's sparrow

APPENDIX S

THREATENED OR ENDANGERED SPECIES SCREENING PROCESS

Grizzly bears, wolves, bald eagles, and lynx are the listed species that occur incidentally throughout the Dillon Field Office. This appendix describes analysis screens developed by a Level 1 team of interagency field biologists to facilitate, streamline, and ensure consistency across administrative boundaries during Section 7 consultation under the Endangered Species Act.

The screens are designed to identify simple, straightforward actions that have insignificant or discountable effects on listed species. If proposed actions are fully compliant with the wildlife screens, and the screen leads to a “not likely to adversely affect” conclusion, they will likely be covered for terrestrial species by a programmatic concurrence from the U.S. Fish and Wildlife Service. These proposed actions could proceed once the appropriate documentation (i.e. biological assessment or worksheet with appropriate documentation) is completed. The screens are not all inclusive because some projects warrant additional analyses from the onset. Furthermore, even though an action is identified in the screen, the standard consultation procedure could still be required. A qualified wildlife biologist is responsible for implementing the screening process.

Wildlife screens are attached for bald eagle, gray wolf, and grizzly bear. Measures identified in the Lynx Conservation and Assessment Strategy (LCAS) will serve as the screen for lynx. The action agency will be required to submit periodic progress reports for NLAA actions that have been consulted on using the programmatic concurrence.

The following sections provide guidance on how to use the wildlife screens and emphasize when the programmatic concurrence would not apply. If programmatic concurrence does not apply, the standard¹ section 7 process would occur. The process described here follows and compliments the National Fire Plan consultation strategy. The screens developed for the National Fire Plan process consider the effects of certain fire-related projects and may be used to screen all National Fire Plan projects. The screens presented here consider the effects of most other activities.

CONDITIONS APPLICABLE TO ALL SCREENS

- The programmatic concurrence applies to Forest Service and BLM projects or actions where the biological assessment clearly leads to a “not likely to adversely affect” (NLAA) determination. Use of the consultation screens is intended to be a tool to arriving at an effects determination; the biologist must consider the effects of the action added to the environmental baseline and cumulative effects. The concurrence is expressly limited to those simple, straightforward actions that will have documentation supporting insignificant or discountable effects on wildlife. **More complex projects that do not clearly lead to an NLAA determination or those projects for which the project biologist has any threatened and endangered wildlife species concerns do not qualify for this programmatic concurrence. For these projects, biologists should follow standard consultation processes.**
- Further, projects not meeting or included in the species-specific criteria are not covered by the programmatic consultation and must follow the standard processes for conducting project analysis, biological assessment development, and consultation. Several activities are not included in the species’ screens because the nature of the activity warrants additional consideration provided through standard consultation procedures.
- If one species does not meet the screening criteria, then standard consultation procedures need to be followed for all species. However, it is possible to use the screens as a documentation process for those species that fit the screens and include this documentation alongside the analysis for the species that do not fit the screens.
- As always, cumulative effects must be considered; cumulative effects findings may cause the project to go to standard consultation.

¹ Standard consultation refers to the process whereby the action agency biologist commences dialogue with U.S. Fish and Wildlife Service (Service) counterparts to determine the appropriate consultation procedures. Typically this involves phone correspondence to apprise the Service of the effects of an ongoing project and to reach consensus on such an effect and to determine if informal consultation is sufficient or if the project should proceed to formal consultation. Upon agreement of the respective consultation procedure, the action agency biologist will submit the appropriate request and documentation to the Service for concurrence or a biological opinion.

- No Effect determinations are included in the species-specific flowcharts to assist in overall effect determinations even though consultation is not necessary.
- Application of the screens and determination of project effects for compliance with Section 7 must be accomplished by a qualified wildlife biologist.
- In no case does the programmatic concurrence apply to any project or action that has the potential to cause or increase the likelihood of take as defined by the Service's regulations.
- In the event that a project or action proceeds under the programmatic concurrence and exceeds the conditions of the programmatic concurrence, the action agency must initiate informal or formal consultation or request reaffirmation of concurrence, as appropriate, for that project or action.

APPENDIX T

BALD EAGLE PROJECT SCREENING ELEMENTS AND DETERMINATIONS

The bald eagle screen includes definitions and flowcharts to assist in the effects determination. If, according to the flowcharts, the project arrives at an NLAA determination, then the project qualifies for the programmatic concurrence. If the project arrives at 'Standard Consultation' then the aforementioned procedures must be followed.

All attempts were made to adhere to and be compatible with the guidance found in the Montana Bald Eagle Management Plan (July 1994). Please refer to the Montana Bald Eagle Management Plan for further, more detailed, information. For a proposed activity in or near bald eagle breeding habitat, take it through each of the screens that refers to the location in which the project will occur (e.g. Zone I, etc.). Read each separate section if it is within the area of zone affected.

Definitions:

Zone I-Nest Site Area, 1/4 mi (400 m) radius of all nest sites in the breeding area that have been active within 5 years or until an active nest is located. When an active nest is located, Zone I applies only to the active nest (MBEMP p.23). Zone maps may be modified if sufficient information on the bald eagles using them exists.

Zone II-Primary Use Area, includes the area 1/4 mi (400 m) to 1/2 mi (800 m) from all nest sites in the breeding area that have been active within 5 years or until an activities nest is located. When an active nest is located, Zone II applies only to the active nest (*Id.*p.23).

Zone III-Home Range, represents most of a home range used by eagles during the nesting season. It usually includes all suitable foraging habitat within 2.5 mi (4 km) of all nest sites in the breeding area that have been active within 5 years (*Id.* p.24).

Foraging Habitat-includes foraging habitat outside of Zones I, II and III where resident breeding birds may forage. This is essential for the entire population, not just resident breeding eagles. Includes lakes, rivers, wetlands and meadows (*Id.* p.24).

Human Activity-examples of low intensity such as dispersed recreation; high intensity is heavy equipment use, blasting, logging, or concentrated recreation (*Id.* p.24).

Development-development that may increase human activity levels or negatively impact bald eagle habitat (*Id.* p. 24 refers to permanent development)

Nesting Season (dates)-as early as Feb. 1 and as late as Aug. 15 in MT (*Id.* p.22); nest specific information will firm up the dates for that nest/pair

Postfledging-birds leave the nest area, generally in Aug. in MT

Habitat alteration-that which may negatively affect bald eagles include, but are not limited to, timber harvest, prescribed fire, power line construction, pesticide use, land clearing, stream channeling, levee or dam construction or wetland drainage (*Id.*p.23).

Nesting and feeding habitat characteristics-see MBEMP p. 27-28

Structures-example of a structure hazardous to bald eagles is overhead utility lines (*Id.* p.24)

Disturbance-any human elicited response that induces a behavioral or physiological change in a bald eagle contradictory to those that facilitate survival and reproduction. Disturbance may include elevated heart or respiratory rate, flushing from a perch or events that cause a bald eagle to avoid an area or nest site (*Id.* p. 48).

Key use areas-Parts of Zone III most used by bald eagles

Successful Production Criteria-60% nest success and has fledged 3 or more young during the preceding 5 years (*Id.* p. 23)

*not from MT BEMP, from Pacific Bald Eagle Recovery Plan, p. 53 (pers. comm. Eric Greenquist to Carole Jorgensen)

ZONE I, II AND III

ZONE II and III and Foraging Areas

Structures proposed that pose no risk to bald eagles or their prey

ZONE III

FORAGING AREAS

APPENDIX U

WOLF PROJECT SCREENING ELEMENTS AND DETERMINATIONS

The following screening process is intended to facilitate ESA processing of project consultation requirements. The wolf screen should be used to assist in identifying projects that have “no effect” (NE) or “not likely to adversely affect” (NLAA) determination calls for the wolf. All projects that do not fall into the NE or NLAA must consider the wolf by using the established process for evaluating impacts of proposed projects on threatened and endangered species [i.e. project analysis (including cumulative effects) Biological Assessment, and consultation with USFWS].

The gray wolf screen includes a series of flowcharts. If the project screens to the NLAA determination that is not prefaced with the ‘Standard Consultation’ requirement as identified on the flow chart, then the project qualifies for the programmatic concurrence. If the project screens to “Standard Consultation”, then the project is not included in the programmatic concurrence and standard consultation processes need to be followed. It is possible to reach an NLAA determination and still be required to apply standard consultation procedures. This is because the nature of the project warrants additional consideration above and beyond that provided by the programmatic concurrence.

The major components of the wolf screen are population designation (wild or experimental) and whether the proposed project has any relationship to den or rendezvous sites during spring/summer, the prey base and/or livestock grazing. The original draft of the wolf screen was based on the following references and personal communications and has been modified through review by the Montana Level I Team:

- USFWS 1987. Wolf Recovery Plan.
- Fontaine, Joe. Personal communication (with Mike Hillis)
- USDA and USDI. 2000. Interior Columbia Basin Ecosystem Management Project, Final Environmental Impact Statement.
- USDA and USDI. Biological Assessment. Interior Columbia Basin Ecosystem Management Project. In preparation.

APPENDIX V

GRIZZLY BEAR MANAGEMENT

GRIZZLY BEAR PROJECT SCREENING ELEMENTS AND DETERMINATIONS

The following grizzly bear screening process is intended to facilitate ESA processing of project consultation requirements for minor projects, when a “no effect” or “not likely to adversely affect” determination is “clearly” the appropriate conclusion. Projects not meeting or included in the criteria presented must follow standard processes for conducting project analysis, BA development, and consultation.

The process relies heavily upon criteria developed as a part of the R1, R4, R6 National Fire Plan Consultation Screening Process, LRMPs, consultation processes, and other relevant plans. Criteria may differ among areas or units, but since the criteria have gone through planning, decisions, and review, they are considered adequate management elements for this process.

The grizzly bear screen is two-tiered. The Grizzly Bear Screening Process Part 1 is the first tier. If a proposed project does not satisfy the three considerations identified in Part 1 then standard consultation procedures must be followed. If the proposed project successfully meets the criteria identified in Part 1 then proceed to Part 2. Passing to the next tier

does not immediately guarantee that a project will be covered by the programmatic concurrence. If the project results in a “Not Likely to Adversely Affect” determination then the project is covered under the programmatic concurrence. If the project could potentially result in a “Likely to Adversely Affect” determination then standard consultation processes need to be followed.

Three considerations are prerequisite to more detailed consideration of other project information and are considered in screening process Part 1. (1) The area must be in compliance with the appropriate access management direction. (2) Human foods, livestock feed, garbage, and other attractants must be managed by the application of an adequate “food storage rule” similar to the NCDE or Yellowstone food storage orders. If no specific rule exists for the area, use of either the Yellowstone or NCDE order will be considered adequate. (3) Projects that involve seeding or planting of grasses, forbs, or shrubs, must do so in a manner that will tend not to attract bears into areas where increased mortality risk or interaction between bears and people is likely.

After access management, food/attractant storage, and seeding/planting of grasses, forbs, or shrubs have been considered in Part 1, only then can other project details be considered in Part 2 of the screening process

Grizzly Bear Screening Process Part 1

Part 2: The following Screening Criteria Table displays activities and criteria, that when met, will allow the project to meet “screening elements”. If the project does not meet the identified criteria, the project should proceed through the established consultation process.

#	Activity Type	Activity Component	Crew Level and Duration of Use	Screening Criteria	Determination
1	Forest Products	Personal use firewood collection, berry picking, low/incidental mushroom picking, and collection of “other forest products” (such as bear grass greens, medicinal herbs, pachistima, etc)	Day and overnight use	Does not include off road mechanical skidding. Include “bear aware” education message	NLAA
		Commercial firewood collection, berry picking, and “other forest products” (such as bear grass greens, medicinal herbs, pachistima, etc), but does not include mushrooms.	Day use only or camping of ≤ 20 individuals and ≤ 5 days total/analysis area	Does not include off road mechanical skidding. Enforce sanitation standards, and Include “bear aware” education message.	NLAA
2	Mechanical	Off road heavy equip operation, such as site prep, fuel piling, log yarding, etc	NA	NA	Potential LAA, go to Standard Consultation process
		Helicopter use for monitoring, prescribed fire ignition, wildlife relocations, etc	Use includes few trips and ≤ 2 activities/year and ≤ 2 days/activity/analysis area	NA	NLAA
3	Habitat Restoration	See timber harvest, mechanical treatments, roads, weed control, and prescribed fire. Also includes monitoring, exclosure development, fish barrier development, fish spp removal/trapping, rotenone treatment, interpretation/Con Ed, meadow restoration, riparian planting and restoration, snag creation, and water source development.	Day use only or camping of ≤ 20 individuals and ≤ 5 days/analysis area	Project occurs between July 1 through March 31 or completed in ≤ 1 day in riparian areas. Project does not result in an increase in public use or user type.	NLAA
4	Prescribed Fire	General support, ignition, mop-up	Day use only or camping of ≤ 20 individuals and ≤ 5 days/analysis area	Does not include riparian areas	NLAA
		Fire line construction	Same as support	Fire line does not/will not function as a travel way	NLAA
		Defensible space treatments (within 100m of structure)	Same as support	Planting and/or seeding does not include palatable forage spp.	NLAA
5	Range	Infrastructure development	NA	NA	NLAA
		Grazing		Maintains or reduces existing livestock grazing or changes livestock class to a less vulnerable spp, and no history of depredation or control actions	NLAA

#	Activity Type	Activity Component	Crew Level and Duration of Use	Screening Criteria	Determination
		Grazing		Increases livestock grazing, introduces new grazing into areas where depredation more likely, or history of livestock depredation	Potential LAA, go to Standard Consultation process
6	Recreation	Trail maintenance or reconstruction	NA	Results in increased use or change of user type	Potential LAA, go to Standard Consultation process
		Trail maintenance or reconstruction		Does not result in increase in use or change in user type	NLAA
		New Trail construction			Potential LAA, go to Standard Consultation process
		Facility operations, including developed and dispersed camping		Educate public campers and enforce sanitation standards. Does not increase use or change user type.	NLAA
		Facility operations, including developed and dispersed camping		Sanitation standards are not enforced or use is increased or user type is changed.	Potential LAA, go to Standard Consultation process
7	Roads & Road Maintenance	Opening closed road			Potential LAA, go to Standard Consultation process
		Reclaiming road outside of riparian/spring habitat		Meets administrative use levels	NLAA
		Reclaiming road in riparian/spring hab		Project occurs between July 1 through March 31 or completed in ≤ 1 day, and meets administrative use levels	NLAA
		Reclaiming road		Does not meet administrative use levels, or occurs in riparian/spring habitat and active during 4/1-6/30	Potential LAA, go to Standard Consultation process
		Road Maint: blading, culvert cleaning, brushing, etc		Road is open, or use meets administrative use criteria	NLAA
		New road construction			Potential LAA, go to Standard Consultation process

#	Activity Type	Activity Component	Crew Level and Duration of Use	Screening Criteria	Determination
		Bridge or stream culvert replacement		Project occurs between July 1 through March 31 or completed in ≤ 1 day	NLAA
8	Silviculture Activities	Reforestation hand planting	Day use only or camping of ≤ 20 individuals and ≤ 5 days/analysis area	Does not include snow plowing for access	NLAA
		Reforestation mechanical treatments	NA	NA	Potential LAA, go to Standard Consultation process
		Insect suppression Aerial chemical application	NA	Chemicals do not effect cutworm moth or habitat	NLAA
		Insect suppression Aerial chemical application	NA	Chemicals affect cutworm moth or habitat, and in moth habitat	Potential LAA, go to Standard Consultation process
		Insect suppression ground chemical application	NA	NA	NLAA
		Insect suppression survey, fertilization, manual treatment, individual tree fire treatment, or pheromone treatment	NA	NA	NLAA
		Precommercial thinning			Potential LAA, go to Standard Consultation process
9	Timber harvest	Harvest, skidding, and/or hauling of timber products	NA	NA	Potential LAA, go to Standard Consultation process
10	Watershed restoration	Includes erosion control structures, sediment control, monitoring. Also, see reforestation, timber harvest, mechanical treatments, etc.	Day use only or camping of ≤ 20 individuals and ≤ 5 days/analysis area	Project occurs between July 1 through March 31 or completed in ≤ 1 day	NLAA
11	Weed control	Chemical, aerial or ground application	NA	NA	NLAA
		Sheep or goat grazing	NA	NA	Potential LAA, go to Standard Consultation process

CONSERVATION ACTIONS FOR GRIZZLY BEARS

The following excerpts from the Yellowstone Conservation Strategy and Grizzly Bear Management Plan for Southwestern Montana are pertinent to grizzly bear management in

the Dillon Field Office. These are the conservation measures that address the needs and risk factors for grizzly bear, and will be used to evaluate land management authorizations. The DFO is outside the Primary Conservation Area for grizzly, and only those actions specific to areas outside the PCA will be used.

Final Conservation Strategy for the Grizzly Bear in the Greater Yellowstone Area March 2003

Chapter 1 - Introduction and Background

The future management of the Yellowstone grizzly bear population is envisioned as one in which the grizzly and its habitat are conserved as integral parts of the Greater Yellowstone Area. Within the Greater Yellowstone Area (GYA), the grizzly bear population and its habitat will be managed utilizing a management approach that identifies a Primary Conservation Area (PCA) and adjacent areas where occupancy by grizzly bears is anticipated and acceptable. The PCA is the existing Yellowstone grizzly bear recovery zone as identified in the 1993 *Grizzly Bear Recovery Plan (Recovery Plan)* (USFWS 1993). The size of the recovery zone is not being expanded in this approach. Upon implementation of this Conservation Strategy, management using a recovery zone line and grizzly bear Management Situations described in the Interagency Grizzly Bear Guidelines (IGBC 1986) will no longer be necessary. The PCA boundary will replace the recovery zone boundary. In the Conservation Strategy, management direction is described for both the PCA and adjacent areas within the GYA. State grizzly bear management plans, forest plans, and other appropriate planning documents will provide specific management direction for the adjacent areas outside the PCA.

This Conservation Strategy was developed to be the document guiding management and monitoring of the Yellowstone grizzly bear population and its habitat upon recovery and delisting. This approach will remain in place beyond recovery and delisting. Ongoing review and evaluation of the effectiveness of this Conservation Strategy is the responsibility of the state and federal managers in the GYA. This Conservation Strategy will be updated by the management agencies every five years or as necessary, allowing public comment in the updating process. Upon implementation of the Conservation Strategy, the Yellowstone Grizzly Coordinating Committee (YGCC) will replace the Yellowstone Ecosystem Subcommittee.

The Conservation Strategy and the State Management Plans

The purpose of this Conservation Strategy (Strategy) and the state plans is to:

- Describe and summarize the coordinated efforts to manage the grizzly bear population and its habitat to ensure continued conservation in the GYA
- Specify the population, habitat, and nuisance bear standards to maintain a recovered grizzly bear population for the foreseeable future
- Document the regulatory mechanisms and legal authorities, policies, management, and monitoring programs that exist to maintain the recovered grizzly bear population
- Document the commitment of the participating agencies

Implementation of the management strategies requires continued cooperation between federal and state agencies.

The GYA is a dynamic environment; monitoring systems in the Strategy allow for dynamic management as environmental issues change. The agencies are committed to be responsive to the needs of the grizzly bear by dynamic management actions based on the results of detailed annual population and habitat monitoring.

The vision of the Strategy can be summarized as follows:

- The PCA will be a secure area for grizzly bears, with population and habitat conditions maintained to ensure a recovered population is maintained for the foreseeable future and to allow bears to continue to expand outside the PCA.
- Outside of the PCA, grizzly bears will be allowed to expand into biologically suitable and socially acceptable areas.

- Outside of the PCA, the objective is to maintain existing resource management and recreational uses and to allow agencies to respond to demonstrated problems with appropriate management actions.
- Outside of the PCA, the key to successful management of grizzly bears lies in bears utilizing lands that are not managed solely for bears but in which their needs are considered along with other uses.
- Expand public information and education efforts.
- Provide quick responsive management to deal with grizzly bear conflicts.
- Manage grizzly bears as a game animal; including allowing regulated hunting when and where appropriate.

Relationship to Other Plans

By integrating state plans into the Strategy, it was ensured that the plans and the Strategy are consistent where necessary and complementary. The state plans are formally incorporated in the Conservation Strategy as Appendices K, L, and M. Relationships with national forest and national park plans are also mentioned throughout the Strategy. Land and resource management plans for some national forests, national parks, and the Bureau of Land Management (BLM) in the GYA have incorporated the habitat standards and other relevant provisions of the Conservation Strategy. For those standards and provisions not yet incorporated into management plans, the agencies will implement the habitat standards and monitoring requirements in this conservation strategy through their established planning processes, subject to NEPA or other legal requirements.

Chapter 2 - Population Standards and Monitoring

To maintain a healthy (recovered) grizzly bear population in the GYA, it is necessary to have adequate numbers of bears that are widely distributed with a balance between reproduction and mortality. This section details the population criteria in the *Recovery Plan* that were necessary to achieve recovery, and the population standards necessary to maintain it. *Recovery Plan* criteria focus on the PCA and a 10-mile perimeter, whereas standards in the Strategy and the parameters in appended state plans focus beyond the PCA and encompass the entire GYA. Because grizzly bears are a difficult species to monitor and manage, multiple standards with additional monitoring items are identified to provide sufficient information upon which to base management decisions. It is the goal of the agencies implementing this Conservation Strategy to manage the Yellowstone grizzly population in the entire GYA at or above a total of 500 grizzly bears.

Chapter 3 - Habitat Standards and Monitoring

The habitat standards identified in this document will be maintained at identified levels inside the PCA. In addition to the habitat standards, several other habitat factors will be monitored and evaluated to determine the overall condition of habitat for bears. It is the goal of the habitat management agencies to maintain or improve habitat conditions existing as of 1998, as measured within each subunit within the PCA, while maintaining options for management of resource activities at approximately the same level as existed in 1998. The habitat standards in this document are subject to revision based on the best available science and will be reviewed and updated as necessary.

Habitat standards include:

- Maintenance of secure habitat at 1998 levels in each BMU subunit through management of motorized access route building and density, with short-term deviations allowed under specific conditions. Secure habitat is defined as more than 500 meters from an open or gated motorized access route or reoccurring helicopter flight line and must be greater than or equal to 10 acres in size.
- The number of commercial livestock allotments and number of permitted domestic sheep will not exceed 1998 levels inside the PCA. Existing sheep allotments will be phased out as the opportunity arises with willing permittees.
- Management of developed sites at 1998 levels within each BMU subunit, with some exceptions for administrative and maintenance needs

Habitat criteria that will be monitored and reported include:

- Monitoring open and total motorized access route density in each BMU subunit inside the PCA
- Monitoring of four major food items throughout the Yellowstone area: winter ungulate carcasses, cut-throat trout spawning numbers, bear use of army cutworm moth sites, and whitebark pine cone production. The incidence of white pine blister rust in sampled areas will also be monitored.

- Monitoring of habitat effectiveness in the PCA using the databases from the Yellowstone Grizzly Bear Cumulative Effects Model
- Monitoring the number of elk hunters inside the PCA
- Monitoring the number of grizzly bear mortalities throughout the Yellowstone area on private lands and development of a protocol to monitor private land status and condition
- Land managers will ensure that habitat connectivity is addressed throughout the Yellowstone area as part of any new road construction or reconstruction

Chapter 4 - Management and Monitoring of Grizzly Bear/Human Conflicts

The management of grizzly bear/human conflicts inside the PCA is based upon the existing laws and authorities of the state wildlife agencies and federal land management agencies. Outside the PCA, state management plans will direct the management of nuisance bears. Management of nuisance bears usually falls into one or more of the following categories:

- Removing or securing the attractant
- Deterring the bear from the site through the use of aversive conditioning techniques
- Capturing and relocating the nuisance bear
- Removing the bear from the wild, including lethal control

The focus and intent of nuisance grizzly bear management inside and outside the PCA will be predicated on strategies and actions to prevent grizzly bear/human conflicts. It is recognized that active management aimed at individual nuisance bears will be required in both areas. Management actions outside the PCA will be implemented according to state management plans. These actions will be compatible with grizzly bear population management objectives for each state for the areas outside the PCA.

In circumstances that result in a nuisance bear situation outside the PCA, more consideration will be given to existing human uses. Site-specific conflict areas within and outside the PCA will be documented and prioritized to focus proactive management actions to minimize grizzly bear/human conflicts and address existing and potential human activities that may cause future conflicts. Past conflict management has demonstrated that grizzly bears can coexist with most human activities. Management of all nuisance bear situations will emphasize resolving the human cause of the conflict. Relocation and removal of grizzly bears may occur if other management actions are not successful.

Before any removal, except in cases of human safety, management authorities will consult with each other prior to judging the adequacy of the reason for removal. Captured grizzly bears identified for removal may be given to public research institutions or public zoological parks for appropriate non-release educational or scientific purposes as per regulations of states and national parks. Grizzly bears not suitable for release, research, or educational purposes will be removed as described in appropriate state management plans or in compliance with national park management plans. All grizzly bear relocations and removals will be documented and reported annually in the IGBST (Interagency Grizzly Bear Study Team) Annual Report.

Chapter 5 - Information and Education

The purposes of the information and education aspects of this cooperative effort are to support the development, implementation, and dissemination of a coordinated information and education program. This program should be understandable and useful for the people who visit, live, work, and recreate in bear habitat to minimize grizzly bear/human conflicts and to provide for the safety of people while building support for viable bear populations. Information made available to the public will be open and responsive to public concerns. Open discussions with the public will increase credibility of the grizzly bear management program. These efforts will be reviewed periodically and program adjustments will be made as necessary. In addition, efforts will be expanded as the bear population expands and additional efforts are needed in areas that could become occupied in the near future.

The current information and education (I & E) working group within the Greater Yellowstone Area will continue. Members of this I & E team include public affairs personnel from Forest Service Regions 1, 2, and 4; Grand Teton and Yellowstone National Parks; the BLM; representatives from each state wildlife agency; and the information and education specialist from the IGBC. This team will continue to work with all affected interests to ensure consistency of information, efficient funding strategies, identifying and targeting audiences, developing partnerships, and identifying new tools for implementation.

Grizzly Bear Management Plan for Southwestern Montana 2002-2012

Specific Habitat Management and Guidelines

FWP will seek to maintain road densities of one mile or less per square mile of habitat as the preferred approach. This is the goal of the statewide elk management plan (including the southwestern Montana areas covered by this plan). The goal seeks to meet the needs of a variety of wildlife while maintaining reasonable public access. If additional management is needed based on knowledge gained as bears reoccupy areas, it should be developed and implemented by local groups as suggested in this plan.

The following general management guidelines are applicable coordination measures. They should be considered when evaluating the effects of existing and proposed human activities in identified seasonally important habitats for a variety of wildlife species including grizzlies on federal and State lands.

1. Identify and evaluate, for each project proposal, the cumulative effects of all activities, including existing uses and other planned projects. Potential site-specific effects of the project being analyzed are a part of the cumulative effects evaluation which will apply to all lands within a designated "biological unit". A biological unit is an area of land which is ecologically similar and includes all of the year-long habitat requirements for a sub-population of one or more selected wildlife species.
2. Avoid human activities, or combinations of activities, on seasonally important wildlife habitats that may result in an adverse impact on the species or reduce long-term habitat effectiveness.
3. Base road construction proposals on a completed transportation plan which considers important wildlife habitat components and seasonal use areas in relation to road location, construction period, road standards, seasons of heavy vehicle use, road management requirements, and more.
4. Use minimum road and site construction specifications based on projected transportation needs. Schedule construction times to avoid seasonal-use periods for wildlife as designated in species-specific guidelines.
5. Locate roads, drill sites, landing zones, etc., to avoid important wildlife habitat components based on site-specific evaluation.
6. Roads that are not compatible with area management objectives, and are no longer needed for the purpose for which they were built, will be closed and reclaimed. Native plant species will be used whenever possible to provide proper watershed protection on disturbed areas. Wildlife forage and/or cover species will be used in rehabilitation projects where appropriate.
7. Impose seasonal closures and/or vehicle restrictions based on wildlife, or other resource needs, on roads that remain open and enforce and prosecute illegal use by off-road vehicles if given authority. FWP will actively work to secure authority through the appropriate process and identify funding to support enforcement efforts.
8. FWP supports the U.S. Forest Service and BLM restrictions banning all off-road/trail use.
9. Efforts will be directed towards improving the quality of habitat in site-specific areas of habitually high human-caused bear mortality. Increased sanitation measures, seasonal road closures, etc., could be applied.

APPENDIX W LYNX MANAGEMENT

LYNX PROJECT SCREENING ELEMENTS AND DETERMINATIONS

The Lynx Conservation and Assessment Strategy will serve as the lynx screen. Projects that result in an NLAA determination as outlined in the LCAS will be covered by the programmatic concurrence. Screens may be developed that rely upon the LCAS, and documentation utilized in the "on-going" project clearance process used for lynx.

LYNX SCREEN

SUMMARY OF LYNX CONSERVATION ASSESSMENT AND STRATEGY (LCAS) AND LYNX CONSERVATION MEASURES

The BLM and FWS signed a Conservation Agreement to promote the conservation of the Canada lynx and its habitat on BLM lands, using the Lynx Science Report and the Lynx Conservation and Assessment Strategy. The LCAS was developed in place of the normal recovery plan previously used for most other species listed under ESA.

The agreement and strategy identify objectives, standards, guidelines, and conservation measures to reduce or eliminate risk factors. These measures are intended to conserve the lynx, and to reduce or eliminate adverse effects from the spectrum of management activities on federal lands. These measures are provided to assist federal agencies in seeking opportunities to benefit lynx and to help avoid negative impacts through the thoughtful planning of activities. Plans that incorporate them, and projects that implement them, are generally not expected to have adverse effects on lynx, and implementation of these measures across the range of the lynx is expected to lead to conservation of the species.

Critical habitat for the Canada Lynx was not designated through the listing process. The LCAS instead relies on defining potential habitat based on vegetation characteristics and prey availability wherever that may occur since current lynx populations are small and widely dispersed. Conservation focus is to:

- Manage forested habitat within the historic range of variability for vegetation, and maintain large unfragmented blocks of forest with the appropriate structure;
- Maintain dense understory conditions providing cover and forage for snowshoe hares as the primary lynx prey base;
- Minimize snow compaction that would encourage access for competing predators into lynx habitat; and
- Provide connections within and between lynx habitat areas, emphasizing riparian habitats.

CONSERVATION MEASURES APPLICABLE TO ALL PROGRAMS AND ACTIVITIES

Because it is impossible to provide standards and guidelines to address all possible actions in all locations across the broad range of the lynx, it is imperative that project specific analysis and design be completed for all actions that have the potential to affect lynx. Circumstances unique to individual projects or actions and their locations may still result in adverse effects on lynx. In these cases, additional or modified mitigating measures may be necessary to avoid or minimize adverse effects.

Programmatic planning - objectives

1. Design vegetation management strategies that are consistent with historical succession and disturbance re-

gimes. The broad-scale strategy should be based on a comparison of historical and current ecological processes and landscape patterns, such as age-class distributions and patch size characteristics. It may be necessary to moderate the timing, intensity, and extent of treatments to maintain all required habitat components in lynx habitat, to reduce human influences on mortality risk and interspecific competition, and to be responsive to current social and ecological constraints relevant to lynx habitat.

Programmatic planning - standards

1. Conservation measures will generally apply only to lynx habitat on federal lands within LAUs.
2. To facilitate project planning, delineate LAUs. To allow for assessment of the potential effects of the project on an individual lynx, LAUs should be at least the size of area used by a resident lynx and contain sufficient year-round habitat.
3. To be effective for the intended purposes of planning and monitoring, LAU boundaries will not be adjusted for individual projects, but must remain constant.
4. Lynx habitat will be mapped using criteria appropriate to each geographic area.
5. Prepare a broad-scale assessment of landscape patterns that compares historical and current ecological processes and vegetation patterns, such as age-class distributions and patch size characteristics. In the absence of guidance developed from such an assessment, limit disturbance within each LAU as follows: if more than 30 percent of lynx habitat within a LAU is currently in unsuitable condition, no further reduction of suitable conditions shall occur as a result of vegetation management activities by federal agencies.

Programmatic planning - guidelines

1. The size of LAUs should generally be 6,500- 10,000 ha (16,000 – 25,000 acres or 25-50 square miles) in contiguous habitat, and likely should be larger in less contiguous, poorer quality, or naturally fragmented habitat. Larger units should be identified in the southern portions of the Northern Rocky Mountains Geographic Area (in Idaho from the Salmon River south, Oregon, Wyoming, and Utah) and in the Southern Rocky Mountains Geographic Area.

In the west, we recommend using watersheds (e.g., 6th code hydrologic unit codes (HUCs) in more northerly portions of geographic areas, and 5th code HUCs in more southerly portions). In the east, terrestrial ecological units that have been delineated at the landtype association or subsection level (e.g., LTAs or whatever scale most closely approximates the size of a lynx home range) may be an appropriate context for analysis. Coordinate delineation of LAUs with adjacent administrative units and state wildlife management agencies, where appropriate.

2. After LAUs are identified, their spatial arrangement should be evaluated. Determine the number and arrangement of contiguous LAUs needed to maintain lynx habitat well distributed across the planning area. LAUs with only insignificant amounts of lynx habitat may be discarded, or portions of the unit combined with or divided among neighboring LAUs to provide a meaningful unit for analysis.

Project planning - standards

1. Within each LAU, map lynx habitat. Identify potential denning habitat and foraging habitat (primarily snowshoe hare habitat, but also habitat for important alternate prey such as red squirrels), and topographic features that may be important for lynx movement (primary ridge systems, prominent saddles, and riparian corridors). Also identify non-forest vegetation (meadows, shrub-grassland communities, etc.) adjacent to and intermixed with forested lynx habitat that may provide habitat for alternate lynx prey species.
2. Within a LAU, maintain denning habitat in patches generally larger than 5 acres, on at least 10 percent of the area that is capable of producing stands with these characteristics. Where less than 10 percent of the forested lynx habitat within a LAU provides denning habitat, defer those management actions that would delay achievement of denning habitat structure.
3. Maintain habitat connectivity within and between LAUs.

CONSERVATION MEASURES TO ADDRESS RISK FACTORS AFFECTING LYNX PRODUCTIVITY

Timber Management in Lynx Habitat

Timber management modifies the vegetation structure and mosaic of forested landscapes. Timber management can be used in conjunction with, or in place of, fire as a disturbance process to create and maintain snowshoe hare habitat. In the southern portion of its range, lynx populations appear to be limited by the availability of snowshoe hare prey, as suggested by large home range sizes, high kitten mortality due to starvation, and greater reliance on alternate prey, especially red squirrels, as compared with populations in northern Canada. Timber management practices should be designed to maintain or enhance habitat for snowshoe hare and alternate prey such as red squirrel. Dense horizontal cover of conifers, just above the snow level in winter, is critical for snowshoe hare habitat. This structure may occur either in regenerating seedling/sapling stands, or as an understory layer in older stands.

Most aspen stands in the Rocky Mountains are in late successional condition as a result of past fire prevention and grazing. In aspen stands intermixed with spruce-fir forests, particularly in southern Idaho, southern Montana, Wyoming, Utah, and Colorado, treatments that result in dense regeneration of aspen are likely to enhance habitat for potential prey of lynx.

Programmatic planning - objectives

1. Evaluate historical conditions and landscape patterns to determine historical vegetation mosaics across landscapes through time. For example, large infrequent disturbance events may have been more characteristic of lynx habitat than small frequent disturbances.
2. Maintain suitable acres and juxtaposition of lynx habitat through time. Design vegetation treatments to approximate historical landscape patterns and disturbance processes.
3. If the landscape has been fragmented by past management activities that reduced the quality of lynx habitat, adjust management practices to produce forest composition, structure, and patterns more similar to those that would have occurred under historical disturbance regimes.

Project planning - objectives

1. Design regeneration harvest, planting, and thinning to develop characteristics suitable for snowshoe hare habitat.
2. Design project to retain/enhance existing habitat conditions for important alternate prey (particularly red squirrel).

Project planning - standards

1. Management actions (e.g., timber sales, salvage sales) shall not change more than 15 percent of lynx habitat within a LAU to an unsuitable condition within a 10-year period.
2. Following a disturbance such as blowdown, fire, insects, and disease that could contribute to lynx denning habitat, do not salvage harvest when the affected area is smaller than 5 acres; exceptions would include areas such as developed campgrounds. Where larger areas are affected, retain a minimum of 10% of the affected area per LAU in patches of at least 5 acres to provide future denning habitat. In such areas, defer or modify management activities that would prevent development or maintenance of lynx foraging habitat.
3. In lynx habitat, pre-commercial thinning will be allowed only when stands no longer provide snowshoe hare habitat (e.g., self-pruning processes have eliminated snowshoe hare cover and forage availability during winter conditions with average snowpack).
4. In aspen stands within lynx habitat in the Cascade Mountains, Northern Rocky Mountains and Southern Rocky Mountains Geographic Areas, apply harvest prescriptions that favor regeneration of aspen.

Project planning - guidelines

1. Plan regeneration harvests in lynx habitat where little or no habitat for snowshoe hares is currently available, to recruit a high density of conifers, hardwoods, and shrubs preferred by hares. Consider the following:
 - a) Design regeneration prescriptions to mimic historical fire (or other natural disturbance) events, including retention of fire-killed dead trees and coarse woody debris;
 - b) Design harvest units to mimic the pattern and scale of natural disturbances and retain natural connectivity across the landscape. Evaluate the potential of riparian zones, ridges, and saddles to provide connectivity; and
 - c) Provide for continuing availability of foraging habitat in proximity to denning habitat.
2. In areas where recruitment of additional denning habitat is desired, or to extend the production of snowshoe hare foraging habitat where forage quality and quantity is declining due to plant succession, consider improvement harvests (commercial thinning, selection, etc). Improvement harvests should be designed to:
 - a) Retain and recruit the understory of small diameter conifers and shrubs preferred by hares;
 - b) Retain and recruit coarse woody debris, consistent with the likely availability of such material under natural disturbance regimes; and
 - c) Maintain or improve the juxtaposition of denning and foraging habitat.

Wildland Fire Management

Wildland fire and insects have historically played the dominant role in maintaining a mosaic of forest successional stages in lynx habitat. Stand-replacing fires were infrequent and affected large areas. In areas with a mixed fire regime, moderate to low intensity fires also occurred in the intervals between stand-replacing events. Refer to the geographic area descriptions for more detailed information regarding historical fire regimes.

Periodic vegetation disturbances maintain the snowshoe hare prey base for lynx. In the period immediately following large stand-replacing fires, snowshoe hare and lynx densities are low. Populations increase as the vegetation grows back and provides dense horizontal cover, until the vegetation grows out of the reach of hares. Low to moderate intensity fires may also stimulate understory development in older stands.

Fire exclusion may have altered the pattern and composition of vegetation in subalpine forests. In the western United States, particularly in the southern portion of the Northern Rocky Mountains Geographic Area and in the Southern Rocky Mountains Geographic Area, fire exclusion is one of the primary factors contributing to the decline or loss of aspen. Aspen communities occupy a small percentage of

the total forested area, but they provide important habitat diversity. Aspen/tall forb community types, especially those that include snowberry, serviceberry and chokecherry shrubs in the understory, are very productive and may contribute to the quality of lynx foraging habitat.

Wildland fire management activities include suppression and pre-suppression activities, as well as prescribed fire (natural and management ignitions).

Programmatic planning - objectives

1. Restore fire as an ecological process. Evaluate whether fire suppression, forest type conversions, and other forest management practices have altered fire regimes and the functioning of ecosystems.
2. Revise or develop fire management plans to integrate lynx habitat management objectives. Prepare plans for areas large enough to encompass large historical fire events.
3. Use fire to move toward landscape patterns consistent with historical succession and disturbance regimes. Consider use of mechanical pre-treatment and management ignitions if needed to restore fire as an ecological process.
4. Adjust management practices where needed to produce forest composition, structure, and patterns more similar to those that would have occurred under historical succession and disturbance regimes.
5. Design vegetation and fire management activities to retain or restore denning habitat on landscape settings with highest probability of escaping stand-replacing fire events. Evaluate current distribution, amount, and arrangement of lynx habitat in relation to fire disturbance patterns.

Project planning - objectives

1. Use fire as a tool to maintain or restore lynx habitat.
2. When managing wildland fire, minimize creation of permanent travel ways that could facilitate increased access by competitors.

Project planning - standards

1. In the event of a large wildfire, conduct a post-disturbance assessment prior to salvage harvest, particularly in stands that were formerly in late successional stages, to evaluate potential for lynx denning and foraging habitat.
2. Design burn prescriptions to regenerate or create snowshoe hare habitat (e.g., regeneration of aspen and lodgepole pine).

Project planning - guidelines

1. Design burn prescriptions to promote response by shrub and tree species that are favored by snowshoe hare.
2. Design burn prescriptions to retain or encourage tree species composition and structure that will provide habitat for red squirrels or other alternate prey species.

3. Consider the need for pre-treatment of fuels before conducting management ignitions.
4. Avoid constructing permanent firebreaks on ridges or saddles in lynx habitat.
5. Minimize construction of temporary roads and machine fire lines to the extent possible during fire suppression activities.
6. Design burn prescriptions and, where feasible, conduct fire suppression actions in a manner that maintains adequate lynx denning habitat (10% of lynx habitat per LAU).

Recreation Management

Lynx have evolved a competitive advantage in environments with deep soft snow that tends to exclude other predators during the middle of winter, a time when prey is most limiting (Murray and Boutin 1991, Livaitis 1992, Buskirk et al. 1999). Widespread human activity (snowshoeing, cross-country skiing, snowmobiling, snow cats) may lead to patterns of snow compaction that make it possible for competing predators such as coyotes and bobcats to occupy lynx habitat through the winter, reducing its value to and even possibly excluding lynx (Bider 1962, Ozoga and Harger 1966, Murray et al. 1995, O'Donoghue et al. 1998). In order to maintain a competitive advantage for lynx, it may be necessary to minimize or even preclude snow compacting activities in and around quality snowshoe hare habitat. To not do so may lead to the elimination of lynx, or preclude the ability to re-establish them, in these landscapes.

A consideration for lynx in winter landscapes is exploitation or interference competition from other predator/competitors (Buskirk et al. 1999) and human disturbance (e.g., large developed recreational sites or areas of concentrated winter recreational use). Lynx may be able to adapt to the presence of regular and concentrated recreational use, so long as critical habitat needs are being met. Therefore it is essential that an interconnected network of foraging habitat be maintained that is not subjected to widespread human intervention or competition from other predator species.

In areas of concentrated recreational use (e.g., large ski areas), it may be necessary to maintain or provide "diurnal security habitat". In landscapes where there is widespread or intense recreational use, the natural diurnal patterns of human and lynx activity may provide the opportunity to maintain both uses in the landscape. Most human activity occurs during daylight hours, while lynx appear to be most active dusk to dawn, although weather may affect the time period when lynx are most active (Apps 1999). A key to providing temporal segregation of use may be in ensuring there are places in that landscape where lynx can bed during the day relatively undisturbed. Sites that are similar to denning habitat (i.e., areas that are tangled with large woody debris) will tend to exclude most human activity because of the inherent difficulty they pose for human movement. Di-

urnal security habitat should be sufficiently large to provide effective and visual insulation from human activity, and must be well distributed and in proximity to foraging habitat.

Where such diurnal security sites exist, they should be protected from actions or activities that would destroy or compromise their functional value. In landscapes where these areas are lacking or inadequate, it may be desirable to create them, focusing on location, adequate size, and an abundance of jackstrawed large woody debris.

Landscape connectivity may be provided by narrow forested mountain ridges, plateaus, or forest stringers that link more extensive areas of lynx habitat. Woodland riparian communities that provide travel cover across otherwise open areas may also provide connectivity.

Minimizing disturbance around denning habitat is important from May to August.

Programmatic planning - objectives

1. Plan for and manage recreational activities to protect the integrity of lynx habitat, considering as a minimum the following:
 - a) Minimize snow compaction in lynx habitat.
 - b) Concentrate recreational activities within existing developed areas, rather than developing new recreational areas in lynx habitat.
 - c) On federal lands, ensure that development or expansion of developed recreation sites or ski areas and adjacent lands address landscape connectivity and lynx habitat needs.

Programmatic planning - standards

1. On federal lands in lynx habitat, allow no net increase in groomed or designated over-the-snow routes and snowmobile play areas by LAU. This is intended to apply to dispersed recreation, rather than existing ski areas.
2. Map and monitor the location and intensity of snow compacting activities (for example, snowmobiling, snowshoeing, cross-country skiing, dog sledding, etc.) that coincide with lynx habitat, to facilitate future evaluation of effects on lynx as information becomes available.

Programmatic planning - guidelines

1. Provide a landscape with interconnected blocks of foraging habitat where snowmobile, cross-country skiing, snowshoeing, or other snow compacting activities are minimized or discouraged.
2. As information becomes available on the impact of snow-compacting activities and disturbance on lynx, limit or discourage this use in areas where it is shown to compromise lynx habitat. Such actions should be undertaken on a priority basis considering habitat function and importance.

Project planning - standards

Developed Recreation:

1. In lynx habitat, ensure that federal actions do not degrade or compromise landscape connectivity when planning and operating new or expanded recreation developments.
2. Design trails, roads, and lift termini to direct winter use away from diurnal security habitat.

Dispersed Recreation:

1. To protect the integrity of lynx habitat, evaluate (as new information becomes available) and amend as needed, winter recreational special use permits (outside of permitted ski areas) that promote snow compacting activities in lynx habitat.

Project planning - guidelines

Developed Recreation:

1. Identify and protect potential security habitats in and around proposed developments or expansions.
2. When designing ski area expansions, provide adequately sized coniferous inter-trail islands, including the retention of coarse woody material, to maintain snowshoe hare habitat.
3. Evaluate, and adjust as necessary, ski operations in expanded or newly developed areas to provide nocturnal foraging opportunities for lynx in a manner consistent with operational needs, especially in landscapes where lynx habitat occurs as narrow bands of coniferous forest across the mountain slopes.

Forest/Backcountry Roads and Trails

Forest and backcountry roads and trails are those that occur on public lands; highways are addressed separately. Refer also to the conservation measures in the Forest Management, Recreation, and Trapping sections.

Plowed roads and groomed over-the-snow routes may allow competing carnivores such as coyotes and mountain lions to access lynx habitat in the winter, increasing competition for prey (Buskirk et al. 1999). However, plowed or created snow roads may be necessary to accomplish winter logging, which may be desirable to meet a variety of resource management objectives.

Preliminary information suggests that lynx may not avoid roads, except at high traffic volumes. Therefore, at this time, there is no compelling evidence to recommend management of road density to conserve lynx. However, new road construction continues to occur in many watersheds within lynx habitat, many of which are already highly roaded, and the effects on lynx are largely unknown. Further research directed at elucidating the effects of road density on lynx is needed.

Programmatic planning - objectives

1. Maintain the natural competitive advantage of lynx in deep snow conditions.

Programmatic planning - standards

1. On federal lands in lynx habitat, allow no net increase in groomed or designated over-the-snow routes and snowmobile play areas by LAU. Winter logging activity is not subject to this restriction.

Programmatic planning - guidelines.

1. Determine where high total road densities (>2 miles per square mile) coincide with lynx habitat, and prioritize roads for seasonal restrictions or reclamation in those areas.
2. Minimize roadside brushing in order to provide snowshoe hare habitat.
3. Locate trails and roads away from forested stringers.
4. Limit public use on temporary roads constructed for timber sales. Design new roads, especially the entrance, for effective closure upon completion of sale activities.
5. Minimize building of roads directly on ridgetops or areas identified as important for lynx habitat connectivity.

Livestock Grazing

In riparian areas within lynx habitat, ungulate forage use levels may reduce forage resources available to snowshoe hares. Browsing or grazing can have a direct effect on snowshoe hare habitat if it alters the structure or composition of native plant communities.

Throughout the Rocky Mountains, grazing has been a factor in the decline or loss of aspen as a seral species in subalpine forests. Young, densely regenerating aspen stands with a well-developed understory provide good quality habitat for snowshoe hares and other potential lynx prey species, such as grouse. Grazing should be managed to allow for regeneration of aspen clones.

Particularly in the naturally fragmented habitats of the western United States, inclusions of high elevation shrub-steppe habitats often may exist within the home range of a lynx. Resident lynx are also known to occasionally make exploratory movements out of their home ranges (Squires and Laurion 1999, Aubry et al. 1999), encountering these habitats and potential alternate prey such as ground squirrels and jackrabbits. Therefore, shrub-steppe habitats within the elevational ranges of forested lynx habitat should be considered lynx habitat and be managed to maintain or achieve mid-seral or higher conditions, thereby providing maximum natural cover and prey availability. Those areas that are currently in late seral condition should not be degraded.

Programmatic planning - objectives

1. In lynx habitat and adjacent shrub-steppe habitats, manage grazing to maintain the composition and structure of native plant communities.

Project planning - objectives

1. Manage livestock grazing within riparian areas and willow carrs in lynx habitat to provide conditions for lynx and lynx prey.
2. Maintain or move towards native composition and structure of herbaceous and shrub plant communities.
3. Ensure that ungulate grazing does not impede the development of snowshoe hare habitat in natural or created openings within lynx habitat.

Project planning - standards

1. Do not allow livestock use in openings created by fire or timber harvest that would delay successful regeneration of the shrub and tree components. Delay livestock use in post-fire and post-harvest created openings until successful regeneration of the shrub and tree components occurs.
2. Manage grazing in aspen stands to ensure sprouting and sprout survival sufficient to perpetuate the long-term viability of the clones.
3. Within the elevational ranges that encompass forested lynx habitat, shrub-steppe habitats should be considered as integral to the lynx habitat matrix and should be managed to maintain or achieve mid seral or higher condition.
4. Within lynx habitat, manage livestock grazing in riparian areas and willow carrs to maintain or achieve mid seral or higher condition to provide cover and forage for prey species.

Other Human Developments: Oil & Gas Leasing, Mines, Reservoirs, Agriculture

Most of these activities affect lynx habitat by changing or eliminating native vegetation, and may also contribute to fragmentation. The primary effects of leases and mines on lynx are probably related to the potential for plowed roads to provide access for lynx competitors, particularly coyotes. Construction of reservoirs will be handled under normal FERC and consultation procedures, and no conservation measures were developed specific to those projects.

Programmatic planning - objectives

1. Design developments to minimize impacts on lynx habitat.

Programmatic planning - guidelines

1. Map oil and gas production and transmission facilities, mining activities and facilities, dams, and agricultural lands on public lands and adjacent private lands, in order to assess cumulative effects.

Project planning - standards

1. On projects where over-snow access is required, restrict use to designated routes.

Project planning - guidelines

1. If activities are proposed in lynx habitat, develop stipulations for limitations on the timing of activities and surface use and occupancy at the leasing stage.
2. Minimize snow compaction when authorizing and monitoring developments. Encourage remote monitoring of sites that are located in lynx habitat, so that they do not have to be visited daily.
3. Develop a reclamation plan (e.g., road reclamation and vegetation rehabilitation) for abandoned well sites and closed mines to restore suitable habitat for lynx.
4. Close newly constructed roads (built to access mines or leases) in lynx habitat to public access during project activities. Upon project completion, reclaim or obliterate these roads.

CONSERVATION MEASURES TO ADDRESS MORTALITY RISK FACTORS

Trapping (legal and non-target)

Lynx are known to be very vulnerable to trapping. Ward and Krebs (1985) stated that trapping was the single most important mortality factor in their Yukon study area. Incidental trapping of lynx can occur in areas where regulated trapping of other species overlaps with lynx habitat (Mech 1973, Carbyn and Patriquin 1983, Squires and Laurion 1999). Lynx may be more vulnerable to trapping near open roads (Koehler and Aubry 1994, Bailey et al. 1986).

The U.S. Fish and Wildlife Service (FWS) is proposing to work with the States to develop a 4-d. rule for all regulated or unregulated trapping (e.g., coyote, wolverine, bobcat, fox) in lynx habitats by establishing adequate trapping protocols to minimize incidental take. Each state would work with FWS to customize the protocol for their specific regions.

Programmatic planning - objectives

1. Reduce incidental harm or capture of lynx during regulated and unregulated trapping activity, and ensure retention of an adequate prey base.

Programmatic planning - guidelines

1. Federal agencies should work cooperatively with States and Tribes to reduce incidental take of lynx related to trapping.

Predator Control

Predator control activities conducted on federal lands by Wildlife Services include trapping, shooting, and poisoning animals on domestic livestock allotments, occasionally within lynx habitat. Similar efforts may be conducted on adjacent private lands. Although such actions are intended to target the offending animal, non-target animals including lynx may be impacted.

Programmatic planning - objectives

1. Reduce incidental harm or capture of lynx during predator control activities, and ensure retention of adequate prey base.

Programmatic planning - standards

1. Predator control activities, including trapping or poisoning on domestic livestock allotments on federal lands within lynx habitat, will be conducted by Wildlife Services personnel in accordance with FWS recommendations established through a formal Section 7 consultation process.

Shooting

Lynx may be mistakenly shot by legal predator hunters seeking bobcats, or illegally by poachers. Prey species, such as snowshoe hares and ground squirrels, may also be affected by legal shooting.

Programmatic planning - objectives

1. Reduce lynx mortalities related to mistaken identification or illegal shooting.

Programmatic planning - guidelines

1. Initiate interagency information and education efforts throughout the range of lynx in the contiguous states. Utilize trailhead posters, magazine articles, news releases, state hunting and trapping regulation booklets, etc., to inform the public of the possible presence of lynx, field identification, and their status.
2. Federal agencies should work cooperatively with States and Tribes to ensure that important lynx prey are conserved.

Competition and Predation as Influenced by Human Activities

Habitat changes that benefit competitor/ predator species, including some vegetation management practices and providing packed snow travel ways, may lead to increased starvation or direct mortality of lynx. Refer also to applicable conservation measures in the Forest Management, Recreation, and Forest/ Backcountry Roads and Trails sections.

Programmatic planning - objectives

1. Maintain the natural competitive advantage of lynx in deep snow conditions.

Programmatic planning - standards

1. On federal lands in lynx habitat, allow no net increase in groomed or designated over-the-snow routes and snowmobile play areas by LAU. This is intended to apply to dispersed recreation, rather than existing ski areas.

Highways

Direct mortality from vehicular collisions may be detrimental to lynx populations in the lower 48 states. Mortality levels can drastically increase with relatively small increases in traffic volumes and speed.

Programmatic planning - objectives

1. Reduce the potential for lynx mortality related to highways.

Programmatic planning - standards

1. Within lynx habitat, identify key linkage areas and potential highway crossing areas.

Programmatic planning - guidelines

1. Where needed, develop measures such as wildlife fencing and associated underpasses or overpasses to reduce mortality risk.

CONSERVATION MEASURES TO ADDRESS MOVEMENT AND DISPERSAL

It is essential to provide landscape connectivity so that all or most habitat has the potential of being occupied, and populations remain connected.

At the southern periphery and eastern portions of lynx range, habitat occurs in narrow fragmented bands (man-made or naturally-occurring), or has been fragmented by human developments. Connected forested habitats allow lynx, and other large and medium size carnivores, to easily move long distances in search of food, cover and mates. Highways and private lands that are subdivided for commercial or residential developments or have high human use patterns, can interrupt existing habitat connectivity and further fragment lynx habitat, reducing the potential for population interchange. In some areas, particularly the eastern United States, habitat connectivity may be difficult to achieve because of mixed ownerships. Land exchanges and cooperative management with private landowners may be the only options available to provide landscape connectivity.

Shrub-steppe habitats provide connectivity between mountain ranges and other blocks of primary forested lynx habitat. Where blocks of lynx habitat are separated by intervening basins, valleys, or high mesas of shrub-steppe, land managers should evaluate those shrub-steppe expanses for potential to provide landscape connectivity. Vegetative or geomorphic features within shrub-steppe habitats that may be particularly important are riparian systems and relatively high ridge systems. Where such features exist, land management practices should be consistent with maintaining landscape connectivity. Livestock grazing within shrub-steppe habitats in such areas should be managed to maintain or achieve mid seral or higher condition, to maximize cover and prey availability. Such areas that are currently in late seral condition should not be degraded.

Programmatic planning - objectives

1. Maintain and, where necessary and feasible, restore habitat connectivity across forested landscapes.

Programmatic planning - standards

1. Identify key linkage areas that may be important in providing landscape connectivity within and between geographic areas, across all ownerships.
2. Develop and implement a plan to protect key linkage areas on federal lands from activities that would create barriers to movement. Barriers could result from an accumulation of incremental projects, as opposed to any one project.
3. Evaluate the potential importance of shrub-steppe habitats in providing landscape connectivity between blocks of primary lynx habitat. Livestock grazing within shrub-steppe habitats in such areas should be managed to maintain or achieve mid seral or higher condition, to maximize cover and prey availability. Such areas that are currently in late seral condition should not be degraded.

Programmatic planning - guidelines

1. Where feasible, maintain or enhance native plant communities and patterns, and habitat for potential lynx prey, within identified key linkage areas. Pursue opportunities for cooperative management with other landowners.

Highways

Highways impact lynx and other carnivores by fragmenting habitat and impeding movements. As traffic lanes, volume, speeds, and right-of-way width increase, the effects on lynx and other carnivores are magnified. As human demographics change, highways tend to increase in size and traffic density. Special concern must be given to the development of new highways (gravel roads being paved), and changes in highway design, such as additions in the number of traffic lanes, widening of rights-of-way, or other modifications to increase highway capacity or speed.

Within key linkage areas, highway crossing structures should be employed to reduce effects on wildlife. Information from Canada (Trans-Canada Highway) suggests crossings should generally be at 1/2-mile intervals and not farther than 1 mile apart, depending on topographic and vegetation features.

Programmatic planning - objectives

1. Ensure that connectivity is maintained across highway rights-of-way.

Programmatic planning - standards

1. Federal land management agencies will work cooperatively with the Federal Highway Administration and State Departments of Transportation to address the following within lynx geographic areas:
 - a) Identify land corridors necessary to maintain connectivity of lynx habitat.
 - b) Map the location of "key linkage areas" where highway crossings may be needed to provide habitat connectivity and reduce mortality of lynx (and other wildlife).

Programmatic planning - guidelines

1. Evaluate whether land ownership and management practices are compatible with maintaining lynx highway crossings in key linkage areas. On public lands, management practices will be compatible with providing habitat connectivity. On private lands, agencies will strive to work with landowners to develop conservation easements, exchanges, or other solutions.

Project planning - standards

1. Identify, map, and prioritize site-specific locations, using topographic and vegetation features, to determine where highway crossings are needed to reduce highway impacts on lynx.
2. Within the range of lynx, complete a biological assessment for all proposed highway projects on federal lands. A land management agency biologist will review and coordinate with highway departments on development of the biological assessment.

Project planning - guidelines

1. Dirt and gravel roads traversing lynx habitat (particularly those that could become highways) should not be paved or otherwise upgraded (e.g., straightening of curves, widening of roadway, etc.) in a manner that is likely to lead to significant increases in traffic volumes, traffic speeds, increased width of the cleared ROW, or would foreseeably contribute to development or increases in human activity in lynx habitat. Such projects may increase habitat fragmentation, create a barrier to movements, increase mortality risks due to vehicle collisions, and generate secondary adverse effects by inducing, facilitating, or exacerbating development and human activity in lynx habitat. Whenever rural dirt and gravel roads traversing lynx habitat are proposed for

such upgrades, a thorough analysis should be conducted on the potential direct and indirect effects to lynx and lynx habitat.

Land Ownership

Lynx exemplify the need for landscape-level ecosystem management. Contiguous tracts of land in public ownership (national forests, national parks, wildlife refuges, and BLM lands) provide an opportunity for management that can maintain lynx habitat connectivity. Throughout most of the lynx range in the lower 48 states, connectivity with habitats and populations in Canada is critical for maintaining populations in the U.S.

Programmatic planning - objectives

1. Retain lands in key linkage areas in public ownership.

Programmatic planning - standards

1. Identify key linkage areas by management jurisdiction(s) in management plans and prescriptions.

Programmatic planning - guidelines

1. In land adjustment programs, identify key linkage areas. Work towards unified management direction via habitat conservation plans, conservation easements or agreements, and land acquisition.

Project planning - standards

1. Develop and implement specific management prescriptions to protect/ enhance key linkage areas.
2. Evaluate proposed land exchanges, land sales, and special use permits for effects on key linkage areas.

Ski Areas/Large Resorts and Associated Activities

Ski areas and large resorts are often developed in and across bands of high elevation boreal forests containing lynx habitat. Landscape location, the high intensity of recreational and operational use, and associated development pose a risk to lynx movement and dispersal. Developments that may impede lynx movement occur in Utah and western Wyoming (Northern Rocky Mountains Geographic Area), Colorado (Southern Rocky Mountains Geographic Area), and possibly portions of the Northeast Geographic Area.

Programmatic planning - objectives

1. When conducting landscape level planning on Federal lands, allocate land uses such that landscape connectivity is maintained.

Programmatic planning - standards

1. Within identified key linkage areas, provide for landscape connectivity.

Project planning - standards

1. When planning new or expanding recreational developments, ensure that key linkage areas are protected.

Project planning - guidelines

1. Plan recreational development, and manage recreational and operational uses to provide for lynx movement and to maintain effectiveness of lynx habitat.

This information has been excerpted from the Canada Lynx Conservation Assessment and Strategy. The entire assessment and strategy, along with the amendment proposed for the Northern Rockies can found on the U.S. Fish and Wildlife Service website at: <http://www.fs.fed/r1/planning/lynx/reports/lcas.pdf>.

APPENDIX X

SAGE GROUSE MANAGEMENT

INTRODUCTION

Conservation measures delineated in the Montana Sage Grouse Conservation Strategy developed by a joint working group will be considered and used as the basis for conserving sage grouse populations through implementation of the Dillon RMP. Conservation measures would guide habitat management recommendations during watershed assessments and project level analysis under Alternative A, B and D. The measures would be applied as standards under Alternative C, along with the Western Association of Fish and Wildlife Agencies (WAFWA) guidelines which are summarized in this appendix. Only habitat-related conservation measures from the plan and guidelines are utilized in RMP alternatives. The Montana Conservation Strategy is in conformance with the draft National BLM sage grouse habitat conservation strategy.

RISKS TO SAGE GROUSE AND THEIR HABITAT

The Montana Sage Grouse Working Group identified risks to sage grouse and their habitat during the conservation planning effort. Conservation actions proposed in the strategy would address the 12 major issues presented in the plan and reduce the identified risks. The conservation actions are related to:

- *Fire Management*
- *Grazing Management*
- *Harvest Management*
- *Noxious Weed Management*
- *Managing Other Wildlife in Sage Grouse Habitats*
- *Mining and Energy Development*
- *Outreach and Education*
- *Power Lines and Generation Facilities*
- *Predation*
- *Recreational Disturbance*
- *Roads and Motorized Vehicles*
- *Vegetation*

CONSERVATION ACTIONS

The following conservation actions delineated in the Montana Sage Grouse Conservation Strategy by issue would be used in the watershed assessment process and in project level analysis for actions on BLM lands.

Fire Management

Issue: Reduction of sagebrush by prescribed fire.

1. Sites should not be burned unless:
 - a) biological and physical limitations of the site and impact on sage grouse are identified and considered,
 - b) management objectives for the site, including those for wildlife, are clearly defined,
 - c) potential for weed invasion and successional trends are well understood, and
 - d) capability exists to manage the post-burn site properly, including a funded monitoring schedule, to achieve a healthy sagebrush community.
2. Develop local or regional guidelines, such as the Beaverhead-Deer Lodge Forest/FWP guidelines in the intermountain valleys, or consider the following guidelines if fire is used as a tool elsewhere:
 - a) analyze cumulative effects of sagebrush treatment by considering ecological units, evaluate the degree of fragmentation, and maintain a good representation of mature sagebrush,
 - b) predict effects for the length of time necessary for sagebrush to return to desired condition for determine treatment types and intervals,
 - c) identify suitable patch size based on site-specific characteristics of the natural community and treat patches in a mosaic pattern that provides sagebrush cover for snow capture, hiding cover, and a seed source,
 - d) use available literature to research the effects of fire on sagebrush communities,
 - e) use caution in reducing sagebrush cover in and following drought periods,
 - f) work cooperatively with public agencies, academia, and private landowners to establish conservation objectives for the project area, and
 - g) map all burns within one year of treatment, monitor vegetative response, and develop a GIS layer of burn history.
3. Develop treatments to improve habitats over the long term if sagebrush stands do not meet objectives for sage grouse, such as confining treatments to small patches.
4. Consider mechanical treatment as the primary method and prescribed fire as a secondary method to remove conifers that encroach on sage grouse habitat, except where forested habitat is limited.
5. Avoid treatments to sage grouse habitat in areas that are susceptible to invasion by cheatgrass or other invasive plant species. Treatment will be accompanied by restoration, and reseeded if necessary, to re-establish native vegetation.

6. Protect sagebrush along riparian zones, meadows, lakebeds, and farmlands that include important sage grouse habitat:
 - a) winter habitat,
 - b) breeding habitat, and
 - c) nesting habitat.
7. Wash vehicles and heavy equipment for fires prior to arrival at a new location to avoid introduction for noxious weeds.

Issue: Reduction of sagebrush by wildfire.

1. Schedule annual coordination meetings – with appropriate resource staff including fire specialists, wildlife biologists, and range ecologists – to incorporate new sage grouse habitat and other wildlife habitat information needed to set wildfire suppression priorities related to resources. Distribute updates to fire dispatchers for initial attack planning.
2. Identify the location of known sage grouse habitat and other wildlife habitats of concern, such as latitude and longitude with a polygon and radius, to avoid disturbance or degradation by temporary facilities, such as fire camps, staging areas, and helibases.
3. Incorporate known sage grouse habitat information into each Wildfire Situation Analysis to help determine appropriate suppression plans and prioritize multiple fires.
4. Retain unburned areas of sage grouse habitat, such as interior islands and patches between roads and fire perimeter, unless compelling safety, resource protection, or control objectives are at risk.

Issue: Rehabilitation and restoration of sagebrush grasslands.

1. Assure that long-term wildfire rehabilitation objectives are consistent with the desired natural plant community.
2. Re-vegetate burned sites in sage grouse habitat within one year unless natural recovery of the native plant community is expected. Areas disturbed by heavy equipment will be given priority consideration.
3. Emphasize native plant species adapted to the site that are readily available and economically and biologically feasible.
4. Monitor the site and treat for noxious weeds.
5. Allow a minimum of two growing seasons of rest from grazing by domestic livestock unless there are specific restoration objectives using livestock.

Issue: Proactive treatments that could reduce the risk of loss of habitat critical to sage grouse.

1. Develop criteria for managing fuels and other risks to sage grouse habitat.
2. Identify critical sage grouse habitats and prioritize on the basis of risk of loss to wildfire.

3. Develop appropriate actions on a site by site basis, such as using existing roads as fire breaks.

Grazing Management

Issue: Conflicting priorities for land uses, species, and habitats.

1. Use scientific data and historic information to establish baseline information when evaluating soil conditions and ecological processes and when monitoring seasonal sage grouse habitats.
2. Set specific habitat objectives and implement appropriate grazing management to achieve those objectives and maintain or improve vegetation condition and trends.
3. Offer private landowners incentives when and where appropriated to achieve sage grouse objectives.

Issue: Some sagebrush communities may have been significantly altered by past grazing management practices.

1. Implement appropriate grazing management strategies and range management practices where soil conditions and ecological processes will support sage grouse and desired commodities and societal values.
2. Establish suitable goals for sagebrush communities that have deteriorated to such an extent that livestock management alone may not contribute to habitat objectives.
3. Offer private landowners incentives when and where appropriate to achieve sage grouse objectives.

Issue: Drought may result in the degradation of native plant communities, and reduces forage production and sage grouse habitat.

1. Livestock managers should have drought management strategies or plans, e.g. water facilities; forage sources formulated for implementation during periods of drought.
2. Consider effects of livestock and wildlife distribution on sage grouse prior to developing additional water sources.
3. Offer private landowners incentives when and where appropriate to achieve sage grouse objectives.

Issue: Improper grazing or lack of grazing can change the composition and/or structure of the native plant community and thereby reduce or eliminate food and cover for sage grouse.

1. Monitor the response of forbs (kinds, vigor, and production), and the compositional diversity of native species with respect to livestock grazing, evaluate the data, and make necessary adjustments.
2. Identify reasons for lack of grass and forb cover in sagebrush communities and recommend practices to in-

- crease the native herbaceous understory.
3. Identify critical sage grouse areas, and adjust grazing to minimize conflict among the production of commodities and protection of societal values.
4. use monitoring methods that are best suited to the type of grazing management being incorporated at a site.
5. Adjust stocking levels (up or down) within the carrying capacity of the pasture or range. Adjustments should be based on monitoring program evaluating plant and soil response with respect to actual livestock use, weather, wildlife use, insects, and other environmental factors.

Issue: Riparian areas (wet meadows, seeps, streams) are important resources for sage grouse and livestock.

1. Design and implement livestock grazing management practices (riparian pastures, seasonal grazing, development of off-stream water facilities, etc.) to achieve riparian management objectives.
2. Modify or adapt pipelines and natural springs, where practical, to create small wet meadows as brood habitat.
3. ensure the sustainability of desired soil conditions and ecological processes within upland plant communities following implementation of strategies to protect riparian areas. This can be achieved by:
 - protecting natural wet meadows and springs from over-use while developing water for livestock, and
 - plan the location, design, and construction of new fences to minimize impacts on sage grouse.

Issue: Potential for sage grouse to be disturbed or displaced by concentrations of livestock near leks or winter habitat.

1. Discourage concentration of livestock on leks or other key sage grouse habitats.
 - Avoid placement of salt or mineral supplements near leks during the breeding season (March-June), and
 - Avoid supplemental winter feeding of livestock, where practical, on sage grouse winter habitat and around leks.

Issue: Sage grouse seasonal ranges often encompass private, tribal, state, and federal land. Habitat values across the respective ownership are important to sage grouse.

1. Encourage land management practices that provide for maintaining or enhancing sage grouse habitat on private, tribal, state, and federal land.
2. Encourage the coordination of management activities on both properties to provide yearlong benefits to sage grouse. This may require reasonable compromise in establishing management practices to achieve specific goals.

3. Offer private landowners incentives when and where appropriate to achieve sage grouse objectives.

Issue: Existing fences near breeding, brood-rearing, or winter habitats can increase the risk of collision mortalities and/or predation on sage grouse by hawks, eagles, and ravens by providing perches.

1. If portions of existing fences are found to pose a significant threat to sage grouse as strike sties or raptor perches, mitigate through moving or modifying posts, implementation of predator control programs, etc. Actions may include increasing the visibility of the fences by flagging or by designing "take-down" fences.
2. Offer private landowners incentives when and where appropriate to achieve sage grouse objectives.

Issue: Pesticides and herbicides may adversely impact the kinds and number of foods available in the form of insects and forbs and can directly affect chick survival.

1. Evaluate ecological consequences of using pesticides to control grasshoppers or other insects.
2. Evaluate ecological consequences of broadcast herbicide use on forbs and other important sage grouse foods.
3. Minimize use of pesticides and herbicides within 1 mile of known grouse nests, leks, or brood-rearing areas.
4. Develop educational materials detailing the effects of pesticides and herbicides that can be used to evaluate their effects on sage grouse.

Harvest Management

Issue: There is a single harvest structure for the entire state, but regionally sage grouse may have different population characteristics and status.

1. Divide sage grouse habitat into ecoregions based on clearly defined differences in ecological and/or population characteristics, which would allow for different season structures.
2. Develop an adaptive harvest management strategy including closed, conservative, and standard season structures. Clearly define "triggers" for each season structure based on population trend.
3. Establish sage grouse seasons on an annual basis using the current year's lek data and other appropriate survey data. This would include the development of a statistically reliable trend monitoring protocol for inventorying lek attendance of male sage grouse.

Issue: There strongly opposed viewpoints on the influences of hunting on sage grouse populations.

1. Develop graduate level studies to evaluate the influence of hunting on sage grouse in Montana and what would constitute a maximum harvest rate.

2. Establish standardized wing collection protocol to evaluate the influence of environmental conditions on sage grouse productivity and population trends.
3. Identify small populations of sage grouse that are genetically isolated from other populations that could be at risk of overharvest.
4. Expand public information efforts designed to increase public awareness of the role of sage grouse hunting.

Managing Other Wildlife in Sage Grouse Habitats

Issue: High concentrations of wild herbivores in localized areas may reduce habitat effectiveness for sage grouse.

1. Identify and map key sage grouse habitats where other wild herbivores are having significant impacts.
2. Establish an inventory and vegetative monitoring schedule to quantitatively determine the extent of the effects in key areas.
3. Determine seasons of expected use and assess the potential impact to sage grouse habitat.
4. Develop plans that keep ungulate population levels consistent with the sites capability to support them.

Issue: Wetlands and other riparian habitats may be vulnerable to overuse by wild herbivores on some sites. This can sometimes be exacerbated seasonally, during droughts, and/or by other land use practices.

1. Identify levels of use by wild herbivores in affected riparian areas.
2. Identify other land use practices occurring in riparian habitats.
3. Assess current management practices in respect to findings.
4. Determine whether management changes are needed.
5. Have drought management plans in place to allow for the rapid implementation of alternate management strategies.

Mining and Energy Development

Issue: Energy development may adversely affect sage grouse.

1. Work cooperatively – agencies, utilities, and landowners – to identify and map important seasonal ranges for sage grouse.
2. Complete a broad scale assessment to identify important areas that require additional protection or conservation during land use planning and leasing of energy reserves.
3. Prioritize areas relative to their need for protection – ranging from complete protection to availability for moderate to high levels of energy development.

4. Encourage development in incremental stages to stagger disturbance (federal leases range from 3-10 years); design schedules that include long-term strategies to localize disturbance and recovery within established zones over a staggered time frame.
5. Provide technical assistance to private landowners who lease privately owned fee minerals.
6. Use off-site mitigation, such as the creation of sagebrush habitat, or purchase conservation easements with industry dollars to offset habitat losses.
7. Remove facilities and infrastructure when use is completed.
8. Enhance our understanding of the effects of energy development through:
 - a) pre-activity inventory,
 - b) monitoring over the life of the development, and
 - c) annual evaluations.

Issue: Increased human disturbance.

1. Allow no surface occupancy within 0.25 miles of an active lek. Use the best available information for siting structures near important breeding, brood-rearing, and winter habitat considering the following:
 - a) size of the structure(s),
 - b) life of the operation,
 - c) extent to which impacts would be minimized by topography, and
 - d) disturbance by noise and maintenance.
2. Allow no surface use in nesting habitat within 2 miles of an active lek during a period of breeding and nesting – March 15 – June 15.
3. Restrict maintenance and related activities in sage grouse breeding/nesting complexes – March 15 – June 15 – between the hours of 4:00 – 8:00 a.m. and 7:00 – 10:00 p.m.
4. Allow no surface use activities within crucial sage grouse wintering areas during December 1 – March 15.
5. Remove structures and associated infrastructure when project is completed.

Issue: Increased roads, pipelines, and power lines can fragment sagebrush habitats.

1. Develop a comprehensive infrastructure plan prior to energy development activities to minimize road densities.
2. Avoid locating roads and power lines in crucial sage grouse breeding, nesting, and wintering areas.
3. See conservation actions for siting and constructing power lines.
4. Use minimal surface disturbance to install roads and pipelines and reclaim site of abandoned wells to natural communities.

Issue: Energy-related facilities located within 2 miles of a sage grouse lek can degrade habitat quality within existing leases.

1. Locate storage facilities, generators, and holding tanks outside the line of sight and sound of important breeding habitat.
2. Minimize ground disturbance in sagebrush stands with documented use by sage grouse:
 - a) breeding habitat – the lek and associated stands of sagebrush,
 - b) nesting habitat – stands of sagebrush within 2 miles of a lek, and
 - c) wintering habitat – sagebrush stands with documented winter use by sage grouse with portions that would remain above the snow even during years of deep-snow conditions.
3. Concentrate energy-related facilities when practicable.

Issue: Energy-related activities can cause invasion of noxious weeds and other non-native plants.

1. See conservation actions related to preventing the spread of weeds and controlling infestations of noxious weeds.
2. Engage industry as a partner to develop and establish new sources of seed of native plant species for restoration of sites disturbed by development.

Issue: Noise can disrupt breeding rituals and cause abandonment of leks.

1. Restrict noise levels from production facilities to 49 decibels (10 dba above background noise at the lek).
2. Restrict use of any heavy equipment that exceeds 49 decibels within 2 miles of a lek to hours from 8:00 a.m. to 7:00 p.m. and 10:00 p.m. to 4:00 a.m. March 15 to June 15.

Issue: Water discharge and impoundments can degrade or inundate breeding, nesting, and winter habitat.

1. Design impoundments and manage discharge so as not to degrade or inundate leks, nesting sites, and wintering sites.
2. Protect natural springs from any source of disturbance or degradation from energy-related activities.

Issue: Siting requirements need to be re-examined as technological advances make development more compatible with sage grouse needs.

1. Provide for long-term monitoring of siting requirements to examine effects of current and future development on sage grouse.
2. Set up a schedule for reviewing and revising siting and use criteria with industry.

Noxious Weed Management

Issue: Current information on existing weed infestations is insufficient for successful weed management.

- Inventory and map existing noxious weed populations within and adjacent to occupied sage grouse habitat or suspected range.

Issue: Appropriate weed management can't be performed without habitat-specific information.

- Develop habitat-specific weed management plans for known sage grouse ranges, using the inventory and map information developed in the action described above.

Issue: Weed infestations result in loss of native grass, forb, and sagebrush abundance and diversity.

- Promote measures that prevent the introduction and spread of weed seeds and other reproducing plant parts.

Issue: Noxious weeds spread quickly and without regard to ownership or management boundaries. Without immediate treatment, noxious weeds become a problem to all surrounding landowners. Effective weed management cannot occur in isolation or to the exclusion of any land managers within an area.

1. Develop and implement management techniques that minimized the risk of infestation.
2. Use weed seed-free livestock forage and mulch.
3. Thoroughly clean personal clothing, pets, all vehicles and machinery before moving into non-infested areas.
4. Where feasible, isolate livestock from known infestations and avoid vehicle movement through infested areas.
5. Delay movement of livestock for a time period necessary to prevent viable weed seeds from passing through animals' digestive tracts or remaining physically attached when moving from infested to non-infested areas.
6. Use weed-free seed for re-establishment of vegetation.
7. Eliminate unnecessary soil disturbance and vehicle access/movement into occupied sage grouse habitat. Limit vehicle use to established roads only.
8. Regularly monitor access points and roads for weed establishment.

Issue: Cooperative integrated weed management efforts are essential in order to have successful sage grouse habitat.

1. Develop partnerships with regional public and private land management units. Solicit involvement of local weed management specialists, private landowners, wildlife biologists, and range ecologists to share knowledge and responsibilities on noxious weed issues.

2. Establish goals and set priorities that encompass the needs of both livestock and wildlife managers so all parties are working under a similar plan.
3. Provide training to appropriate staff on the proper selection and use of herbicides, including effects that climatic conditions and soils types have on applications of herbicides.
4. Maintain proper operating herbicide application equipment as well as proper herbicide application records, according to Montana pesticide laws.
5. Conduct monitoring and develop follow-up procedures for treated areas.
6. Participate in integrated weed management training conducted by state and federal agencies, local experiment stations, and local (county) weed districts.
7. Educate all field personnel on weed identification, manner in which weeds spread, and methods of treating weed infestations.

Issue: It is important to maintain viable sagebrush habitat and populations of sage grouse while eradicating infestations of noxious weeds.

1. Employ integrated weed management treatment methods such as a combination of biological and cultural, such as grazing, mowing, or seeding treatments in conjunction with herbicides to manage weeds in sage grouse habitat.
2. Use the most selective herbicides where chemical treatment is appropriate, to minimize loss of non-target plant species.
3. Restore plant communities with desired species adapted to the site, using proven management techniques where biologically feasible. A restoration program may be necessary if conditions prevent natural plant species.

Issue: New weed infestations are often undetected.

- Establish a monitoring protocol to detect new infestations.

Issue: Weed management may not be identified budget item in sage grouse management plans.

- Weed management costs should be an identified budget item in sage grouse management plans. Money should be dedicated for monitoring and education as well as direct treatment expenses.

Issue: Funding and/or human resources may not be available when new infestations are discovered.

- Establish partnerships or formal agreements with local (county) weed districts if appropriate to utilize their equipment and/or personnel.

Outreach, Education, and Implementation

Issue: The general public and agency staffs have not been exposed to current information on ecological needs and methods for conserving sage grouse and sagebrush habitats. Materials are needed to present this information.

1. Develop educational materials (brochure, Power Point presentation, camera-ready ads, press releases, public service announcements, event invitations and surveys, websites, newsletters, and research information).
2. Present materials in a series of community meetings that bring statewide technical groups participants and regional agency staff together with local people.
3. consider Resource Advisory Committees and other regional and local opportunities for education and outreach.
4. Encourage public participation in censusing leks and other volunteer projects, including the general public on public lands and private landowners on their own properties.

Issue: The general public and agency staff may not initially understand, and therefore support, the plan.

1. Distribute the plan via hard copy and website.
2. Develop and implement a communications plan that identifies the audience and the message.
3. Prepare an executive summary of the plan.
4. Review and reconcile public concerns.

Issue: Implementing a statewide plan in light of diverse geographical, cultural, and socio-economic challenges poses a challenge.

1. Implement the local work group concept.
2. Coordinate efforts among work groups.

Issue: Educational materials are needed for the sage grouse conservation effort in Montana.

1. Develop a list of incentive programs presently offered that could be used to prevent the loss of sage grouse habitat.
2. Develop and distribute information on best management practices and is and agencies to designate a sage grouse contact person in interface with county planning authorities.
3. Request counties and agencies to designate a sage grouse contact person to interface with county planning authorities.
4. Provide sage grouse habitat maps and recommendations to county planners, public land agencies, and other interest groups and land managers.
5. Encourage county governments to offer incentives to developers who protect and enhance sage grouse habitat.

Powerlines and Generation Facilities

Issue: Existing power lines near a lek, brood-rearing habitat, or winter habitat increases the risk of predation on sage grouse by raptors.

1. Document the segment(s) of line causing problems.
2. Determine by cooperative action- agencies, utilities, and landowners- whether or not modification of poles to limit perching will prevent electrocution of raptors and decrease predation on sage grouse.
3. Emphasize the following if perch prevention modifications do not work to protect sage grouse and sagebrush habitat:
 - a) reroute the line using distance, topography, or vegetative cover; or
 - b) bury the line.
4. Explore opportunities for technical assistance and funding.
5. Remove power line when use is completed.

Issue: New power lines proposed in areas that provide sage grouse habitat can pose threats to sage grouse.

1. Minimize the number of new lines in sage grouse habitat.
2. Site new lines in existing corridors wherever practicable.
3. Encourage the use of off-grid systems such as solar, natural gas micro-turbines, and wind power where feasible in sage grouse habitats.
4. Use the best available information for siting power lines on important breeding, brood-rearing, and winter habitat in an appropriate vicinity of the proposed line.
5. Develop a route – with agencies, utilities, and landowners cooperating – that uses topography, vegetative cover, site distance, etc. to effectively protect identified sage grouse habitat in a cost efficient manner.
6. Restrict timing for construction to prevent disturbance during critical periods:
 - a) breeding – March 15 – May 15
 - b) winter – December 1 – March 15.
7. Take appropriate measures to prevent introduction or dispersal of noxious weeds during construction and planned maintenance.
8. Remove power line when use is completed.

Issue: Existing power line is causing consistent or significant collision mortality on sage grouse.

1. Document the segment(s) of line causing consistent or biologically significant mortality- with agencies, utilities, and landowners cooperating in the effort.
2. Initiate collision prevention measures using guidelines (Avian Power Line Action Committee 1994) on identified segments.

Measures are subject to restriction or modification for wind and ice loading or other engineering concerns, or updated collision prevention information.

3. Remove power lines that traverse important sage grouse habitats when facilities being serviced are no longer in use or when projects are completed.

Issue: Fossil fuel generation may impact sage grouse and sage grouse habitat.

1. Use the best available information to :
 - a) identify important sage grouse breeding, brood-rearing, and winter habitat in an appropriate vicinity of a proposed facility and associated infrastructure; and
 - b) site fossil fuel generation facilities and associated infrastructure – with developers, agencies, utilities, and landowners cooperating – using topography, vegetative cover, site distance, etc., to effectively protect identified sage grouse habitat.

Issue: Wind generation may impact sage grouse and sage grouse habitat.

1. Consult with USFWS Ecological Services for site selection evaluation information.
2. Use the best available information to:
 - a) identify important sage grouse breeding, brood-rearing , and winter habitat in an appropriate vicinity of a proposed facility and associated infrastructure; and
 - b) site wind generation facilities – with agencies, utilities, and landowners cooperating – using topography, vegetative cover, site distance, etc. to effectively protect identified sage grouse habitat.
3. Identify and avoid both local (daily)and seasonal migration routes.
4. Restrict timing of construction to minimize disturbance during critical periods:
 - a) breeding – March 15 – May 15
 - b) winter – December 1 – March 15
5. Take appropriate measures to prevent introduction or dispersal of noxious weeds during construction, maintenance, and operation as required by federal and state laws.
6. Develop offsite mitigation strategies in situations in which fragmentation or degradation of sage grouse habitat is unavoidable.

Predation

Issue: Predator numbers and species composition have changed, and the predator-prey relationship for sage grouse in Montana needs further investigation.

1. Initiate studies to better understand sage grouse mortality rates, the factors that influence these rates and the effectiveness of management actions to change them.
2. Assess population status and trends of important predator species (both native and invasive).
3. Expand public information efforts designed to increase public awareness on the role of habitat predation, and weather on sage grouse population trends.

Issue: Habitat fragmentation and poor quality habitat may be affecting mortality rates by allowing increased predation.

1. Initiate studies to determine the relationships between predation, habitat fragmentation, and habitat condition.
2. Implement actions to improve the structure and composition of sagebrush communities to meet desired conditions for sage grouse seasonal habitats.
3. Maintain and restore sagebrush communities where appropriate for sage grouse populations.
4. Protect existing habitats through conservation easements, incentives, or other practices such as long-term leases.

Issue: Man-caused alterations on the landscape have modified conditions and may directly facilitate increased predation.

1. Reduce man-made perches and conifer encroachment in sage grouse breeding, nesting, and wintering habitats.
 - a) Placement of power poles should follow prescription detailed in the discussion transmission lines.
 - b) Placement of fences should follow prescriptions detailed in the discussion of grazing management, and
 - c) Treatment of conifer encroachment should be implemented in ways to minimize loss of sagebrush habitats.
2. Reduce the availability of predator ‘subsidies’ such as human-made den sites (nonfunctioning culverts, old foundations, wood piles) and supplemental food sources (garbage dumps, spilled grains, etc.) that contribute to increased predator numbers.
3. If predations is shown to be depressing sage grouse populations, consider predator management actions specific to the predator species, site, and situation.
4. Consider expanded opportunities to take non-protected, invasive species where appropriate.

Recreational Disturbance of Sage Grouse

Issue: Citizens should be able to view and photograph sage grouse breeding displays, However, viewing may disturb breeding activities, displace leks, and reduce reproductive success.

1. Agencies should document leks where recreational viewing is occurring.
2. Working together, the agency(ies) and interested public should determine whether or not management of viewing is needed to reduce disturbance of leks.
3. Educational materials should be developed and provided to the public indicating the effects of concentrated recreational activities and the importance of seasonal ranges to sage grouse.

Issue: Management of lek viewing may be necessary.

1. Establish viewing guidelines, i.e., distance, timing, approach methods, signage, parking areas, and area closures.
2. Consider sage grouse needs when developing roads and OHV management plans.
3. Develop and provide educational materials to the public describing effects of concentrated recreational activities and the importance of seasonal ranges to sage grouse.
4. Encourage recreationists to avoid continuous or concentrated use within 1.5 miles of leks from March 15 to May 15.
5. Issue special use permits for certain activities with distance and timing restrictions to maintain the integrity of breeding habitat.
6. Discourage concentration of hunters on critical seasonal habitats, such as during late big game seasons, when sage grouse are present.

Roads and Motorized Vehicles

Issue: Roads may increase sage grouse mortality through collisions with vehicles, displacement because of human disturbance, or other factors.

1. Identify, map, quantify, and evaluate impacts of existing roads, including 2-tracks, in relation to known lek locations and sage grouse winter ranges.
2. Consider impacts to sage grouse when designing new roads and modifying existing roads.
3. Consider seasonal use restrictions or signing to avoid disturbance of critical times, such as winter and nesting periods.
4. Consider the use of speed bumps where appropriate to reduce vehicle speeds near leks, such d during oil and gas development.
5. Manage on-road travel and OHV use in key grouse areas to avoid disturbance during critical times such as winter and nesting periods.
6. Plan or permit organized events to avoid increased traffic and impacts to sage grouse.
7. Manage motorized and mechanized travel to minimize impacts to sage grouse and their habitat by developing standards for future roads to give to BLM, FS, BIA, state, county, and private parties.

8. Manage motorized and mechanized travel to minimize impacts to sage grouse by increasing enforcement of existing OHV and travel management plans.
9. Provide educational opportunities for users of OHVs dealing with the possible effects they may have on sage grouse.

Issue: Roads and their associated disturbances and cumulative effects contribute to the loss of habitat and declining sage grouse populations.

1. Develop a transportation management plan across ownership boundaries in critical sage grouse habitats.
2. Participate in travel planning efforts and educate the general public about the impacts of roads on sage grouse and critical habitat.
3. Consider buffers, removal, realignment, or seasonal closures where appropriate to avoid degradation of habitat.
4. Re-vegetate closed roads with plant species beneficial to sage grouse.
5. Close and re-vegetate travel ways in sage grouse habitats where appropriate.
6. Provide sage grouse habitat information during the planning phases of transportation development, working with MDOT, FHWA, industry, counties, etc.

Vegetation

Issue: Conifer encroachment reduces sagebrush habitat.

1. Map and inventory areas believed to be impacted by conifer expansion.
2. If conifer encroachment is a concern, options for treatment include:
 - a) prescribed fires when and where feasible,
 - b) remove trees mechanically when feasible, and
 - c) apply herbicides when and where feasible.
3. Reclaim and/or re-seed areas disturbed by treatments when necessary. Include native forbs and grasses in all reclamation and seeding activities.

Issue: Information regarding sagebrush distribution is incomplete.

1. Identify the remaining breeding and winter areas for sage grouse.
2. Improve the classification of sagebrush cover to distinguish density and species.
3. Complete a mid to broad scale assessment to identify conservation priorities across the state.

Issue: The age distribution of sagebrush may have been altered by management, such as a young stand recovering from disturbance or a mature stand with poor regeneration.

1. Map and inventory areas believed to be deficient in quality of habitat or exhibiting poor health.
2. Evaluate the site potential and desired condition, and develop specific objectives accordingly within specific landscapes.
3. If sagebrush is lacking:
 - a) develop and implement grazing practices that influence sagebrush growth,
 - b) inter-seed historical breeding and winter habitats with the appropriate sagebrush species,
 - c) identify and promote seed sources for habitat restoration efforts,
 - d) encourage the voluntary use of sagebrush in habitat incentive programs, such as the Conservation Reserve Program, and work to develop additional funding sources for such programs,
 - e) reclaim and/or re-seed areas disturbed by treatments when necessary, and
 - f) promote sage plantings, where appropriate, on project areas occurring within sage grouse habitats.
4. If mature sagebrush dominates with suppressed herbaceous understory:
 - a) identify areas of dense mature cover that do not appear to be serving as quality habitat and analyze these areas within the context of a larger landscape,
 - b) design sagebrush treatments to be compatible with sage grouse needs,
 - c) develop specific objectives for sage grouse in breeding or winter habitats, and
 - d) if treatment is deemed appropriated, interrupt several stages within the appropriate patch size using the appropriate method, such as brush beating, chaining, chemical means, prescribed fire, etc. that are compatible with local conditions.

Issue: The plant community has been altered and lack a diverse herbaceous understory.

1. Map and inventory areas believed to be important sage grouse breeding habitats.
2. Evaluate the site potential and desired condition within the context of a larger landscape.
3. Develop and implement techniques to increase herbaceous diversity and density in sagebrush-steppe within ecological limits.
4. Ensure that grazing practices allow plants to grow to seed ripe on a rotational basis.
5. Adjust livestock grazing management when necessary, such as the season of use/projects, to promote forb establishment and recruitment.
6. Identify large areas of introduced plant species, such as crested wheat, and determine if restoration efforts are deemed appropriate.
7. Interseed appropriate breeding habitats with forbs as identified by the specialists and affected interests.

8. If mature sagebrush dominates with suppressed herbaceous understory:
 - a) identify areas of dense mature cover that do not appear to be serving as quality habitat and analyze these areas within the context of a larger landscape,
 - b) design sagebrush treatments to be compatible with sage grouse need,
 - c) develop specific objectives for sage grouse in breeding or winter habitats, and
 - d) if treatment is deemed appropriate, interrupt seral stages within the appropriate patch size using the appropriate method, such as brush beating, chaining, chemical means, prescribed fire, etc. compatible with local conditions.
9. Identify and promote seed sources for habitat restoration efforts.
10. Identify landowner incentives and additional funding sources to enhance existing programs, such as to enhance the CRP.

Issue: Residual understory is lacking in sagebrush stands, mainly in breeding habitats.

1. Develop incentives to promote desired habitat conditions on private lands.
2. Manage grazing by domestic livestock and wild herbivores to retain and promote adequate residual cover in all breeding habitats with an emphasis on nesting areas.
3. Ensure that grazing allotment plans include objectives for sage grouse in sage grouse habitats.
4. Monitor USFS/BLM/State allotment plans and regulations, and make changes where necessary.
5. Include native grasses in all reclamation and restoration activities.

SAGE GROUSE GUIDELINES (WAFWA)

Sage grouse populations occupy relatively large areas on a year-round basis (Berry and Eng 1985, Connelly et al. 1988, Wakkinen 1990, Leonard et al. 2000), invariably involving a mix of ownerships and jurisdictions. Thus, state and federal natural resource agencies and private landowners must coordinate efforts over at least an entire seasonal range to successfully implement these guidelines. Based on current knowledge of sage grouse population and habitat trends, these guidelines have been developed to help agencies and landowners effectively assess and manage populations, protect and manage remaining habitats, and restore damaged habitat. Because of gaps in knowledge and regional variation in habitat characteristics (Tisdale and Hironaka 1981), the judgment of local biologists and quantitative data from population and habitat monitoring are necessary to implement the guidelines correctly. Further, agencies are urged

to use an adaptive management approach (Macnab 1983, Gratson et al. 1993), using monitoring and evaluation to assess the success of implementing these guidelines to manage sage grouse populations. These are the guidelines that will be used as standards in Alternative C management along with the Montana Sage Grouse Conservation Strategy conservation measures.

Activities responsible for the loss or degradation of sagebrush habitats also may be used to restore habitat. These activities include prescribed fire, grazing, herbicides, and mechanical treatments. Decisions on land treatments using these tools should be based on quantitative knowledge of vegetative conditions over an entire population's seasonal range.

Generally, the treatment selected should be that which is least disruptive to the vegetation community and has the most rapid recovery time. This selection should not solely be based on economic cost.

Definitions

For the purpose of these guidelines, an occupied lek is defined as a traditional display area in or adjacent to sagebrush-dominated habitats that has been attended by ≥ 2 male sage grouse in ≥ 2 of the previous 5 years. A breeding population is defined as a group of birds associated with one or more occupied leks in the same geographic area separated from other leks by ≥ 20 km. This definition is somewhat arbitrary but generally based on maximum distances females move to nest.

General Habitat Management

The following guidelines pertain to all seasonal habitats used by sage grouse.

1. Monitor habitat conditions and only propose treatments if warranted by range condition (i.e., the area no longer supports habitat conditions described in the following guidelines under habitat protection). Do not base land treatments on schedules, targets, or quotas.
2. Use appropriate vegetation treatment techniques (e.g., mechanical methods, fire) to remove junipers and other conifers that have invaded sage grouse habitat (Commons et al. 1999). Whenever possible, use vegetation control techniques that are least disruptive to the stand of sagebrush, if this stand meets the needs of sage grouse (Table 3).
3. Increase the visibility of fences and other structures occurring within one km of seasonal ranges by flagging or similar means if these structures appear hazardous to flying grouse (e.g., birds have been observed hitting

or narrowly missing these structures or grouse remains have been found next to these structures).

4. Avoid building powerlines and other tall structures providing perch sites for raptors within 3 km of seasonal habitats. If these structures must be built, or presently exist, the lines should be buried or poles modified to prevent their use as raptor perch sites.

Breeding Habitat Management

For both migratory and non-migratory populations, lek attendance, nesting, and early brood rearing occur in breeding habitats. These habitats are sagebrush-dominated rangelands with a healthy herbaceous understory and are critical for survival of sage grouse populations. Mechanical disturbance, prescribed fire, and herbicides can be used to restore sage grouse habitats to those conditions identified as appropriate in the following sections on habitat protection. Local biologists and range ecologists should select the appropriate technique on a case-by-case basis. Generally, fire should not be used in breeding habitats dominated by Wyoming big sagebrush if these areas support sage grouse. Fire can be difficult to control and tends to burn the best remaining nesting and early brood rearing habitats (i.e., those areas with the best remaining understory), while leaving areas with poor understory. Further, using fire in habitats dominated by xeric mountain big sagebrush (*A. t. xericensis*) is not recommended because annual grasses commonly invade these habitats and much of the original habitat has been altered by fire (Bunting et al. 1987).

Although mining and energy development are common activities throughout the range of sage grouse, quantitative data on the long-term effects of these activities on sage grouse are limited. However, some negative impacts have been documented (Braun 1998, Lyon 2000). Thus, these activities should be discouraged in breeding habitats, but, when unavoidable, restoration efforts should follow procedures outlined in these guidelines.

Habitat Protection

1. Manage breeding habitats to support 15-25% canopy cover of sagebrush, perennial herbaceous cover averaging ≥ 18 cm in height with $\geq 15\%$ canopy cover for grasses and $\geq 10\%$ for forbs and a diversity of forbs (Barnett and Crawford 1994, Drut et al. 1994a, Apa 1998) during spring (Table 3). Habitats meeting these conditions should have a high priority for wildfire suppression and should not be considered for sagebrush control programs. Sagebrush and herbaceous cover should provide overhead and lateral concealment from predators. If average sagebrush height is ≥ 75 cm, herbaceous cover may need to be substantially greater than 18 cm to provide this protection. There is much vari-

ability among sagebrush-dominated habitats (Tisdale and Hironaka 1981, Hironaka et al. 1983) and some Wyoming sagebrush and low sagebrush breeding habitats may not support 25% herbaceous cover. In these areas, total herbaceous cover should be $\geq 15\%$. Further, the herbaceous height requirement may not be possible in habitats dominated by grasses that are relatively short when mature. In all of these cases, local biologists and range ecologists should develop height and cover requirements that are reasonable and ecologically defensible. Leks tend to be relatively open, thus cover on leks should not meet these requirements.

2. For non-migratory grouse occupying habitats that are distributed uniformly (i.e., habitats have the characteristics described in guideline 1 and are generally distributed around the leks), protect (i.e., do not manipulate) sagebrush and herbaceous understory within 3.2 km of all occupied leks. For non-migratory populations, consider leks the center of year-round activity and use them as focal points for management efforts (Braun et al. 1977).
3. For non-migratory populations where sagebrush is not distributed uniformly (i.e., habitats have the characteristics described in guideline 1 but distributed irregularly with respect to leks), protect suitable habitats for ≤ 5 km from all occupied leks. Use radiotelemetry, repeated surveys for grouse use, or habitat mapping to identify nesting and early brood rearing habitats.
4. For migratory populations, identify and protect breeding habitats within 18 km of leks in a manner similar to that described for non-migratory sage grouse. For migratory sage grouse, leks generally are associated with nesting habitats but migratory birds may move > 18 km from leks to nest sites. Thus, protection of habitat within 3.2 km of leks may not protect most of the important nesting areas (Wakkinen et al. 1992, Lyon 2000).
5. In areas of large-scale habitat loss ($\geq 40\%$ of original breeding habitat), protect all remaining habitats from additional loss or degradation. If remaining habitats are degraded, follow guidelines for habitat restoration listed below.
6. During drought periods (≥ 2 consecutive years), reduce stocking rates or change management practices for livestock, wild horses and wild ungulates if cover requirements during the nesting and brood rearing periods are not met. Grazing pressure from domestic livestock and wild ungulates should be managed in a manner that, at all times, addresses the possibility of drought.
7. Suppress wildfires in all breeding habitats. In the event of multiple fires, land management agencies should

have all breeding habitats identified and prioritized for suppression, giving the greatest priority to breeding habitats that have become fragmented or reduced by $\geq 40\%$ in the last 30 years.

8. Adjust timing of energy exploration, development, and construction activity to minimize disturbance of sage grouse breeding activities. Energy-related facilities should be located ≥ 3.2 km from active leks whenever possible. Human activities within view of or ≤ 0.5 km from leks should be minimized during the early morning and late evening when birds are near or on leks.

Habitat Restoration

1. Before initiating vegetation treatments, quantitatively evaluate the area proposed for treatment to ensure that it does not have sagebrush and herbaceous cover suitable for breeding habitat. Treatments should not be undertaken within sage grouse habitats until the limiting vegetation factor(s) has been identified, the proposed treatment is known to provide the desired vegetation response, and land use activities can be managed after treatment to ensure that vegetation objectives are met.
2. Restore degraded rangelands to a condition that again provides suitable breeding habitat for sage grouse by including sagebrush, native forbs (especially legumes), and native grasses in reseeding efforts (Apa 1998). If native forbs and grasses are unavailable, use species that are functional equivalents and provide habitat characteristics similar to those of native species.
3. Where the sagebrush overstory is intact but the understory has been degraded severely and quality of nesting habitat has declined, use appropriate techniques (e.g., brush beating in strips or patches and interseed with native grasses and forbs) that retain some sagebrush but open shrub canopy to encourage forb and grass growth.
4. Do not use fire in sage grouse habitats prone to invasion by cheatgrass and other invasive weed species unless adequate measures are included in restoration plans to replace the cheatgrass understory with perennial species using approved reseeding strategies. These strategies could include, but are not limited to, use of pre-emergent herbicides (e.g., Oust®, Plateau®) to retard cheatgrass germination until perennial herbaceous species become established.
5. When restoring habitats dominated by Wyoming big sagebrush, regardless of the techniques used (e.g., prescribed fire, herbicides), do not treat $>20\%$ of the breeding habitat (including areas burned by wildfire) within a 30-year period (Bunting et al. 1987). The 30-year period represents the approximate recovery time for a stand of Wyoming big sagebrush. Additional treatments should be deferred until the previously treated area again provides suitable breeding habitat. In some cases, this may take <30 years and in other cases >30 years. If 2,4-D or similar herbicides are used, they should be applied in strips such that their effect on forbs is minimized. Because fire generally burns the best remaining sage grouse habitats (i.e., those with the best understory) and leaves areas with sparse understory, use fire for habitat restoration only when it can be convincingly demonstrated to be in the best interest of sage grouse.
6. When restoring habitats dominated by mountain big sagebrush, regardless of the techniques used (e.g., fire, herbicides), treat $<20\%$ of the breeding habitat (including areas burned by wildfire) within a 20-year period (Bunting et al. 1987). The 20-year period represents the approximate recovery time for a stand of mountain big sagebrush. Additional treatments should be deferred until the previously treated area again provides suitable breeding habitat. In some cases, this may take <20 years and in other cases >20 years. If 2,4-D or similar herbicides are used, they should be applied in strips such that their effect on forbs is minimized.
7. All wildfires and prescribed burns should be evaluated as soon as possible to determine if reseeding is necessary to achieve habitat management objectives. If needed, reseed with sagebrush, native bunchgrasses, and forbs whenever possible.
8. Until research unequivocally demonstrates that using tebuthiuron and similar acting herbicides to control sagebrush have no long-lasting negative impacts on sage grouse habitat, use these herbicides only on an experimental basis and over a sufficiently small area that any long-term negative impacts are negligible. Because these herbicides have the potential of reducing but not eliminating sagebrush cover within grouse breeding habitats, thus stimulating herbaceous development, their use as sage grouse habitat management tools should be examined closely.

Summer-Late Brood Rearing Habitat Management

Sage grouse may use a variety of habitats, including meadows, farmland, dry lakebeds, sagebrush, and riparian zones from late June to early November (Patterson 1952, Wallestad 1975, Connelly 1982, Hanf et al. 1994). Generally, these habitats are characterized by relatively moist conditions and many succulent forbs in or adjacent to sagebrush cover.

Habitat Protection

1. Avoid land use practices that reduce soil moisture effectiveness, increase erosion, cause invasion of exotic plants, and reduce abundance and diversity of forbs.
2. Avoid removing sagebrush within 300 m of sage grouse foraging areas along riparian zones, meadows, lakebeds, and farmland, unless such removal is necessary to achieve habitat management objectives (e.g., meadow restoration, treatment of conifer encroachment).
3. Discourage use of very toxic organophosphorus and carbamate insecticides in sage grouse brood rearing habitats. Sage grouse using agricultural areas may be affected adversely by pesticide applications (Blus et al. 1989). Less toxic agri-chemicals or biological control may provide suitable alternatives in these areas.
4. Avoid developing springs for livestock water, but if water from a spring will be used in a pipeline or trough, design the project to maintain free water and wet meadows at the spring. Capturing water from springs using pipelines and troughs may affect adversely wet meadows used by grouse for foraging.

Habitat Restoration

1. Use brush beating or other mechanical treatments in strips 4-8 m wide in areas with relatively high shrub canopy cover (>35% total shrub cover) to improve late brood rearing habitats. Brush beating can be used to effectively create different age classes of sagebrush in large areas with little age diversity.
2. If brush beating is impractical, use fire or herbicides to create a mosaic of openings in mountain big sagebrush and mixed shrub communities used as late brood rearing habitats where total shrub cover is >35%. Generally, 10-20% canopy cover of sagebrush and <25% total shrub cover will provide adequate habitat for sage grouse during summer.
3. Only construct water developments for sage grouse in or adjacent to known summer use areas and provide escape ramps suitable for all avian species and other small animals. Water developments and "guzzlers" may improve sage grouse summer habitats (Autenrieth et al. 1982, Hanf et al. 1994). However, sage grouse used these developments infrequently in southeastern Idaho because most were constructed in sage grouse winter and breeding habitat, rather than summer range (Connelly and Doughty 1989).

4. Whenever possible, modify developed springs and other water sources to restore natural free-flowing water and wet meadow habitats.

Winter Habitat Management

Sagebrush is the essential component of winter habitat. Sage grouse select winter use sites based on snow depth and topography and snowfall can affect the amount and height of sagebrush available to grouse (Connelly 1982, Hupp and Braun 1989, Robertson 1991). Thus, on a landscape scale, sage grouse winter habitats should allow grouse access to sagebrush under all snow conditions.

Habitat Protection

1. Maintain sagebrush communities on a landscape scale, allowing sage grouse access to sagebrush stands with canopy cover of 10-30% and heights of at least 25-35 cm regardless of snow cover. These areas should be high priority for wildfire suppression and sagebrush control should be avoided.
2. Protect patches of sagebrush within burned areas from disturbance and manipulation. These areas may provide the only winter habitat for sage grouse and their loss could result in the extirpation of the grouse population. They also are important seed sources for sagebrush reestablishment in the burned areas. During fire suppression activities do not remove or burn any remaining patches of sagebrush within the fire perimeter.
3. In areas of large-scale habitat loss ($\geq 40\%$ of original winter habitat), protect all remaining sagebrush habitats.

Habitat Restoration

1. Reseed former winter range with the appropriate subspecies of sagebrush and herbaceous species unless the species are re-colonizing the area in a density that would allow recovery within 15 years.
2. Discourage prescribed burns >50 ha and do not burn >20% of an area used by sage grouse during winter within any 20-30 year interval (depending on estimated recovery time for the sagebrush habitat).

APPENDIX Y

TENTATIVE IMPLEMENTATION SCHEDULE

FY 2006

Lead Program	Action
Fish	Review and evaluate pending ACEC nominations <ul style="list-style-type: none"> • Clark Canyon Watershed ACEC Nomination • Greater Yellowstone Elk and Bison ACEC Nomination
Fish	Develop a Cooperative Agreement with FWP for adequate protection and access to the fluvial arctic grayling brood pond in the Axolotl Lakes area, and prepare a management plan in cooperation with FWP for management of acquisition lands.
Fish	Coordinate with private entities to modify dams or outlets on Axolotl Lake, Reservoir Lake, and Twin Lakes to maintain a residual pool.
Geology	Post signs at the following geologic features: Wedding Ring Rock, Squirrel Rock, and Road Agents Rock.
Lands	Terminate the C&MU classification at Road Agents Rock.
Recreation	Complete and sign the BLM-managed portions of the Continental Divide National Scenic Trail.
Recreation	Formalize an agreement between BLM, ARS and USFS on Continental Divide National Scenic Trail responsibilities.
Recreation	Establish use levels for OPAs for outfitted big game hunting in coordination with those affected.
Wilderness	Complete the evaluation and update of the Bear Trap Canyon Wilderness Management Plan.
Wildlife/Recreation	Post major public land trailheads and access points in the South Madison, East Fork of the Blacktail, Axolotl Lakes, and Centennial Mountain areas to advise recreationists about proper food storage to avoid back country conflict with grizzly bears.
Recreation	Complete development and maintenance of sites in 2002 FERC re-licensing agreement for the Missouri-Madison hydroelectric project.
Wildlife	Update and revise the Red Rock Waterfowl Habitat Management Plan.
Wildlife	Update and revise the Blacktail Habitat Management Plan.
Wildlife/Range	Amend grazing permits that lie within wildlife migration/dispersal corridors to state that depredation losses are possible.
Wildlife	Place or construct barriers to prevent unauthorized travel into Blue Lake ACEC.

FY 2007

Lead Program	Action
Geology	Develop educational materials/brochure for Block Mountain ACEC.
Cultural/Lands	Withdraw 2,160 acres of Everson Creek ACEC from locatable mineral entry.
Cultural	Prepare Everson Creek Archaeological District NRHP nomination package.
Fish	Update and revise the Sheep Creek Aquatic Habitat Management Plan.
Wildlife/Recreation	Develop interpretive materials about axolotl at appropriate locations.
Recreation/Lands	Withdraw developed recreation sites not already withdrawn from locatable mineral entry.
Recreation/Lands	Withdraw land along the Madison River between Warm Springs and the planning boundary to the north from locatable mineral entry.
Recreation	Complete and sign the BLM-managed portions of the Continental Divide National Scenic Trail.
Wilderness	Complete the evaluation and update of the Bear Trap Canyon Wilderness Management Plan.
Recreation	Develop a boat launch, parking area, and toilet along the Madison River Storey Property.
Wildlife	Update and revise the Hidden Pasture Bighorn Habitat Management Plan.
Range	Adopt or develop a habitat management plan and conservation strategies for: <ul style="list-style-type: none"> • In riparian habitats: <i>Carex idahoensis</i> (<i>Idaho Sedge</i>) • In sagebrush-steppe habitats: <i>Penstemon lemhiensis</i> (<i>Lemhi Beardtongue</i>)
Recreation	Establish use levels for OPAs for outfitted big game hunting in coordination with those affected.

FY 2008

Lead Program	Action
Cultural	Prepare Muddy Creek Archaeological District NRHP nomination package.
Recreation	Develop a boat launch, parking area, and toilet along the Madison River Storey Property.
Range	Adopt or develop a habitat management plan and conservation strategies for one of the special status plant species and habitats identified below: <ul style="list-style-type: none"> • In riparian habitats: <i>Primula alcalina</i> (<i>Alkali Primrose</i>) • In sagebrush-steppe habitats: <i>Astragalus scaphoides</i> (<i>Bitterroot Milkvetch</i>)
Recreation	In coordination with the Beaverhead-Deerlodge National Forest, prepare a Recreation Area Management Plan for the South Pioneers to consider opportunities for motorized and/or mountain bike trail development.

FY 2009

Lead Program	Action
Cultural/Lands	Withdraw Beaverhead Rock ACEC from locatable mineral entry.
Recreation	Complete and sign the BLM-managed portions of the Continental Divide National Scenic Trail.
Recreation	Develop additional recreational support facilities at the Maiden Rock Boat Launch site.
Wildlife/Fish	Update and revise the Axolotl Lakes Habitat Management Plan.
Wildlife	Update and revise the Wall Creek Habitat Management Plan.
Range	Adopt or develop a habitat management plan and conservation strategies:
•	In riparian habitats: <i>Taraxacum eriophorum</i> (<i>Rocky Mountain Dandelion</i>)
•	In sagebrush-steppe habitats: <i>Astragalus terminalis</i> (<i>Railhead Milkvetch</i>)

FY 2010

Lead Program	Action
Cultural/Lands	Withdraw Virginia City ACEC from locatable mineral entry.
Cultural/Lands	Withdraw Christnot Mill from locatable mineral entry.
Recreation	Develop additional recreational support facilities at the Maiden Rock Boat Launch site.
Range	Adopt or develop a habitat management plan and conservation strategies for:
•	In riparian habitats: <i>Thalictrum alpinum</i> (<i>Alpine Meadowrue</i>)

FY 2011

Lead Program	Action
Cultural/Geol/Lands	Withdraw Wedding Ring Rock, Squirrel Rock, and Road Agent Rock from locatable mineral entry.
Cultural/Lands	Withdraw Lewis's Lookout from locatable mineral entry
Lands	Review and update, if necessary, the communication site plans for:
•	the Armstead Mountain designated use area.
•	Maurer Mountain designated use area.
•	Pipe Organ designated use area.
•	Bear Trap designated use area.
•	Virginia City Hill designated use area.

FY 2009	FY 2008	FY 2007	FY 2006	FY 2005	FY 2004	FY 2003
Total Program	Total Program	Total Program	Total Program	Total Program	Total Program	Total Program
Direct	Direct	Direct	Direct	Direct	Direct	Direct
Indirect	Indirect	Indirect	Indirect	Indirect	Indirect	Indirect
Total	Total	Total	Total	Total	Total	Total
Total	Total	Total	Total	Total	Total	Total
Total	Total	Total	Total	Total	Total	Total
Total	Total	Total	Total	Total	Total	Total
Total	Total	Total	Total	Total	Total	Total
Total	Total	Total	Total	Total	Total	Total
Total	Total	Total	Total	Total	Total	Total
Total	Total	Total	Total	Total	Total	Total
Total	Total	Total	Total	Total	Total	Total
Total	Total	Total	Total	Total	Total	Total
Total	Total	Total	Total	Total	Total	Total
Total	Total	Total	Total	Total	Total	Total
Total	Total	Total	Total	Total	Total	Total
Total	Total	Total	Total	Total	Total	Total
Total	Total	Total	Total	Total	Total	Total
Total	Total	Total	Total	Total	Total	Total
Total	Total	Total	Total	Total	Total	Total
Total	Total	Total	Total	Total	Total	Total
Total	Total	Total	Total	Total	Total	Total
Total	Total	Total	Total	Total	Total	Total
Total	Total	Total	Total	Total	Total	Total
Total	Total	Total	Total	Total	Total	Total

APPENDIX Z PLAN MAINTENANCE ROSTER

Dillon RMP Maintenance Roster

Changes made (list page number(s) and wording):

Reason(s);

Date _____ Signature _____

Title _____

APPENDIX Z PLAN MAINTENANCE ROSTER

Draw Title: Maintenance Roster

Organization: [illegible]

Personnel:

APPENDIX AA PLAN MONITORING ROSTER

Dillon RMP Monitoring Roster

Portion of Plan Monitored:

Date(s):

Results:

Is any modification needed to adjust the plan?

If so, please explain.

Date _____ Signature _____

Title _____

US DEPARTMENT OF THE INTERIOR
Bureau of Land Management

**Dillon Field Office
Resource Management Plan**

	Designated ACECs
	BLM Lands
	Dillon Field Office Boundary

Map shows eight areas designated as areas of critical environmental concern (ACECs). These are the Beaverhead Rock ACEC, Block Mountain ACEC, Blue Lake ACEC, Centennial Mountains ACEC, Centennial Sandhills ACEC, Everson Creek ACEC, Muddy Creek/Big Sheep Creek ACEC, and Virginia City Historic District ACEC. See individual ACEC maps for detail.

Designated ACECs

Albers Equal Area, NAD83

This map is intended for display purposes. No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data, or for purposes not intended by BLM. This map may not meet National Map Accuracy Standards. This product was developed through digital means and information may be updated without notification.

February 2006

Map 3

R. 8 W.

R. 7 W.

R. 6 W.

US DEPARTMENT OF THE INTERIOR
Bureau of Land Management

Dillon Field Office Resource Management Plan

- Designated ACEC
- Bureau of Land Management
- Private
- State of Montana
- Contour Interval 40 feet

Beaverhead Rock ACEC

Map shows boundary of designated ACEC. ACEC includes public land only. Relevant and important values are tied to historic resources associated with the Lewis and Clark National Historic Trail.

Albers Equal Area, NAD83

This map is intended for display purposes. No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data, or for purposes not intended by BLM. This map may not meet National Map Accuracy Standards. This product was developed through digital means and information may be updated without notification.

February 2006

Map 4

US DEPARTMENT OF THE INTERIOR
Bureau of Land Management

Dillon Field Office Resource Management Plan

- Designated ACEC
- Bureau of Land Management
- Private
- State of Montana
- Contour Interval 100 feet

Block Mountain ACEC

Map shows boundary of designated ACEC. ACEC includes public land only. Relevant and important values are tied to geologic features in the area.

Albers Equal Area, NAD83

This map is intended for display purposes. No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data, or for purposes not intended by BLM. This map may not meet National Map Accuracy Standards. This product was developed through digital means and information may be updated without notification.

February 2006

Map 5

US DEPARTMENT OF THE INTERIOR
Bureau of Land Management

**Dillon Field Office
Resource Management Plan**

- Designated ACEC
- Bureau of Land Management
- Forest Service
- Private
- State of Montana
- Contour Interval 100 feet

Blue Lake ACEC

Map shows boundary of designated ACEC. ACEC includes public land only. Relevant and important value is axolotl habitat.

Albers Equal Area, NAD83

This map is intended for display purposes. No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data, or for purposes not intended by BLM. This map may not meet National Map Accuracy Standards. This product was developed through digital means and information may be updated without notification.

February 2006

Map 6

US DEPARTMENT OF THE INTERIOR
Bureau of Land Management

Dillon Field Office Resource Management Plan

0 5 10
Miles

- Designated ACEC
- Dillon Field Office Boundary
- Bureau of Land Management
- Fish and Wildlife Service
- Forest Service
- Agricultural Research Service
- Private
- State of Montana
- Contour Interval 100 feet

Centennial Mountains ACEC

Map shows boundary of designated ACEC. ACEC includes public land only. Relevant and important values are mainly tied to scenic values, grizzly bear, lynx, and wolf habitats, and wildlife migration.

Albers Equal Area, NAD83

This map is intended for display purposes. No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data, or for purposes not intended by BLM. This map may not meet National Map Accuracy Standards. This product was developed through digital means and information may be updated without notification.

February 2006

Map 7

US DEPARTMENT OF THE INTERIOR

Bureau of Land Management

Dillon Field Office

Resource Management Plan

- Designated ACEC
- Bureau of Land Management
- Fish and Wildlife Service - FWS
- Forest Service
- Private
- State of Montana
- Contour Interval 40 feet

Centennial Sandhills ACEC

Map shows boundary of designated ACEC. ACEC includes public land only. Relevant and important values are tied to sand dune complex and associated special status plants.

Albers Equal Area, NAD83

This map is intended for display purposes. No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data, or for purposes not intended by BLM. This map may not meet National Map Accuracy Standards. This product was developed through digital means and information may be updated without notification.

February 2006

Map 8

US DEPARTMENT OF THE INTERIOR
Bureau of Land Management

Dillon Field Office Resource Management Plan

- Designated ACEC
- Bureau of Land Management
- Forest Service
- Private
- State of Montana
- Contour Interval 100 feet

Everson Creek ACEC

Map shows boundary of designated ACEC. ACEC includes public land only. Relevant and important values are cultural resources.

Albers Equal Area, NAD83

This map is intended for display purposes. No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data, or for purposes not intended by BLM. This map may not meet National Map Accuracy Standards. This product was developed through digital means and information may be updated without notification.

February 2006

Map 9

US DEPARTMENT OF THE INTERIOR
Bureau of Land Management

Dillon Field Office Resource Management Plan

- Designated ACEC
- Bureau of Land Management
- Forest Service
- Private
- State of Montana
- Contour Interval 100 feet

Muddy Creek/Big Sheep Creek ACEC

Map shows boundary of designated ACEC. ACEC includes public land only. Relevant and important values are cultural resources and scenic values.

Albers Equal Area, NAD83

This map is intended for display purposes. No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data, or for purposes not intended by BLM. This map may not meet National Map Accuracy Standards. This product was developed through digital means and information may be updated without notification.

February 2006

Map 10

US DEPARTMENT OF THE INTERIOR
Bureau of Land Management

**Dillon Field Office
Resource Management Plan**

- Designated ACEC
- Bureau of Land Management
- Private
- State of Montana
- Contour Interval 100 feet

Virginia City Historic District ACEC

Map shows boundary of designated ACEC. ACEC includes public land only. Relevant and important value is historic resource.

Albers Equal Area, NAD83

This map is intended for display purposes. No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data, or for purposes not intended by BLM. This map may not meet National Map Accuracy Standards. This product was developed through digital means and information may be updated without notification.

February 2006

Map 11

US DEPARTMENT OF THE INTERIOR
Bureau of Land Management

**Dillon Field Office
Resource Management Plan**

- Bear Trap National Recreation Trail
- Big Sheep Creek Back Country Byway
- Continental Divide National Scenic Trail
- Lewis and Clark National Historic Trail
- Nez Perce National Historic Trail
- Bureau of Land Management
- Bureau of Reclamation
- Fish and Wildlife Service
- Forest Service
- National Park Service
- Agricultural Research Service
- Private
- State of Montana
- Lakes
- Dillon Field Office Boundary

Map shows the location of the Big Sheep Creek Back Country Byway, the Lewis and Clark National Historic Trail, the Nez Perce National Historic Trail, the Bear Trap National Recreation Trail, and the Continental Divide National Scenic Trail.

**Back Country Byways
and National Trails**

Albers Equal Area, NAD83

This map is intended for display purposes. No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data, or for purposes not intended by BLM. This map may not meet National Map Accuracy Standards. This product was developed through digital means and information may be updated without notification.

February 2006

US DEPARTMENT OF THE INTERIOR
Bureau of Land Management
**Dillon Field Office
Resource Management Plan**

Fire Management Zones

Fire Management Category A

Fire Management Category B

Fire Management Category C

Fire Management Category D

Dillon Field Office Boundary

Map shows allocation of BLM lands to Fire Management Categories A through D. Fire Management Zone (FMZ) boundaries, as described in Appendix D, are also shown.

Category A: Wildland fire is not desired in these areas. The fire management emphasis should be placed on prevention, detection, rapid response, use of appropriate suppression techniques and tools, and non-fire fuels treatment.

Category B: Areas where unplanned fire is likely to cause negative effects, but these effects can be mitigated or avoided through fuels management (e.g., prescribed fire), prevention of human caused fire, or other strategies.

Category C: Areas where fire is desired to manage ecosystems, but there are significant constraints that must be considered for its use. These constraints could include critical wildlife habitat, air quality, or threatened and endangered species. Resource considerations could be described in terms of maximum acreage, of time of year, or as burned acres per decade from all types of fire.

Category D: Areas where fire is desired and where there are no constraints associated with resource conditions or social, economic, or political considerations (i.e., where natural and management ignited fire may be used to achieve desired objectives, such as to improve vegetation or watershed conditions.)

**Fire Management Zones
and Category Designations**

Albers Equal Area, NAD83

This map is intended for display purposes. No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data, or for purposes not intended by BLM. This map may not meet National Map Accuracy Standards. This product was developed through digital means and information may be updated without notification.

February 2006

**Dillon Field Office
Resource Management Plan**

- ★ Existing Communication Sites
- ★ Right-of-Way Use Areas
- Utility Corridor
- Exclusion Areas
- Avoidance Areas
- BLM Lands
- Dillon Field Office Boundary

Map shows designated exclusion areas (the Bear Trap Wilderness and Beaverhead Rock) and several avoidance areas, including all Wilderness Study Areas and BLM lands along the Lewis and Clark Trail. Ten existing communication sites, of which five have been designated as right-of-way use areas are also shown, as are two designated utility corridors.

**Avoidance and Exclusion
Areas and Designated
Corridors and Use Areas**

Albers Equal Area, NAD83

This map is intended for display purposes. No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data, or for purposes not intended by BLM. This map may not meet National Map Accuracy Standards. This product was developed through digital means and information may be updated without notification.

February 2006

Dillon Field Office Resource Management Plan

Map shows schedule for assessments by watershed areas. Assessments determine if Standards for Rangeland Health are being met. Low priority (unlabeled) watersheds will be done with adjacent watersheds or as separate allotments or will be assessed in 2009.

Watershed Assessment Schedule

Albers Equal Area, NAD83

This map is intended for display purposes. No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data, or for purposes not intended by BLM. This map may not meet National Map Accuracy Standards. This product was developed through digital means and information may be updated without notification.

February 2006

Map 20

Dillon Field Office Resource Management Plan

- ★ Existing Mineral Material Sites
- BLM Lands
- BLM Lands Unavailable for Mineral Material Disposal
- Dillon Field Office Boundary

Map shows existing mineral material sites and lands that are available for mineral material disposal. Areas closed to mineral material disposal include: the Bear Trap Wilderness, Centennial Sandhills, Christnot Mill, developed recreation sites, certain lands with 1/4 mile of Big Sheep Creek, Lewis's Lookout, wilderness study areas, and the Sheep Creek Common Use Area. New mineral material sites may be authorized on a ease-by-ease basis in remaining areas of BLM lands.

Mineral Material Areas

Albers Equal Area, NAD83

This map is intended for display purposes. No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data, or for purposes not intended by BLM. This map may not meet National Map Accuracy Standards. This product was developed through digital means and information may be updated without notification.

February 2006

Map 22

0 10 20 30 40
Miles

Dillon Field Office Resource Management Plan

- SRMAs
- BLM Administered Public Lands
- Dillon Field Office Boundary

Map shows the ten Special Recreation Management Areas (SRMAs) designated by the Approved Plan. The Rocky Hills area will only be managed as a SRMA if the Henneberry Ridge WSA is released.

Special Recreation Management Areas (SRMAs)

Albers Equal Area, NAD83

This map is intended for display purposes. No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data, or for purposes not intended by BLM. This map may not meet National Map Accuracy Standards. This product was developed through digital means and information may be updated without notification.

February 2006

Map 23

Dillon Field Office Resource Management Plan

- ★ Developed Recreation Sites
- BLM Lands
- Dillon Field Office Boundary

Map shows sites currently developed for recreation purposes.

Developed Recreation Sites

Albers Equal Area, NAD83

This map is intended for display purposes. No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data, or for purposes not intended by BLM. This map may not meet National Map Accuracy Standards. This product was developed through digital means and information may be updated without notification.

February 2006

Map 24

**Dillon Field Office
Resource Management Plan**

OPA Boundaries

BLM Lands

Dillon Field Office Boundary

Map shows boundaries of Outfitter Permit Areas (OPAs). BLM only manages land under BLM jurisdiction within OPA boundaries.

**Outfitter Permit Areas
(OPAs)**

Albers Equal Area, NAD83

This map is intended for display purposes. No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data, or for purposes not intended by BLM. This map may not meet National Map Accuracy Standards. This product was developed through digital means and information may be updated without notification.

February 2006

US DEPARTMENT OF THE INTERIOR
Bureau of Land Management

**Dillon Field Office
Resource Management Plan**

Map shows areas determined to be closed pursuant to 45 CFR 8342. Definition of "closed" is found at 43 CFR 8340.

Closures include: Bear Trap Wilderness, Blacktail Mountains, Centennial Mountains, East Fork Blacktail, Farlin Creek, and North Ruby Mountains.

**Areas Closed to
Motorized Travel**

Albers Equal Area, NAD83

This map is intended for display purposes. No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data, or for purposes not intended by BLM. This map may not meet National Map Accuracy Standards. This product was developed through digital means and information may be updated without notification.

February 2006

Map 28

**Dillon Field Office
Resource Management Plan**

Snowmobiles Not Allowed

BLM Lands

Dillon Field Office Boundary

Map shows BLM lands where snowmobile use is not allowed.

Snowmobile Restrictions

Albers Equal Area, NAD83

This map is intended for display purposes. No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data, or for purposes not intended by BLM. This map may not meet National Map Accuracy Standards. This product was developed through digital means and information may be updated without notification.

February 2006

US DEPARTMENT OF THE INTERIOR
Bureau of Land Management

**Dillon Field Office
Resource Management Plan**

Map shows BLM lands assigned to Visual Resource Management (VRM) Classes 1 through IV.

Class I allows no visible change.

Class II allows visible change that does not attract attention.

Class III allows change that attracts attention but does not dominate.

Class IV allows change that dominates but is mitigated.

**Visual Resource
Management (VRM)
Designations**

Albers Equal Area, NAD83

This map is intended for display purposes. No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data, or for purposes not intended by BLM. This map may not meet National Map Accuracy Standards. This product was developed through digital means and information may be updated without notification.

February 2006

Map 30

0 10 20 30 40
Miles

**Dillon Field Office
Resource Management Plan**

- Bear Trap Wilderness
- Wilderness Study Areas
- BLM Lands
- Dillon Field Office Boundary

Map shows the designated Bear Trap Wilderness and nine wilderness study areas (WSAs). WSAs include: Axolotl Lakes, Bell/Limekiln Canyon, Blacktail Mountains, Centennial Mountains, East Fork Blacktail Deer Creek, Farlin Creek, Henneberry Ridge, Hidden Pasture, and the Ruby Mountains.

**Designated Wilderness
and
Wilderness Study Areas**

Albers Equal Area, NAD83

This map is intended for display purposes. No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data, or for purposes not intended by BLM. This map may not meet National Map Accuracy Standards. This product was developed through digital means and information may be updated without notification.

February 2006

Map 31

R19W R17W R15W R13W R11W R9W R7W R5W R3W R1W R1E R3E

T1N
T1S
T3S
T5S
T7S
T9S
T11S
T13S

- Raptor Management Area
- BLM Lands
- Dillon Field Office Boundary

Map shows the Lima Foothills and the Sweetwater Breaks key raptor management areas.

US DEPARTMENT OF THE INTERIOR
Bureau of Land Management

Dillon Field Office Resource Management Plan

Raptor Management Areas

Albers Equal Area, NAD83

This map is intended for display purposes. No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data, or for purposes not intended by BLM. This map may not meet National Map Accuracy Standards. This product was developed through digital means and information may be updated without notification.

February 2006

Map 32

US DEPARTMENT OF THE INTERIOR
Bureau of Land Management

**Dillon Field Office
Resource Management Plan**

Map shows public land subject to management to reduce conflicts between wildlife and other users in dispersal/migration corridors for special status species and general wildlife movement. Areas include lands modeled by American Wildlands "Corridors of Life" as core and subcore areas, and those areas ranked 1-89 as corridors.

**Wildlife Dispersal/
Migration Corridors**

Albers Equal Area, NAD83

This map is intended for display purposes. No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data, or for purposes not intended by BLM. This map may not meet National Map Accuracy Standards. This product was developed through digital means and information may be updated without notification.

February 2006

Map 33

R19W R17W R15W R13W R11W R9W R7W R5W R3W R1W R1E R3E

T1N
T1S
T3S
T5S
T7S
T9S
T11S
T13S

US DEPARTMENT OF THE INTERIOR
Bureau of Land Management

**Dillon Field Office
Resource Management Plan**

- Dillon Field Office Boundary
- Grizzly Bear Use Areas
- Bureau of Land Management
- Bureau of Reclamation
- Fish and Wildlife Service
- Forest Service
- National Park Service
- Agricultural Research Service
- Private
- State of Montana
- Lakes

Map shows areas of BLM land in the Dillon Field Office where grizzly bears are known or likely to occur. Map based on data from 2002 grizzly bear distribution maps prepared by interagency staff. None of the BLM lands in the Dillon Field Office lie within the Primary Conservation Area for grizzly bear.

Grizzly Bear Areas

Albers Equal Area, NAD83

This map is intended for display purposes. No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data, or for purposes not intended by BLM. This map may not meet National Map Accuracy Standards. This product was developed through digital means and information may be updated without notification.

February 2006

Map 34

US DEPARTMENT OF THE INTERIOR
Bureau of Land Management

Dillon Field Office Resource Management Plan

- Bighorn Sheep Areas
- BLM Lands
- Dillon Field Office Boundary

Map shows BLM lands used by bighorn sheep based on BLM and FWP data and on reintroduction locations.

Bighorn Sheep Occupied Habitat

Albers Equal Area, NAD83

This map is intended for display purposes. No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data, or for purposes not intended by BLM. This map may not meet National Map Accuracy Standards. This product was developed through digital means and information may be updated without notification.

February 2006

Map 35

US DEPARTMENT OF THE INTERIOR
Bureau of Land Management

**Dillon Field Office
Resource Management Plan**

Map shows areas in the Centennial Valley where emergent wetland vegetation will be managed to benefit trumpeter swans and other waterfowl by providing adequate nesting cover and security.

**Centennial Valley
Wetland and Waterfowl
Production Areas**

Albers Equal Area, NAD83

This map is intended for display purposes. No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data, or for purposes not intended by BLM. This map may not meet National Map Accuracy Standards. This product was developed through digital means and information may be updated without notification.

February 2006

Map 36

US DEPARTMENT OF THE INTERIOR
Bureau of Land Management

Dillon Field Office
Resource Management Plan

Land Status in the Planning Area

Dillon, Montana

- BLM-Administered Federal Minerals
- Bureau of Land Management
- Bureau of Reclamation
- Fish and Wildlife Service
- Forest Service
- National Park Service
- Other Federal
- Private
- State of Montana
- Lakes
- Dillon Field Office Boundary

Map shows ownership and administration of lands in the planning area.

This map is intended for display purposes. No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data, or for purposes not intended by BLM. This map may not meet National Map Accuracy Standards. This product was developed through digital means and information may be updated without notification.

Albers Equal Area, North American Datum 1983.
First Standard Parallel: 43.50, Second Standard Parallel: 48.00
Central Meridian: -106.00, Latitude of Origin: 42.50
False Easting: 0.00, False Northing: 0.00

February 2006

R19W R17W R15W R13W R11W R9W R7W R5W R3W R1W R1E R3E

T1N

T1S

T3S

T5S

T7S

T9S

T11S

T13S

US DEPARTMENT OF THE INTERIOR
Bureau of Land Management
Dillon Field Office
Resource Management Plan

Class 1 (Blue Ribbon), Westslope Cutthroat Trout and Arctic Grayling Streams

Dillon, Montana

- Arctic Grayling

Class I (Blue Ribbon)

Westslope Cutthroat Trout - 100%

Westslope Cutthroat Trout - 99 to 99.9%

Westslope Cutthroat Trout - 90 to 98.9%

Westslope Cutthroat Trout - Unknown Purity

Bureau of Land Management

Bureau of Reclamation

Fish and Wildlife Service

Forest Service

National Park Service

Other Federal

Private

State of Montana

Lakes

Dillon Field Office Boundary

Map highlights portions of streams on public lands containing Arctic Grayling and Westslope Cutthroat Trout and those designated as Class 1 (Blue Ribbon) streams by the State of Montana. Westslope Cutthroat Trout streams identified as "unknown" are managed as 100 % pure until genetic testing establishes purity.

This map is intended for display purposes. No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data, or for purposes not intended by BLM. This map may not meet National Map Accuracy Standards. This product was developed through digital means and information may be updated without notification.

Albers Equal Area, North American Datum 1983
First Standard Parallel: 43.50, Second Standard Parallel: 48.00
Central Meridian: -106.00, Latitude of Origin: 42.50
False Easting: 0.00, False Northing: 0.00

February 2006

Map 14

0 5 10 20 30
Miles

R19W R17W R15W R13W R11W R9W R7W R5W R3W R1W R1E R3E

T1N

T1S

T3S

T5S

T7S

T9S

T11S

T13S

US DEPARTMENT OF THE INTERIOR
Bureau of Land Management

Dillon Field Office
Resource Management Plan

Priority Treatment Areas and Vegetation Habitat Types

Dillon, Montana

- Priority Treatment Areas
- Warm Very Dry Forest
- Warm Dry Forest
- Cool Moist Forest
- Xeric Shrub
- Mesic Shrub
- Mountain Fire Sprout Shrub
- Mountain Shrub
- Grassland
- Riparian
- Aspen
- Mountain Mahogany
- Other
- Dillon Field Office Boundary

Map shows general location of habitat types referred to in the Approved Plan. Information is based on SILC imagery processed through the SIMPLLE model. "Other" includes areas of rock, irrigated pasture, snow cover, etc.

The three priority treatment areas identified in the Approved Plan are also depicted (South Tobacco Roots, South Ruby Mountains, and Barton/Idaho Gulch).

This map is intended for display purposes. No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data, or for purposes not intended by BLM. This map may not meet National Map Accuracy Standards. This product was developed through digital means and information may be updated without notification.

Albers Equal Area, North American Datum 1983
First Standard Parallel: 43.50, Second Standard Parallel: 48.00
Central Meridian: -106.00, Latitude of Origin: 42.50
False Easting: 0.00, False Northing: 0.00

February 2006

Map 15

0 5 10 20 30 Miles

US DEPARTMENT OF THE INTERIOR
Bureau of Land Management

**Dillon Field Office
Resource Management Plan**

Existing and Proposed Withdrawal Areas

Dillon, Montana

- Proposed Mineral Withdrawals
- Existing Withdrawals**
 - Air Navigation Site
 - Bear Trap Wilderness
 - BLM Protective
 - BLM Recreation Site
 - Bureau of Reclamation
 - Forest Service Administrative Site
 - Power Site Reserve/FERC
 - Public Water Reserve
 - Reservoir Site Reserve
 - Multiple Types
 - Bureau of Land Management
 - Bureau of Reclamation
 - Fish and Wildlife Service
 - Forest Service
 - National Park Service
 - Other Federal
 - Private
 - State of Montana
 - Lakes
 - Dillon Field Office Boundary

Map shows areas that are proposed for withdrawal from locatable mineral entry and lands that are withdrawn for certain purposes or from operation of certain laws. Some withdrawn areas may be too small to show. The following areas are proposed to be withdrawn from locatable mineral entry: Beaverhead Rock, Christnot Mill, Developed Recreation Sites (not already withdrawn), Everson Creek, Lewis's Lookout, Lower Madison Lands, Road Agent Rock, Squirrel Rock, Virginia City Historic District, and Wedding Ring Rock.

This map is intended for display purposes. No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data, or for purposes not intended by BLM. This map may not meet National Map Accuracy Standards. This product was developed through digital means and information may be updated without notification.

Albers Equal Area, North American Datum 1983
First Standard Parallel: 43.50, Second Standard Parallel: 48.00
Central Meridian: -106.00, Latitude of Origin: 42.50
False Easting: 0.00, False Northing: 0.00

US DEPARTMENT OF THE INTERIOR
Bureau of Land Management

Dillon Field Office
Resource Management Plan

Land Adjustment Categories

Dillon, Montana

- Land Adjustment Category 1
- Land Adjustment Category 2
- Land Adjustment Category 3
- Bureau of Reclamation
- Fish and Wildlife Service
- Forest Service
- National Park Service
- Other Federal
- Private
- State of Montana
- Lakes
- Dillon Field Office Boundary

Map shows allocations of lands to adjustment categories:
Category 1 lands are managed for retention and allow no disposal.
Category 2 lands are managed for retention but allow limited adjustment.
Category 3 lands are targeted for potential disposal.

Some small parcels may not display within Category 3. See Appendix 1 in the Approved Plan for a list of Category 3 parcels by legal description.

This map is intended for display purposes. No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data, or for purposes not intended by BLM. This map may not meet National Map Accuracy Standards. This product was developed through digital means and information may be updated without notification.

Albers Equal Area, North American Datum 1983
First Standard Parallel: 43.50, Second Standard Parallel: 48.00
Central Meridian: -106.00, Latitude of Origin: 42.50
False Easting: 0.00, False Northing: 0.00

Dillon Field Office
Resource Management Plan

Grazing Availability and Allotments

Dillon, Montana

- Grazing Allotments
- Unleased
- Unavailable for Grazing
- Bureau of Land Management
- Bureau of Reclamation
- Fish and Wildlife Service
- Forest Service
- National Park Service
- Other Federal
- Private
- State of Montana
- Lakes
- Dillon Field Office Boundary

Map shows allotment boundaries as of 2005 and lands that are unavailable for livestock grazing, or currently unleased, as identified in the Dillon RMP. No term grazing permits or leases will be issued for unavailable areas, though areas could be grazed with livestock on a temporary, nonrenewable basis to meet resource objectives. Reclaiming BLM lands are available for grazing subject to meeting the *Western Montana Standards for Rangeland Health* and provisions in the grazing regulations. Unleased tracts will be evaluated during Watershed Assessments to determine if grazing should be authorized.

This map is intended for display purposes. No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data, or for purposes not intended by BLM. This map may not meet National Map Accuracy Standards. This product was developed through digital means and information may be updated without notification.

Albers Equal Area, North American Datum 1983
First Standard Parallel: 43.50, Second Standard Parallel: 48.00
Central Meridian: -106.00, Latitude of Origin: 42.50
False Easting: 0.00, False Northing: 0.00

February 2006

US DEPARTMENT OF THE INTERIOR
Bureau of Land Management

Dillon Field Office
Resource Management Plan
Oil and Gas
Leasing Availability

Dillon, Montana

- No Lease
- No Surface Occupancy
- Timing Limitations - Controlled Surface Use
- Standard Lease Terms
- Lakes, Rivers, & Streams
- Dillon Field Office Boundary

Map shows availability of BLM-administered federal mineral estate and types of stipulations applied to available lands. Stipulated areas may change over time as part of plan maintenance as additional inventory information becomes available. Note that vehicle use restrictions and visual resource management considerations apply to all BLM lands including those subject to Standard Lease Terms.

This map is intended for display purposes. No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data, or for purposes not intended by BLM. This map may not meet National Map Accuracy Standards. This product was developed through digital means and information may be updated without notification.

Albers Equal Area, North American Datum 1983
First Standard Parallel: 43.50, Second Standard Parallel: 48.00
Central Meridian: -106.00, Latitude of Origin: 42.50
False Easting: 0.00, False Northing: 0.00

February 2006

R19W

R17W

R15W

R13W

R11W

R9W

R7W

T1N

T1S

T3S

T5S

T7S

T9S

Match Line to Map 27

- Bureau of Land Management
- Bureau of Reclamation
- Forest Service
- National Park Service
- Private
- State of Montana
- Lakes
- Wilderness Study Areas

- National Park Service
- Private
- State of Montana
- Lakes
- Wilderness Study Areas
- Dillon Field Office Boundary

Dates Closed

- Open Year Round
- April 1 - July 1
- December 1 - May 15
- December 1 - June 30
- October 1 - July 14
- October 15 - December 1
- October 15 - May 15

Road Standard

- Interstate
- Highway
- Improved
- Unimproved
- 4 Wheel Drive
- Trail

US DEPARTMENT OF THE INTERIOR
Bureau of Land Management

Dillon Field Office Resource Management Plan

Motorized Route Designations West Half

Dillon, Montana

Albers Equal Area, North American Datum 1983

Map uses baseline of existing routes based on several digital databases and field inventory conducted in 2001. Designated routes across BLM administered lands would be open for motorized travel by wheeled vehicles either yearlong or seasonally if access is available to the public. Routes shown as designated across State lands are intended to show desirable access and would be coordinated with appropriate State agencies. Routes already designated as open across state lands by the Interagency Travel Plan would remain open even if not indicated on this map.

February 2006

Map 26

0 10 20 30 Miles

This map is intended for display purposes. No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data, or for purposes not intended by BLM. This map may not meet National Map Accuracy Standards. This product was developed through digital means and information may be updated without notification.

Match Line to Map 27

R7W

R5W

R3W

R1W

R1E

R3E

Match Line to Map 26

T1N

T1S

T3S

T5S

T7S

T9S

Whitehall

Silver Star

Twin Bridges

Sheridan

Norris

Ennis

Alder

Virginia City

- Bureau of Land Management
- Fish and Wildlife Service
- Forest Service
- National Park Service
- Agricultural Research Service
- Private
- State of Montana
- Lakes
- Bear Trap Wilderness

Legend

- National Park Service
- Agricultural Research Service
- Private
- State of Montana
- Lakes
- Bear Trap Wilderness
- Wilderness Study Areas
- Dillon Field Office Boundary

Dates Closed

- Open Year Round
- April 1 - July 1
- December 1 - May 15
- December 1 - June 30
- October 1 - July 14
- October 15 - December 1
- October 15 - May 15

Road Standard

- Interstate
- Highway
- Improved
- Unimproved
- 4 Wheel Drive
- Trail

Grid

T9S

T11S

T13S

Match Line to Map 26

US DEPARTMENT OF THE INTERIOR
Bureau of Land Management

**Dillon Field Office
Resource Management Plan**

Motorized Route Designations East Half

Dillon, Montana

Albers Equal Area, North American Datum 1983

Map uses baseline of existing routes based on several digital databases and field inventory conducted in 2001. Designated routes across BLM administered lands would be open for motorized travel by wheeled vehicles either yearlong or seasonally if access is available to the public. Routes shown as designated across State lands are intended to show desirable access and would be coordinated with appropriate State agencies. Routes already designated as open across state lands by the Interagency Travel Plan would remain open even if not indicated on this map.

February 2006

Map 27

This map is intended for display purposes. No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data, or for purposes not intended by BLM. This map may not meet National Map Accuracy Standards. This product was developed through digital means and information may be updated without notification.

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

Public Lands USA: Use, Share, Appreciate