United States Department of the Interior

Bureau of Land Management

PROPOSED
Cottonwood Resource Management Plan and Final Environmental Impact Statement

ID-420-2005-EIS-1058

Volume I - Chapters 1, 2, 3, and 4

June 2008

BLM

Cottonwood Field Office

It is the mission of the Bureau of Land Management to sustain the health, diversity and productivity of the public lands for the use and enjoyment of present and future generations.

BLM/ID/PT-06/005+1610/REV2008

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
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TAKE PRIDE IN AMERICA

In Reply Refer to:
1610 (420)

Dear Reader:

Enclosed, for your review, is the Proposed Resource Management Plan (RMP)/Final Environmental Impact Statement (EIS) for the Bureau of Land Management's (BLM) Cottonwood Field Office. The RMP will guide future management actions and subsequent site-specific implementation decisions on approximately 132,496 acres of BLM-administered land within the BLM's Cottonwood Field Office. This acreage figure reflects the recent transfer of approximately 11,304 acres of public land to the Bureau of Indian Affairs, to be held in trust for the benefit of the Nez Perce Tribe. The transfer of this public land was made in accordance with the Snake River Water Rights Act of 2004 (Settlement Act), Public Law 108-447, Division J, Title X, Section 6. References to acreage figures, computations and percentages of public land throughout the Proposed RMP/Final EIS have not been updated to reflect this most recent land transfer. An acreage figure of 143,830 has been used in the RMP/EIS.

A majority of the 132,496 acres of BLM-administered land consists of scattered tracts intermingled with State of Idaho, private, Nez Perce Tribe, and National Forest lands. Due to the small amount of public land and the scattered land ownership, relatively few issues were raised during the public scoping period or in comments on the Draft RMP/EIS. There are no sage grouse or energy-related issues in the planning area. Alternatives were developed based upon public comments, resource issues identified, complexity of programs managed, as well as laws and regulations pertinent to the management of public land and resources.

The Proposed RMP is a refinement of the Preferred Alternative (Alternative B) presented in the May 2006 Draft RMP/EIS, with consideration given to public comments, corrections, and rewording for clarification. The Draft RMP/EIS was available for a 90-day review period ending on November 27, 2006. The Proposed RMP/Final EIS is designed to be used in conjunction with the Draft RMP/EIS for reference to maps and in regard to page numbers cited in the comment and response section (Appendix U). Both the Proposed RMP/Final EIS and Draft RMP/EIS are available on the project Web site, www.cottonwoodrmp.com. Chapter 5 of the Proposed RMP/Final EIS contains a summary of the public comment process and the comments received on the Draft RMP/EIS. All comment letters received and BLM responses are located in

Appendix U (Volume III). As a result of public comment and internal BLM review, Alternative

B has been modified and is now considered the Proposed Action for management of BLM lands in the Cottonwood Field Office.

The decisions made in the Proposed RMP/Final EIS, are primarily land use plan decisions, which are subject to a 30-day protest period as outlined below. However, in addition to defining area designations for travel and transportation management (closed, open and limited areas), which are land use plan decisions; decisions have also been made on specific travel routes and restrictions on those routes. The route designations are considered implementation level decisions that are appealable, rather than protestable, after the RMP is approved.

At the end of the 30-day protest period on the land use plan decisions, and after the Governor's consistency review and resolution of protests, BLM will prepare the Record of Decision and the Approved Resource Management Plan. Approval will be withheld on any portion of the Proposed RMP under protest until final action has been completed.

Who can protest?
Any person who participated in the planning process for the Proposed RMP/Final EIS, and has an interest that is or may be adversely affected, may protest approval of this Proposed RMP/Final EIS and land use plan decisions contained within it (see 43 Code of Federal Regulations 1610.5-2) during the 30-day protest period. Only those persons or organizations who participated in the planning process leading to this Proposed RMP/Final EIS may protest. Participation is defined as having submitted written comments, attended a public meeting, and/or personally contacted or discussed the project with a member of the Cottonwood Field Office.

When to protest.
The 30-day period for filing a plan protest begins when the Environmental Protection Agency publishes in the *Federal Register* its Notice of Availability of the Proposed RMP/Final EIS. ***The protest period ends 30 days after publication of this Notice of Availability.*** The BLM will publish announcements specifying the actual start and end dates in local and regional media. The BLM also will post this information on the project website (www.cottonwoodrmp.com) and mail it to contacts on the Cottonwood RMP mailing list. To be considered timely, your protest, along with all attachments, must be postmarked no later than the last day of the protest period. There is no provision for any extension of time.

What to protest.
A protesting party may raise only those issues submitted for the record during the planning process leading up to the publication of this Proposed RMP/Final EIS. New issues may not be brought into the record at the protest stage. All proposed decisions in the Proposed RMP/Final EIS are subject to protest, ***with the exception of decisions on route designations for motorized or nonmotorized vehicle travel, which are discussed in the Transportation and Travel Management portion of Section 2.6 of Chapter 2 of the Proposed RMP (including Figures 28 through 36 in Volume IV of the Cottonwood Draft RMP/EIS). Decisions on route designations may be appealed to the Interior Board of Land***

Appeals following the publication of the Approved RMP/Record of Decision. The Approved RMP/Record of Decision will include information on the appeal process.

How to protest.
A letter of protest must be filed in accordance with the planning regulations, 43 Code of Federal Regulations 1610.5-2(a)(1). Protests must be in writing. Although not required, the BLM suggests that you send your protest by certified mail, return receipt requested. Electronic mail and faxed protests will not be accepted as valid protests unless the protesting party also provides the original letter, by either regular or overnight mail, postmarked by the close of the protest period. In such instances, the BLM will consider the emailed or faxed protest as an advance copy and give it full consideration. If you wish to provide the BLM with such advance notification, please direct faxed protests to the attention of the BLM protest coordinator at (202)452-5112, and emails to Brenda_Hudgens-Williams@blm.gov.

If sent by regular mail, send to:
Director (210)
Bureau of Land Management
Attention: Brenda Hudgens-Williams
PO Box 66538
Washington DC 20035

For overnight (e.g., FedEx), send to:
Director (210)
Bureau of Land Management
Attention: Brenda Hudgens-Williams
1620 L Street, Suite 1075
Washington, DC 20036
Phone: (202) 452-5045

To be considered complete, your protest must contain, at a minimum, the following information:
1. The name, mailing address, telephone number, and interest of the person filing the protest.
2. A statement of the issue or issues being protested.
3. A statement of the part or parts of the Proposed RMP being protested. To the extent possible, this should be done by reference to specific pages, paragraphs, sections, tables, maps, etc., included in the document.
4. A copy of all documents addressing the issue or issues that you submitted during the planning process or a reference to the date the issue or issues were discussed by you for the record.
5. A concise statement explaining why the Idaho BLM State Director's proposed decision is believed to be incorrect. *This is a critical part of your protest.* Take care to document all relevant facts. As much as possible, reference or cite documents. A protest that merely expresses disagreement with the Idaho BLM State Director's proposed decision, without any data, will not provide us with the benefit of your information and insight. In this case, the Director's review will be based on the existing analysis and supporting data.

Thank you for your participation in this planning effort. For additional information or clarification regarding this document or the planning process, please contact Dean Huibregtse at (208) 962-3784.

Sincerely,

Stephanie Connolly

Stephanie Connolly
Field Manager

1 Enclosure:
1. Proposed Cottonwood RMP/Final EIS (1730 pp)

Cottonwood Proposed Resource Management Plan and Final Environmental Impact Statement

1. **Responsible Agency:** United States Department of the Interior
Bureau of Land Management

2. **Type of Action:** Administrative (X) Legislative ( )

3. **Document Status:** Draft ( ) Final (X)

4. **Abstract:** This Proposed Resource Management Plan and Final Environmental Impact Statement describes and analyzes four alternatives for managing approximately 132,526 acres of public lands and resources administered by the Bureau of Land Management's Cottonwood Field Office in Latah, Clearwater, Nez Perce, Lewis, Idaho, and Adams Counties of north-central Idaho. This acreage figure reflects the recent transfer of approximately 11,304 acres of public land to the Bureau of Indian Affairs to be held in trust for the benefit of the Nez Perce Tribe. Acreage figures or references used throughout the RMP/EIS have not been updated to reflect this recent land transfer which represents only 0.2 percent of the public land managed by the CFO. An acreage figure of 143,830 acres has been carried through the RMP/EIS. The plan alternatives are Alternative A (the "no action" alternative or continuation of current management), Alternative B (the agency preferred alternative), Alternative C (minimal active management/preservation emphasis), and Alternative D (commodity/utility emphasis). Planning issues addressed include invasive plant species, forest vegetation, special status species and habitats, priority watersheds or areas for conservation and/or restoration strategies, motorized and nonmotorized travel, levels of commercial uses (minerals, forest products, livestock grazing, and recreation), fuels reduction, adjusting land ownership, and existing and future recreation demand. The alternatives also address designation of Areas of Critical Environmental Concern and the eligibility and suitability of river segments for designation under the National Wild and Scenic Rivers System.

5. **Protest period:** The protest period on the Cottonwood Proposed Resource Management Plan and Final Environmental Impact Statement is 30 calendar days. The protest period begins when the Environmental Protection Agency publishes a Notice of Availability in the *Federal Register*.

6. **For further information contact:**

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LIST OF ACRONYMS

Acronym or Abbreviation	Full Phrase
ACEC	Area of Critical Environmental Concern
AML	abandoned mine lands
ASQ	allowable sale quantity
AUM	animal unit month
BLM	United States Department of the Interior, Bureau of Land Management
BMP	best management practice
BP	before present
CEQ	Council on Environmental Quality
CFO	United States Department of the Interior, Bureau of Land Management, Coeur d'Alene District, Cottonwood Field Office
CFR	Code of Federal Regulations
CO	carbon monoxide
CSU	Controlled Surface Use
DBH	diameter at breast height
DFC	desired future condition
EIS	environmental impact statement
ESA	Endangered Species Act
FLPMA	Federal Land Policy and Management Act
FMP	Fire Management Plan
~~FMU~~FMA	fire management ~~unit~~area
Forest Service	United States Department of Agriculture, Forest Service
FRCC	fire regime condition class
GAP	Gap Analysis Program
GIS	geographic information system
HMM	Hazardous Materials Management
HMP	habitat management plan
HUC	hydrologic unit code
ICBEMP	Interior Columbia Basin Ecosystem Management Project
IDEQ	Idaho Department of Environmental Quality
INFISH	Inland Native Fish Strategy
MBF	thousand board feet
MMBF	million board feet
MFP	Management Framework Plan
National Marine Fisheries Service	National Oceanic and Atmospheric Administration National Marine Fisheries Service
NEPA	National Environmental Policy Act
NRCS	United States Department of Agriculture, Natural Resources Conservation Service
NSO	No Surface Occupancy
NWSRS	National Wild and Scenic Rivers System

LIST OF ACRONYMS *(continued)*

Acronym or Abbreviation	Full Phrase
OHV	off-highway vehicle
PACFISH	Interim Strategies for Managing Anadromous Fish-Producing Watersheds In Eastern Oregon and Washington, Idaho, and Portions of California
PFC	Proper Functioning Condition
planning area	CFO RMP planning area
PM_{10}	particulate matter with a diameter less than 10 micrometers
$PM_{2.5}$	particulate matter with a diameter less than 2.5 micrometers
PSQ	probable sale quantity
PVG	Potential Vegetation Group
RCA	Riparian Conservation Area
RHCA	Riparian Habitat Conservation Areas
RMP	resource management plan
RNA	Research Natural Area
ROD	record of decision
ROS	Recreation Opportunity Spectrum
SRMA	Special Recreation Management Area
TL	Timing Limitation
TMDL	total maximum daily load
US	United States
US EPA	Unites States Environmental Protection Agency
USFWS	United States Department of the Interior, Fish and Wildlife Service
VRM	Visual Resource Management
WMA	Wildlife Management Area
WSA	Wilderness Study Area
WSR Act	Wild and Scenic Rivers Act
WUI	wildland-urban interface

SUMMARY

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EXECUTIVE SUMMARY

INTRODUCTION

The United States (US) Department of the Interior, Bureau of Land Management (BLM) has prepared this proposed~~draft~~ resource management plan (RMP) and final environmental impact statement (EIS) to provide direction for managing public lands under the jurisdiction of the Cottonwood Field Office (CFO) and to analyze the environmental effects resulting from implementing the alternatives addressed in this ~~draft~~ proposed RMP.

The CFO boundary defines the planning area ~~assessed~~, which encompasses over 8.8 million acres in Latah, Clearwater, Nez Perce, Lewis, Idaho, and Adams Counties of north-central Idaho. The BLM administers about 1.4~~1.~~ percent, or ~~143,830~~132,526 acres, of the planning area. This acreage figure reflects the recent transfer of approximately 11,304~~0~~ acres of public land to the Bureau of Indian Affairs to be held in trust for the benefit of the Nez Perce Tribe. The transfer was made in accordance with the Snake River Water Rights Act of 2004 (Settlement Act), Public Law 108-447, Division J, Title X, Section 6. Acreage figures or references used throughout the remainder of this Executive Summary and the RMP/EIS have not been updated to reflect this recent land transfer which represents only 0.2 percent of the public land managed by the CFO. An acreage figure of 143,830 acres has been carried through the RMP/EIS.

The BLM manages the surface and subsurface of federal lands under its jurisdiction and, in some cases, has administrative duties for mineral activities on lands managed by other federal agencies or on private split-estate lands.

A majority of the 132,526 acres of BLM-administered land consists of scattered tracts intermingled ~~Land ownership in the planning area is intermingled~~ with other lands administered by the federal government, the Nez Perce Tribe, State of Idaho, and private property. Approximately 65 percent of the planning area is administered by the federal government, including the BLM; US Department of Agriculture, Forest Service (Forest Service); National Park Service; and US Army Corps of Engineers. **Table ES-1** highlights the ownership pattern of the planning area.

Table ES-1
Land Status within the Planning Area

Land Status	Acres	Percentage of Planning Area
BLM	143,830[1]	1.6
Forest Service	5,528,167	62.5
US Army Corps of Engineers	46,134	0.5
National Park Service	1,885	.02
Nez Perce tribal lands	94,705[1]	1.1
State of Idaho	444,791	5.0
Private	2,581,685	29.2
Total	**8,841,197**	100

[1] Figures do not reflect the recent land transfer as mentioned above.
Source: BLM 2004a

Due to the small amount of public land and the scattered land ownership, relatively few issues were raised during the public scoping period or in comments on the Draft RMP. There are no sage grouse within the planning area and limited, if any, energy-related issues. The range of alternatives for several program areas is limited for these and other reasons, including on-going restoration actions; implementation of rangeland standards and guidelines; use of best management practices (BMPs); as well as laws and regulations pertinent to the management of public land and resources.

Management direction and actions outlined in the RMP apply only to BLM-managed public lands in the CFO planning area and to approximately 84,000 acres of additional federal mineral estate lands under BLM jurisdiction that may lie beneath other surface ownership (split-estate). The CFO manages numerous blocks of BLM land, ranging in size from less than 40 acres to over 12,000 acres. No specific management measures have been developed in this RMP for private and state lands, or other federal lands. However, given that private, state, and other federal lands are interspersed with BLM-managed public lands, these lands could be influenced or could be indirectly affected by BLM management actions.

The RMP is being prepared using the BLM's planning regulations and guidance issued under the authority of the Federal Land Policy and Management Act of 1976. An EIS is incorporated into this document to meet the requirements of the National Environmental Policy Act of 1969 (NEPA), Council on Environmental Quality regulations for implementing NEPA (40 Code of Federal Regulations 1500-1508), and requirements of the BLM's NEPA Handbook, H-1790-1.

PURPOSE OF AND NEED FOR ACTION

The RMP is being prepared to provide the BLM CFO with a comprehensive framework for managing lands in the planning area under its jurisdiction. The purpose of the RMP is to develop a public, detailed management document that defines management polices and actions and determines land use allocations on these lands in order to maintain or restore conditions and help provide community stability through resource use and enjoyment.

The RMP is needed for the following reasons:

- Ecological, socioeconomic, institutional, and regulatory conditions have changed since the approval of the Chief Joseph Planning Unit Management Framework Plan (MFP) (BLM 1981a) and amendments to the MFP.
- Public use of federal lands and impacts from this use has changed, requiring new management direction.

PLANNING PROCESS AND PUBLIC COLLABORATION ~~(SCOPING)~~

Scoping

The planning process for this ~~draft~~ RMP began on September 3, ~~in~~ 2004 with publication of the N~~n~~otice of I~~i~~ntent in the *Federal Register* ~~(September 3, 2004)~~. ~~To assist in the process, t~~The BLM CFO initiated~~mplemented~~ an extensive public scoping and collaboration program~~;. The BLM began this program by~~ producing and distributing a project newsletter~~, mailed~~ on October 15, 2004~~,~~ to over 1,200 federal, state, and local agencies, interest groups, and members of the general public. The newsletter~~,. The BLM CFO compiled the mailing list, which included over 1,200 entries and~~ was also made available for public viewing on the Internet.

~~The newsletter informed the recipients of the BLM and RMP planning process, provided background information on the project, introduced the public scoping process and suggested methods for public involvement, and provided notice of three scoping open houses and community economic profile workshops. The scoping and collaboration program also included establishing a project Web site (www.cottonwoodrmp.com) and publishing news releases and newspaper advertisements, all to further assist with disseminating project information to interested stakeholders.~~

~~The scoping~~O~~-o~~pen house-style meetings~~s~~ were held in~~throughout north-central Idaho, in~~ Riggins, Grangeville, and Lewiston, Idaho on November 1, 3, and 4, 2004, respectively. ~~An open house format was chosen over the more formal public meeting format to encourage broader participation, to allow attendees to learn about the project at their own pace, and to enable people to ask questions of~~ BLM representatives were available in an informal, one-on-one setting. Attendees had~~had the opportunity to~~ access to the project Web site from a laptop computer and f~~. F~~act sheets and handouts ~~about the project and a map of the planning area~~ were made available, as were~~s was a~~ lists of the preliminary planning issue themes and planning criteria related to the project.

On November 9, 2004, the BLM hosted a community economic profile workshop in Grangeville, Idaho, led by an economist. Members of the public and local government representatives discussed economic growth and developing visions for the future of their communities. The attendees also discussed how BLM management of public lands could help support economic growth in local communities. Visions were developed for the areas around the towns of Cottonwood, Elk City, and Grangeville and were considered during the development of this ~~draft~~ RMP/EIS. These visions are documented in the Cottonwood RMP Scoping Report (BLM 2005b).

Distribution and Availability of the Draft RMP/EIS

The Draft RMP/EIS was published on August 25, 2006. A Notice of Availability (NOA) was published by the US Environmental Protection Agency in the *Federal Register* on that date and by the BLM on September 1, 2006 (**Appendix R**, Federal Register Notices). These NOAs notified the public of the availability of the Draft RMP/EIS and solicited written public comments during the 90-calendar-day review period that ended on November 27, 2006. The Draft RMP/EIS was available for downloading on the project Web site (www.cottonwoodrmp.com) and at five public libraries in the towns of Lewiston, Grangeville, Moscow, Cottonwood, and Riggins, Idaho. Newspaper advertisements and press releases were issued in August and October 2006 to notify the public of the Draft RMP/EIS availability, to announce three open houses, and to request public comments.

In total, 199 parties received copies of the Draft RMP/EIS. Included in all mailings were instructions on how to provide written comments by the November 27, 2006 deadline. Paper or CD-ROM copies of the Draft RMP/EIS also were available by request to the BLM in Cottonwood and Boise, Idaho.

Open houses were held in the towns of Riggins, Grangeville, and Lewiston, Idaho, during the 90-day public review period of the Draft RMP/EIS. Each open house featured displays, maps, and an interdisciplinary team of resource specialists who provided information and answered questions. A total of 15 people attended the open houses.

Comments Received on the Draft RMP/EIS

The comment period closed on November 27, 2006. A total of 30 written submissions, two from the same party, were received. Most of the 30 written submissions contained multiple comments on different topics. A total of 376 individual comments were made in the 30 submissions. Comments were received concerning a variety of resource issues. The majority of comments pertained to Wildland Fire Ecology and Management (45 comments or 13 percent). All information received through these comments has been evaluated, verified, and incorporated into the Proposed RMP/Final EIS, as appropriate. Copies of all accepted written submissions are provided in **Appendix U** (Volume III), and the BLM's response to each separate comment within each submission is printed to the right of each comment.

Distribution and Availability of the Proposed RMP/Final EIS

An NOA will be published in the *Federal Register*, which notifies the public of the availability of the Proposed RMP/Final EIS. The NOA also will outline protest procedures for the 30-calendar-day protest period. The Proposed RMP/Final EIS will be available for downloading from the project Web site, www.cottonwoodrmp.com. The Proposed RMP/Final EIS also will be available for review and photocopying at seven public libraries in the towns of Lewiston, Grangeville, Moscow, Cottonwood, and Riggins, Idaho. Newspaper advertisements and a press release will be issued to notify the public of the Proposed RMP/Final EIS availability. All 199 recipients of the Draft RMP/EIS, all 29 parties who submitted written comments on the Draft RMP/EIS (some of whom are the same parties), and an additional 40 private organizations, will receive a postcard or letter via US Mail announcing the availability of the Proposed RMP/Final EIS.

ISSUE IDENTIFICATION

Issue identification is the first step of the nine-step BLM planning process. A planning issue is a major controversy or dispute regarding management of resources or uses on the public lands that could be addressed in a variety of ways. A key component of the scoping process was to provide the public with the opportunity to identify issues and concerns to be addressed in the RMP. After considering public scoping comments, the BLM identified nine major planning issues as follows:

Issue 1: Invasive Plant Species. How will the problem of invasive plant species be addressed?

Issue 2: Forest Vegetation. How will forest vegetation be managed to attain desired stand structure and/or meet the range of natural variability?

Issue 3: Special Status Species. How will special status species and their habitats be managed?

Issue 4: Watershed Management. How will priority watersheds or areas be determined for conservation and/or restoration strategies?

Issue 5: Transportation and Travel Management. How will motorized and nonmotorized travel be managed to provide access, while minimizing impacts on natural and cultural resources?

Issue 6: Commercial Land Uses. At what levels will commercial uses (minerals, forest products, livestock grazing, and recreation) be authorized?

Issue 7: Fuels Reduction Treatments. Where and what types of fuels reduction will be implemented to reduce risk to the public, firefighters, property, and natural and cultural resources?

Issue 8: Public Land Management. How will public land resources be managed in scattered or isolated parcels, given varied resource values and priorities?

Issue 9: Recreational Demands. How will future demands for recreation on public lands be addressed?

The criteria used to identify issues to be addressed in the Cottonwood RMP included identifying if the effects of actions designed to respond to the issue would:

- Approach or exceed accepted standards;
- Substantially change a resource;
- Be controversial;
- Offer a wide range of opportunities; or
- Cause disagreement regarding their environmental impact.

These issues drove the formulation of the RMP alternatives and addressing them has resulted in a range of management options presented in four alternatives (Chapter 2). Each fully developed alternative represents a different land use plan that addresses or resolves the identified planning issues in different ways. While other concerns are addressed in the RMP, management related to them may or may not change by alternative.

Issues Considered but Not Further Analyzed

During scoping, several concerns were raised that are beyond the scope of this planning effort or represented questions on how the BLM would go about the planning process and implementation. There are several issues raised in scoping that are clearly of concern to the public but that are governed by existing laws and regulations (for example, water quality). Where certain management is already dictated by law or regulation, alternatives have not been developed, but management will instead be applied common to all alternatives. The Cottonwood RMP Scoping Report provides a comprehensive list of issues outside the scope of the RMP (BLM 2005b).

MANAGEMENT ALTERNATIVES

In combination with the nine planning issues identified previously~~above~~, the BLM has identified management goals for each resource addressed in the CFO planning area. While each of the four alternatives represents a different land use plan approach to address the identified planning issues, the goals for all resources remain consistent. **Table ES-2** provides the goals identified by the BLM for each resource.

Table ES-2
CFO Planning Area Management Goals by Resource

Resource	Goal(s)
Air Quality	Comply with laws and regulations to meet public health and safety requirements.
Geology	Provide opportunities for the use of geologic resources, while protecting resource values.
Soils	Maintain and restore watershed health, soil productivity, and areas of fragile soils.
Water Resources	Manage water resources to protect beneficial uses and to meet or exceed state and federal water quality standards. Maintain or improve the chemical, physical, and biological integrity of water resources.
Vegetation—Forests	Manage forests to maintain or improve ~~forest vigor~~forest health, composition, structure, ~~and~~ diversity consistent with site potential, and Historical Range of Variability.
Vegetation—Weeds	Prevent establishment of new invasive plant species and reduce infested acreage of established invasive plant species.
Vegetation—Rangelands	Maintain or improve rangeland plant community health (diversity, composition, function, and vigor) relative to site potential.
Vegetation—Riparian and Wetlands	Maintain or improve riparian and wetland areas to achieve proper functioning condition. Manage for riparian plant community types appropriate for the site.
Wildlife and Special Status Wildlife	Manage habitat to contribute to the conservation of special status species habitats and to maintain biological diversity of wildlife.
Aquatic Resources, Fish, and Special Status Fish	Manage habitat to contribute to the conservation of special status and native fish species.
Special Status Plants	Maintain or restore special status species and their habitat to contribute to species recovery.
Wildland Fire Management	Manage fuels and wildland fires to protect life and property and to protect or enhance resource values.
Cultural Resources	Preserve and protect significant cultural resources and ensure that they are available for appropriate uses; and Reduce imminent threats and resolve potential conflicts from natural or human-caused deterioration, or potential conflict with other resources uses, by ensuring that all authorizations for land use and resource use will comply with National Historic Preservation Act, Section 106.
Paleontological Resources	Preserve and protect significant paleontological resources and ensure that they are available for appropriate uses.
Visual Resources	Manage activities to maintain scenic quality.
Resource Uses	
Forest Products	Provide forest products to help meet local and national demands.
Livestock Grazing	Provide opportunities for grazing, while meeting rangeland health standards.
Minerals	Make federal mineral resources available for exploration, acquisition, and production consistent with other resource goals. The federal mineral resource consists of 143,830 acres of public lands (federal surface and mineral) and approximately 84,000 acres of reserved minerals (non-federal surface, federal mineral).

Table ES-2
CFO Planning Area Management Goals by Resource *(continued)*

Resource	Goal(s)
Recreation	Manage public lands and waters to provide a broad spectrum of recreation experiences and benefits. Emphasize resource-based river recreation. Ensure that developed facilities and sites are appropriate for the resource setting, well maintained, safe, secure, and accessible. Provide high value recreation opportunities and receive a fair return for commercial and specialized recreation use.
Renewable Energy	Provide opportunities for the development of renewable energy resources, while minimizing adverse impacts to other resource values.
Transportation and Travel Management	Manage travel, roads, primitive roads, and trails to provide access and recreational opportunities, while minimizing resource impacts and user conflicts.
Lands and Realty	Meet the needs of government agencies and the public for various realty authorizations, access, and land ownership adjustments; and Meet the needs of government agencies and the public for resource protection through public land and minerals withdrawals, acquisition of conservation easements, and resolution of unauthorized use.
Special Designations	
Areas of Critical Environmental Concern and Research Natural Areas	Maintain or enhance relevant resource values of more than local importance, or protect life and promote safety where natural hazards exist.
National Trails	Manage National Trails to protect the values for which they were designated.
Wild and Scenic Rivers	Fulfill the BLM's obligations under Section 5(d)(1) of the Wild and Scenic Rivers Act for the life of this RMP.
Wilderness and Wilderness Study Areas	Manage wilderness areas and Wilderness Study Areas to maintain wilderness characteristics.
Watchable Wildlife Viewing Sites	Maintain or enhance wildlife habitats and opportunities for wildlife viewing areas.
Social and Economic Conditions	
Native American Tribal Uses	Manage natural and cultural resources consistent with treaty and trust responsibilities to Native American tribes.
Public Safety—Abandoned Mines and Hazardous Materials	Protect the public and the environment from exposure to hazards associated with hazardous materials and abandoned mine lands.
Social and Economic Conditions	Provide varied social and economic opportunities through multiple use management.

General Description of Each Alternative

Four alternatives were developed and carried forward for detailed analysis in the Draft RMP/EIS. Alternative A, a continuation of current management, was developed using available inventory data, existing planning and management documents and policies, and established land use allocations. Alternatives B, C and D were developed by the BLM with input from the scoping process, the BLM interdisciplinary team, and citizen/agency groups.

Each alternative was written to address~~es~~ the goals of each resource and be responsive to the identified planning issues. All management under any of the alternatives would comply with state and federal laws, regulations, policies, and standards. ~~Adaptive management would be incorporated across all alternatives as a process of monitoring, evaluating, and incorporating new and changing information into the ongoing management of resources and their uses. A summary of each alternative's objectives is provided below.~~

Alternative A

Alternative A is the continuation of current management. Referred to as the no action alternative, it would continue present management practices based on the existing land use plan and plan amendments. The Chief Joseph MFP (BLM 1981a), as well as all amendments and revisions identified in Chapter 1, **Table 1-3~~1-4~~** (Identification of Chief Joseph Planning Unit MFP Amendments and Other Documents Considered for Implementation-Level Planning), would continue to guide management actions on CFO-administered lands. Direction contained in existing laws, regulations, policies, and standards would also continue to be implemented, sometimes superseding provisions of the 1981 MFP. Key components of Alternative A include the following:

- Continue managing special status species and their habitats to provide for their continued presence in accordance with applicable laws and regulations;
- Manage wildland fire to protect people, property, and cultural and natural resources;
- Continue to manage resource uses, such as grazing, mineral and energy development, and recreation to balance development and protect resources;
- Offer about 6,600 thousand board feet (MBF) as an Allowable Sale Quantity of saw timber per year from the commercial forest land base of 35,757 acres~~ (estimate treating 358 acres per year)~~;
- Continue to manage land tenure adjustments to protect resources while supporting appropriate development and improved public access to public lands;
- Continue to manage in accordance with Interim Strategies for Managing Anadromous Fish-producing Watersheds in Eastern Oregon and Washington, Idaho, and Portions of California (PACFISH) guidance (MFP Supplement for Fisheries and Water Quality Objectives [BLM 1985d]) to achieve or maintain riparian management objectives. Implement Riparian Habitat Conservation Area buffers totaling 24,290 acres to protect riparian areas and wetlands;
- Manage to achieve or maintain water quality and fisheries objectives within 39 prescription watersheds totaling 66,077 acres;
- Do not apply Desired Future Condition standards on forest lands;
- Use Recreation Opportunity Spectrum (ROS) criteria to manage recreation activities, including 14,381 acres Primitive; 18,816 acres Semi-primitive Nonmotorized; 26,206 acres Semi-primitive Motorized; 55,988 acres Roaded-Natural; 27,349 acres Semi-Urban; 40 acres Urban; and 1,046 acres undesignated;
- Manage the Salmon River Scenic (16,245 acres), Salmon River Recreational (6,899 acres) and Clearwater River (3,583 acres) Special Recreation Management Areas (SRMA) for intensive recreation management;

- On 60 percent of BLM-administered lands in the CFO, continue to allow the public to travel cross-country (Open designation) with motorized vehicles. On 28 percent of BLM-administered lands, limit motorized vehicle to designated routes (Limited designation). On 12 percent of BLM-administered lands, do not allow motorized vehicle travel by the public yearlong (Closed designation); and
- Continue to manage existing special management areas, which include four Areas of Critical Environmental Concern (ACECs) (Craig Mountain, Elk City Landfill and American Hill Lake, Lower Lolo Creek, and Lower Salmon River ACECs totaling (23,366 acres) and six ACEC/Research Natural Areas (RNAs) (Captain John Creek, Lower and Middle Cottonwood Islands, Lucile Caves, Wapshilla Ridge, Long Gulch, and Skookumchuck ACEC/RNAs totaling 2,231 acres).

Alternative B (Proposed Resource Management Plan)

Alternative B is the agency's preferred alternative based on interdisciplinary team recommendations, analysis of environmental consequences of the alternatives, and public input during scoping, and comments received on the Draft RMP. Alternative B is the Proposed RMP. Alternative B emphasizes a balanced level of protection, restoration, and commodity production to meet needs for resource protection and resource use. This alternative reflects recommendations made by the interdisciplinary team in response to issues identified through the assessment of current management and concerns raised during public scoping. Key components of Alternative B include the following:

- Manage special status species with an emphasis on maintaining and improving habitat to provide for species' continued presence and conservation;
- Treat fuels on 40 percent of CFO lands (wildland-urban interface [WUI] or non-WUI) classified as moderate or high risk Fire Regime Condition Class (FRCC) 2 or 3 in any five-year period;
- Manage minerals and energy resources to balance development and protect resources;
- Offer 3,129 MBF as a Probable Sale Quantity (PSQ) of saw timber per year from the commercial forest land base of 40,598 acres (estimate treating 242 acres per year);
- Manage land tenure adjustments to improve resource management efficiency and protect public benefit, while supporting appropriate development and improved public access to public lands;
- Protect high-value resources through land withdrawals and protect resources through conservation easements;
- Implement the Aquatic and Riparian Management Strategy to achieve or maintain riparian management objectives. Implement Riparian Conservation Area buffers totaling 22,847 acres to protect riparian areas and wetlands;
- Strive to achieve or not preclude attainment of fisheries and riparian management objectives within 32 28 restoration watersheds and one three conservation watersheds totaling 64,481 acres;
- Apply Desired Future Condition standards on 28,789 acres of forest lands;

- Use ROS criteria to manage recreation activities, including 6,200 acres Primitive; 36,495 acres Semi-primitive Nonmotorized; 23,593 acres Semi-primitive Motorized; 54,867 acres Roaded-Natural; 22,478 acres Rural; and 40 acres Urban (the same as Alternatives C and D);
- Manage the Salmon River Scenic (16,245 acres), Salmon River Recreational (6,899 acres), Clearwater River (3,583 acres), Lolo Creek (3,635 acres), Craig Mountain Wildlife Management Area (24,884 acres) SRMAs for intensive recreation management (the same as Alternatives C and D);
- On BLM-administered lands in the CFO, do not allow the public to travel cross-country (Open designation) with motorized vehicles. On 87 percent of BLM-administered lands, limit motorized vehicle to designated routes (Limited designation). On 13 percent of BLM-administered lands, do not allow motorized vehicle travel by the public yearlong (Closed designation); and
- Create new special management areas where special values warrant such designation. Management would create or expand six ACECs (Lower Salmon River, East Fork American River, American River Historic Sites District, Salmon River, Upper Lolo Creek, and Lower Lolo Creek ACECs totaling 34,187 acres)~~five ACECs (32,562 acres)~~, would maintain or reduce in size six existing ACEC/RNAs (Captain John Creek, Lower and Middle Cottonwood Islands, Wapshilla Ridge, Long Gulch, Lucile Caves, and Skookumchuck ACEC/RNAs totaling 1,966 acres, an overall reduction from Alternative A), and would manage to protect ~~recommend~~ four river segments (Lolo, Lake, Hazard, and Hard Creeks totaling 29.34 miles) found eligible and suitable for inclusion in the National Wild and Scenic Rivers System (NWSRS). (See **Table ES-3**.)

Table ES-3
Evaluation of Areas of Critical Environmental Concern

Area Name	Values of Concern	Resource Use Limitations[1]	Acres	Preferred Alternative Direction
Wapshilla Ridge (Existing RNA/ACEC – 1989)	Natural processes, designated RNA for canyon grasslands and BLM Idaho Watch List plant (Idaho RNA cell for basalts).	1, 2	401 existing	Continue as RNA/ACEC 401 acres
Lower and Middle Cottonwood Islands (Existing RNA/ACEC – 1989)	Natural processes, designated RNA, riparian, Palouse prairie remnant, Clearwater River islands	3	43 existing	Continue as RNA/ACEC 43 acres
Captain John Creek (Existing RNA/ACEC 1989)	Natural processes, designated RNA for canyon grasslands, Douglas fir, and riparian (Idaho cell). Captain John Creek provides habitat for listed steelhead and spring/summer chinook salmon, and Idaho BLM sensitive wildlife, amphibians, reptiles, and plants.	1	1,321 existing	Continue as RNA/ACEC 1,321 acres

Table ES-3
Evaluation of Areas of Critical Environmental Concern *(continued)*

Area Name	Values of Concern	Resource Use Limitations[1]	Acres	Preferred Alternative Direction
Long Gulch (Existing RNA/ACEC 1989)	Natural processes, designated RNA for federally listed MacFarlane's four-o'clock.	4	47 existing	Continue as RNA/ACEC 47 acres
Lucile Caves (Existing RNA/ACEC 1989)	Natural processes, designated RNA, federally listed MacFarlane's four-o'clock, Idaho BLM sensitive plants, wildlife and snails; limestone cave and spring; geology	4	404 existing	Continue as RNA/ACEC 136 acres
Skookumchuck (Existing RNA/ACEC – 1989)	Natural processes, designated RNA for federally listed MacFarlane's four-o'clock.	4	18 existing	Continue as RNA/ACEC 18 acres
Craig Mountain (Existing ACEC 1989)	Designated ACEC, scenic, cultural, federally listed fish, bald eagle, and Spalding's catchfly; Idaho BLM sensitive wildlife, amphibians, reptiles, and plants	2	3,956 existing	Discontinue as ACEC
Elk City/American Hill Lake (Existing ACEC 1989)	Natural hazards, designated ACEC because of concerns for safety and public welfare	5, 6	30 existing	Discontinue as ACEC
Lower Lolo Creek (Existing ACEC 1989)	Designated ACEC, cultural, scenic, federally listed fish; Idaho BLM sensitive wildlife, amphibians, reptiles, and plants; National historic trail	7, 8, 9	3,678 existing	Continue as ACEC 3,678 acres
Lower Salmon River (Confluence to White Bird Creek) (Existing ACEC 1989)	Designated ACEC, cultural, scenic, federally listed fish, bald eagle, and Spalding's catchfly; Idaho BLM sensitive wildlife, amphibians, reptiles, and plants; geology, natural processes	3, 4	15,702 existing	Continue as ACEC 16,199 acres
Upper Lolo Creek	Idaho BLM sensitive wildlife, amphibians, reptiles and plants, cultural, scenic.	7, 10	1,625 proposed	~~Do not add~~ Add as ACEC 1,625 acres
Partridge/Elkhorn	Natural processes, old growth ponderosa pine, Idaho BLM sensitive wildlife	14	576 proposed	Do not add as ACEC
Little Salmon	Natural processes, old growth ponderosa pine, Idaho BLM sensitive wildlife	14	590 proposed	Do not add as ACEC
Upper Salmon River (White Bird Creek to French Creek)	Cultural, scenic, federally listed fish, bald eagle, and MacFarlane's four-o'clock; Idaho BLM sensitive wildlife, amphibians, reptiles, and plants; geology, natural processes	4	5,759 proposed	Add as ACEC 5,759 acres

Table ES-3
Evaluation of Areas of Critical Environmental Concern *(continued)*

Area Name	Values of Concern	Resource Use Limitations[1]	Acres	Preferred Alternative Direction
East Fork of American River	Listed fish, Idaho BLM sensitive wildlife, amphibians, reptiles, fish, and plants; natural processes; riparian and wetlands; and old growth Engelmann spruce.	3, 11, 12	570 proposed	Add as ACEC 570 acres
American River Historic Sites District	Cultural resources, historic mining	13	6,356 proposed	Add as ACEC 6,356 acres

[1] Resource Use Limitations:
1 = timber harvest only to support stand health
2 = exclude livestock grazing
3 = prohibit soil or vegetation disturbance not supporting improved condition (long term)
4 = no actions resulting in long-term adverse impacts to listed plants
5 = closed to cross-country motorized use
6 = no ground-disturbing activities other than rehabilitation
7 = no construction of hydroelectric facilities
8 = no new road construction within 300 feet of Lolo Creek or on slopes exceeding 50%
9 = custodial timber management
10 = timber harvest activities on slopes over 50% utilize aerial or high-lead systems
11 = decommission temporary within three years of construction
12 = no road construction within Riparian Conservation Areas
13 = use mining plan of operations
14 = minimize road construction

Alternative C

Alternative C emphasizes management strategies to preserve and protect ecosystem health across the CFO. This alternative includes active and specific measures to protect and enhance habitat for fish and wildlife, including special status species. This alternative reflects a reduction in resource production goals for forest products, forage, and minerals. Key components of Alternative C include the following:

- Manage special status species and vegetation with an emphasis on maintaining and improving important habitats;
- Treat fuels on 20 percent of CFO lands (WUI or non-WUI) classified as moderate or high risk ~~Fire Regime Condition Class~~FRCC 2 or 3 in any five-year period;
- Manage minerals and energy resources to provide for development, but with an emphasis on maximum conservation and protection of resources;
- Offer 3,101 MBF as a PSQ of saw timber per year from the commercial forest land base of 34,611 acres~~ (estimate treating 191 acres per year)~~;
- Manage land tenure adjustments to improve resource management efficiency and protect public benefit while supporting appropriate development and improved public access to

public lands; place more emphasis on protecting high-value resources through conservation easements;

- Implement the Aquatic and Riparian Management Strategy to maintain riparian management objectives. Implement Riparian Conservation Area buffers totaling 27,624 acres to protect riparian areas and wetlands;
- Strive to achieve or not preclude attainment of fisheries and riparian management objectives within ~~32~~ 37 restoration watersheds and ~~one~~ three conservation watershed totaling 68,359 acres;
- Apply Desired Future Condition standards on 28,087 acres of forest lands;
- Use ROS criteria to manage recreation activities, including 6,200 acres Primitive; 36,495 acres Semi-primitive Nonmotorized; 23,593 acres Semi-primitive Motorized; 54,867 acres Roaded-Natural; 22,478 acres Rural; and 40 acres Urban (the same as Alternatives B and D);
- Manage the Salmon River Scenic (16,245 acres), Salmon River Recreational (6,899 acres), Clearwater River (3,583 acres), Lolo Creek (3,635 acres), Craig Mountain Wildlife Management Area (24,884 acres) SRMAs for intensive recreation management (the same as Alternatives B and D);
- On BLM-administered lands in the CFO, do not allow the public to travel cross-country (Open designation) with motorized vehicles. On 87 percent of BLM-administered lands, limit motorized vehicle to designated routes (Limited designation). On 13 percent of BLM-administered lands, do not allow motorized vehicle travel by the public yearlong (Closed designation). Under Alternative C, additional controls and restrictions would be implemented to emphasize the conservation and protection of resources such as wildlife, special status species, vegetation, soils, air quality, and riparian areas, while providing opportunities for off-highway vehicle use through the development of trails and decreasing route densities; and
- Create new special management areas where special values warrant such designation. Management would create or expand nine ACECs (American River Historic Sites District, Craig Mountain, East Fork American River, Little Salmon River, Upper Lolo Creek, Lower Lolo Creek, Lower Salmon River, Partridge/Elkhorn, and Salmon River ACECs totaling 58,695 acres), would maintain or reduce in size six existing ACEC/RNAs (Captain John Creek, Lower and Middle Cottonwood Islands, Wapshilla Ridge, Long Gulch, Lucile Caves, and Skookumchuck ACEC/RNAs totaling 1,966 acres), and would recommend four river segments (Lake, Hazard, Hard, and Lolo Creeks totaling 29.34 miles) found eligible and suitable for inclusion in the NWSRS.

Alternative D

Alternative D emphasizes commodity production, amenities, and services. Preservation would be secondary to restoring ecosystem health and vigor in forests, upland, and riparian areas. Economic return and community stability would be key considerations in management direction. Protection and enhancement of resources would be secondary, except as mandated by laws, regulations, and policies. Key components of Alternative D include the following:

- Manage special status species and habitats with an emphasis on maintaining and improving important terrestrial and aquatic habitats, but at a lower level than under Alternatives B and C;

- Treat fuels on 60 percent of CFO lands (WUI or non-WUI) classified as moderate or high risk ~~Fire Regime Condition Class~~FRCC 2 or 3 in any five-year period;
- Manage minerals and energy resources to maximize development, while meeting the minimal needs for the conservation and protection of resources;
- Offer 4,823 MBF as a PSQ of saw timber per year from the commercial forest land base of 45,190 acres ~~(estimate treating 361 acres per year)~~;
- Manage land tenure adjustments to improve resource management efficiency and protect public benefit, while supporting appropriate development and improved public access to public lands;
- Implement the Aquatic and Riparian Management Strategy to achieve or maintain riparian management objectives. Implement Riparian Conservation Area buffers totaling 20,710 acres to protect riparian areas and wetlands;
- Strive to achieve or not preclude attainment of fisheries and riparian management objectives within ~~27~~ 24 restoration watersheds and ~~one~~ three conservation watersheds totaling 52,118 acres;
- Do not apply Desired Future Condition standards on forest lands;
- Use ROS criteria to manage recreation activities, including 6,200 acres Primitive; 36,495 acres Semi-primitive Nonmotorized; 23,593 acres Semi-primitive Motorized; 54,867 acres Roaded-Natural; 22,478 acres Rural; and 40 acres Urban (the same as Alternatives B and C);
- Manage the Salmon River Scenic (16,245 acres), Salmon River Recreational (6,899 acres), Clearwater River (3,583 acres), Lolo Creek (3,635 acres), Craig Mountain Wildlife Management Area (24,884 acres) SRMAs for intensive recreation management (the same as Alternatives B and C);
- On 16 percent of BLM-administered lands in the CFO, allow the public to travel cross-country (Open designation) with motorized vehicles. On 71 percent of BLM-administered lands, limit motorized vehicle to designated routes (Limited designation). On 13 percent of BLM-administered lands, do not allow motorized vehicle travel by the public yearlong (Closed designation); and
- Continue to manage two ACECs (Lower Salmon River and Salmon River ACECs totaling 21,958 acres) and maintain or reduce six ACEC/RNAs (Long Gulch, Lower and Middle Cottonwood Islands, Captain John Creek, Wapshilla Ridge, Lucile Caves, and Skookumchuck ACEC/RNAs totaling 1,966 acres). and would manage to protect four river segments (Lolo, Lake, Hazard, and Hard Creeks totaling 29.34 miles) found eligible and suitable for inclusion in the NWSRS~~One river segment found eligible and suitable for inclusion in the National Wild and Scenic Rivers System would be recommended for inclusion~~.

Alternatives Considered but Not Analyzed in Detail

Three alternatives were considered but eliminated from consideration because they do not meet the purpose of and need for the RMP, or they violate laws, regulations, policies, or the BLM's multiple use mandate. These alternatives are to maximize resource protection by eliminating some or all human use in the CFO, to allow exclusive use or protection, and to allow unregulated recreation.

UPDATES FROM THE DRAFT RESOURCE MANAGEMENT PLAN TO THE PROPOSED RESOURCE MANAGEMENT PLAN

As a result of public comment and internal review of the Draft RMP/EIS, Alternative B (the Preferred Alternative in the draft) has been modified and now represents the BLM's Proposed RMP/Final EIS. Changes regarding alternatives focused on adjustments to Alternative B in order to address public concerns, while continuing to meet the BLM's legal and regulatory mandates. Additional information, clarifications and rewording have been inserted as needed and changes have been made throughout Chapters 1 through 5 and the Appendices. Chapter 5 of the Proposed RMP/Final EIS contains a summary of the public comment process and the comments received on the Draft RMP/EIS. All comment letters received and the BLM's responses are located in **Appendix U** (Volume III).

The Proposed RMP/Final EIS is designed to be used in conjunction with the Draft RMP/EIS for reference to maps and in regard to page numbers cited in the comment and response section (**Appendix U**). Both the Proposed RMP/Final EIS and Draft RMP/EIS are available on the project Web site, www.cottonwoodrmp.com.

Updates to the Draft RMP/EIS are shown throughout this Proposed RMP/Final EIS by underlining new text (added since the Draft RMP/EIS) and striking out deleted text (~~text~~) (deleted since the Draft RMP/EIS). Changes generally include the following:

- Adjustments to Alternative B (the Proposed RMP);
- Additions to Chapter 3, Affected Environment;
- Clarifications to better explain the management proposed in the Draft RMP/EIS or the environmental consequences;
- Incorporation of new information;
- Changes to information based on inventory updates after May 2006;
- Revisions to Chapter 4, Environmental Consequences, to make corrections and reflect inventory updates;
- Additions to Chapter 5, Consultation and Coordination, to describe the public comment process on the Draft RMP/EIS;
- Additions to Chapter 6, References, to include additional references cited in the document; and
- Minor corrections, such as typographical errors.

The detailed description of the Proposed RMP (Alternative B, as edited) is included in Chapter 2, and the environmental consequences of implementing the Proposed RMP (Alternative B, as edited) are described in Chapter 4.

CHANGES TO ALTERNATIVE B (PREFERRED ALTERNATIVE) (CHAPTER 2)

Alternative B has been adjusted as follows, based on public comment and internal review:

- Actions have been added regarding avoidance of impacts to sources of drinking water (Water Resources, Objective 1, Action 3; Objective 2, Action 6; and Objective 7, Action 1).

- An action has been added regarding project design in restoration watersheds limiting predicted increased water yield or peak flows (Water Resources, Objective 2, Action 7).
- The Vegetation—Forests goal has been edited to clarify the BLM's desire.
- Various changes have been made to further explain the BLM's forested vegetation management actions (in Vegetation—Forests). Language has been added to clarify the types of resources to which the various actions refer. This includes adding new Actions 2 and 3 to Objective 2.
- Vegetation—Forests Objective 2, Actions 2 and 3 have been moved to the Wildland Fire Ecology and Management section for clarity and consistency.
- Various changes have been made to further explain the BLM's management actions in Vegetation—Riparian and Wetlands. Language has been added to clarify the types of resources to which the various actions refer.
- Vegetation—Riparian and Wetlands, Objective 1, Action 3, Category 4 has been edited to indicate that the riparian conservation area is the area from the edges of the stream channel, wetland, the extent of riparian vegetation or 100 feet slope distance, whichever is greatest.
- Wildlife and Special Status Wildlife, Objective 9, Action 1 has been edited to reference the Elk Habitat Management Coordinating Guidelines.
- Actions 9, 10, and 11 have been added to Wildlife and Special Status Wildlife, Objective 9, regarding the BLM's public education efforts regarding wildlife, designing vegetation projects in big game habitat, and providing migratory bird habitat, respectively.
- Wildlife and Special Status Wildlife, Objective 11, Action 3 has been clarified to recognize the Idaho Department of Fish and Game's role as the agency responsible for management of wildlife and fish in Idaho, and to clarify the BLM's coordination efforts with other agencies.
- Action 4 has been added to Wildlife and Special Status Wildlife, Objective 11, regarding collaborative management efforts that maintain high quality or improve wildlife habitat, travel corridors, habitat connectivity, and wildlife security.
- Wildlife and Special Status Wildlife, Objective 13, Action 2 has been modified to indicate the BLM's coordination efforts with agencies, grazing lessees, and partners on population and habitat management of bighorn sheep within Hells Canyon (Snake River drainage) and Salmon River drainage, and to allow for transplants, reintroductions, and natural expansion of bighorn sheep populations.
- Wildlife and Special Status Wildlife, Objective 13, Action 3 has been edited, and Actions 4, 5, 6, and 7 added, to clarify the BLM's management with regards to bighorn sheep, domestic sheep, and domestic goats.
- Various changes have been made to further explain the BLM's management actions in Aquatic Resources, Fish, and Special Status Fish. Language has been added to clarify the types of resources to which the various actions refer.
- Aquatic Resources, Fish, and Special Status Fish, Objective 1, Action 10 has been added regarding the BLM's public education efforts.
- Clarifications have been made to Livestock Grazing actions to indicate allotment allocations and grazing types.

- Livestock Grazing, Objective 1, Actions 11, 15, and 16 have been edited or added to clarify the BLM's management with regards to bighorn sheep, domestic sheep, and domestic goats.
- ACECs and RNAs, Objective 10 have been edited to include the designation of the Upper Lolo Creek ACEC.
- Wild and Scenic Rivers, Actions to recommend suitable segments for congressional designation in the NWSRS have been changed to do not recommend suitable segments in order to comply with the Memorandum of Understanding with the BLM, Forest Service, and State of Idaho (State of Idaho et al. 1991). Suitability determinations have not changed.

CHANGES TO THE AFFECTED ENVIRONMENT (CHAPTER 3)

Chapter 3 has been adjusted as follows:

- Two species were recently delisted by the US Fish and Wildlife Service (USFWS), which include the bald eagle (effective August 8, 2007) and the gray wolf (effective March 28, 2008). The PRMP/FEIS still includes reference to these species as being federally listed, however it is acknowledged that future management will be in accord with applicable state and federal laws and regulations.
- Section 3.2.9, Wildlife and Special Status Wildlife, has been edited to add information regarding big game species and habitat, bighorn sheep, wildlife habitat vegetation cover types, and wildlife habitat trends.
- Section 3.2.13, Cultural Resources, has been edited to add information to address new directives for land use planning with respect to categorizing known and expected cultural resources according to their nature and relative preservation value.
- Section 3.3.7, Lands and Realty, Withdrawals, has been updated to reflect renewal of the Salmon River mineral withdrawal.

CHANGES TO APPENDICES (VOLUMES II AND III)

The appendices have been adjusted as follows:

- **Appendix B** (Best Management Practices – Alternatives B, C, and D) has been revised to clarify BMPs.
- **Appendix C** (Conservation and Restoration Watersheds – Alternatives B, C, and D) has been revised to clarify and provide consistent supporting rationale for identification of conservation and restoration watersheds for specific alternatives. Identification of various management strategies that may occur in conservation and restoration watersheds was also added to this appendix.
- **Appendix D** (Desired Future Conditions for Forest Vegetation/Wildlife Habitat – Alternatives B and C) has been revised to provide additional clarification for desired future conditions for forest vegetation and wildlife habitat, and additional management direction for snag management.
- **Appendix F** (Aquatic and Riparian Management Strategy – Alternatives B, C, and D) has been revised to incorporate additional Interior Columbia Basin Ecosystem Management Project direction, recommendations from reviewers, and identified during the Endangered Species Act (ESA) consultation process.

- **Appendix I** (Grazing AUMs by Allotment – Alternatives A, B, C, and D) has been revised to include the type of livestock use on each allotment.
- **Appendix K** (Final Wild and Scenic Rivers Eligibility and Suitability Study) has been revised to finalize the study.
- **Appendix R** (Federal Register Notices) has been revised to include all Federal Register notices printed to date for this project.
- **Appendix S** (Species-specific Habitat Definitions) has been revised to incorporate additional clarification and definitions identified during the ESA consultation process.
- New **Appendix U** (Comments Received on Cottonwood Draft RMP/EIS) has been added to capture all written comments on the Draft RMP/EIS and the BLM's response to each comment.
- New **Appendix V** (Conservation Measures for Listed Species) has been added to incorporate species-specific conservation measures that were identified and recommended during the ESA consultation process.
- New **Appendix W** (Desired Condition and Watershed and Aquatic Condition Indicators) has been added to provide additional information and clarification concerning the rating criteria for watershed and aquatic condition indicators.

CHANGES TO MAPS (VOLUME IV OF THE COTTONWOOD DRAFT RMP/EIS)

No maps have been substantially revised since the Cottonwood Draft RMP/EIS. One map depicting the Planning Area Surface Management after Snake River Water Rights Act 2004 was added to Section 3.3.7 to show the administrative transfer of 11,304 acres effective May 15, 2007. One minor change has been made to **Figure 38** (Volume IV of the Cottonwood Draft RMP/EIS). That map inadvertently omits a 25-acre area that should have been shown as an area for disposal. The 25-acre area is currently leased to Bennett Forest Industries. The area was a former industrial site and is being vacated. The final disposal acres will be determined by an implementation-level ~~follow-on~~ NEPA analysis at a later date.

Minor changes have been made to **Figures 3**, **4**, and **5** (Volume IV of the Cottonwood Draft RMP/EIS). Several watersheds identified as Conservation or Restoration watersheds (see **Appendix C**) were not mapped as such. Refer to **Tables C-1**, **C-2**, and **C-3** (Volume II) for the complete listing of these watersheds.

The Draft RMP/EIS included a discrepancy in the Marshall Mountain Wilderness Study Area (WSA) map, **Figure 46** (Volume IV of the Cottonwood Draft RMP/EIS). The WSA boundary mistakenly did not include an area excluded from the original wilderness inventory. The excluded area was included in the maps in the *North Idaho Proposed MFP Amendment and Final EIS for Wilderness* (BLM 1986a). This excluded area includes a road, cabins, and mining operation. The map and acreage have been corrected. The acreage difference is less than one percent of the current total acreage.

Because no substantial changes have been made to maps, the only map (**Figure 1**) included with this Proposed RMP/Final EIS is related to the May 15, 2007, administrative transfer of 11,304 acres, in Chapter 1. All other maps are incorporated herein by reference and are included in the Cottonwood Draft RMP/EIS, Volume IV. Copies of the Cottonwood Draft RMP/EIS Volume IV maps are

available on the project website at www.cottonwoodrmp.com, or upon request from BLM (telephone (208) 962-3784-3245 or email information@cottonwoodrmp.com).

ENVIRONMENTAL CONSEQUENCES

Alternative A would be a continuation of current management. Alternative B would allow for many uses to continue but could constrain certain activities in order to maintain or improve land health conditions. Alternative C would have the least potential impact on physical and biological resources but the potential for greater adverse impact on the local economies and businesses that depend on BLM-administered lands for tourism, recreation, and resource extraction. Conversely, Alternative D offers the greatest economic potential but greatest potential impact on the physical and biological environment. A summary comparison of the environmental consequences for each alternative is presented in **Table ES-4**.

Adopting the no action alternative, or current management (Alternative A), would preclude opportunities to incorporate new BLM direction and regulatory protective measures for newly listed species without undertaking numerous land use plan amendments. Detailed descriptions of impacts of the four alternatives are provided in Chapter 4, along with a discussion of the cumulative impacts, irretrievable and irreversible commitments of resources, and the alternatives' unavoidable adverse impacts.

CONSULTATION AND COORDINATION

The Cottonwood RMP provides guidance for a widely dispersed area of public land in north-central Idaho and necessarily requires the coordination of a variety of organizations with interests in the area. As discussed above, the BLM implemented an extensive public collaboration process to solicit and address these interests. In addition, the BLM conducted formal public scoping and prepared a scoping report summarizing public input.

The BLM met with various collaborators about the Cottonwood RMP, as follows:

- The Nez Perce Tribe;
- Clearwater County Commissioners;
- Idaho County Commissioners;
- Idaho State Department of Environmental Quality;
- Nez Perce Tribe Resource Specialists;
- Idaho Department of Fish and Game ~~Department~~, Clearwater Region; and
- USFWS and National Oceanic and Atmospheric Administration, National Marine Fisheries Service (National Marine Fisheries Service) (BLM entered into a Consultation Agreement/Memorandum of Understanding with USFWS, Snake River Office and National Marine Fisheries Service to facilitate a joint planning effort for the RMP and ESA Section 7 consultation [BLM et al. 2005]).

No agencies entered into formal agreements as Cooperating Agencies. The BLM did coordinate with private landowners and other special interest groups and consulted and coordinated with federal, state, county, and local government elected officials and representatives. Communication is ongoing and will continue throughout development and implementation of the RMP.

The Coeur d'Alene District Resource Advisory Council is a citizen-based group that provides northern Idaho citizens with a voice in managing BLM-administered public lands to help improve their health and productivity. The 15-member council represents~~includes~~ a cross-section of Idaho residents from around northern Idaho. ~~and currently includes a federal grazing permittee, two timber representatives, a rights-of-way and transportation representative, an Off-highway vehicle recreation representative, three representatives of dispersed recreation, a representative of wild horse and burro management, two elected officials, a state employee, and an academician. There are vacancies for an environmental representative and an at-large representative.~~ The BLM updated~~gave~~ the council~~ an update~~ on~~ of~~ the purpose and status of the Cottonwood RMP at Resource Advisory Council meetings on December 3, 2004, and May 18, 2005. The meetings were open to the public and were announced in the *Federal Register*. Meeting summaries are available at www.blm.gov/rac/id/cda/. Chapter 5 provides a discussion of coordination and consultation.

A consultation agreement (memorandum of understanding) regarding consultation on the Cottonwood RMP was developed and signed by the CFO, USFWS, and National Marine Fisheries Service in the summer of 2005. Level 1 Consultation Team meetings between the CFO, USFWS, and National Marine Fisheries Service for the development of the Cottonwood RMP have been ongoing since 2005. Coordination with the Idaho State Historic Preservation Office regarding cultural and historic sections of the RMP has been ongoing.

Table ES-4
Summary of Effects by Alternative

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
SUMMARY OF EFFECTS ON AIR QUALITY			
Air quality would be protected, although short-term impacts could occur from fire activities, fuel reduction activities, or dust generated by motorized use or mining. Smoke from regional and local wildland fires could affect Class I visibility areas within the CFO boundary. Alternative A would have the least potential acres managed by prescribed fire.	Similar to Alternative A, except: More potential acres than Alternative A would be managed by prescribed fire.	Similar to Alternative A, except: Most potential acres would be managed by prescribed fire.	Same as Alternative B.
SUMMARY OF EFFECTS ON GEOLOGY			
Management of resources is not expected to affect geology.	Same as Alternative A.	Same as Alternative A.	Same as Alternative A.

Table ES-4
Summary of Effects by Alternative *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
SUMMARY OF EFFECTS ON SOILS			
Greatest risk for soil compaction and erosion from cross-country travel. Impacts from timber harvest activities would potentially affect 358 acres per year. Soil-protection measures would be provided by PACFISH (BLM and Forest Service 1995) direction, BMPs, and prescription watersheds direction.	No allowed cross-country travel would reduce risk of soil compaction and erosion. Impacts from timber harvest activities would potentially affect 242 acres per year. Soil protection measures would be provided by Aquatic and Riparian Management Strategy, BMPs, and restoration/conservation watersheds direction.	Similar to Alternative B, except: Impacts from timber harvest activities would potentially affect 191 acres per year.	Similar to Alternative A, except: Less cross-country travel would be allowed than under Alternative A. Impacts from timber harvest activities would potentially affect 361 acres per year. Soil protection measures would be provided by Aquatic and Riparian Management Strategy, BMPs, and restoration/conservation watersheds direction.
SUMMARY OF EFFECTS ON WATER RESOURCES			
Off-road motorized travel would cause soil erosion and sediment delivery to streams. More riparian area protection would occur through Riparian Habitat Conservation Area management than Alternatives B and D. Provides least emphasis on increasing Proper Functioning Condition acres/miles.	Off-road motorized travel would be eliminated, reducing the potential for erosion and sediment delivery. More riparian area protection would occur through Riparian Conservation Area management than Alternative D. Provides more emphasis on increasing Proper Functioning Condition acres/miles than Alternative A.	Similar to Alternative B, except: Provides the most riparian area protection through Riparian Conservation Area management. Provides most emphasis on increasing Proper Functioning Condition acres/miles.	Similar to Alternative A, except: Provides the least riparian area protection through Riparian Conservation Area management. Provides more emphasis on increasing Proper Functioning Condition acres/miles than Alternative A.

Table ES-4
Summary of Effects by Alternative *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
SUMMARY OF EFFECTS ON VEGETATION—FORESTS			
Focus on providing timber for harvest while protecting the basic natural components of the environment. ~~Focus is on the production of commercial timber.Highest level of treatments to maintain and improve forest vigor.~~ Least emphasis on management to maintain or enhance old growth forest.	Higher level of treatments than Alternative C to maintain and improve ~~forest vigor~~forest health. Greater emphasis on management to maintain or enhance old growth forest than Alternatives A and D.	Lowest level of treatments to maintain and improve ~~forest vigor~~forest health. Greatest emphasis on management to maintain or enhance old growth forest.	Higher level of treatments to maintain and improve ~~forest vigor~~forest health than Alternatives B and C, lower than Alternative A. Greater emphasis to maintain or enhance old growth forest than Alternative A.
SUMMARY OF EFFECTS ON VEGETATION—WEEDS			
Continued cooperation through Weed Management Areas would allow for a regional approach to addressing noxious weeds. Potential for slow but steady increase in weeds under current management.	Similar to Alternative A., except: Additional protective measures and BMPs for management activities should decrease current weed populations and help avoid their further spread more than Alternative A.	Similar to Alternative B, except: Least potential for spread of weeds due to least amount of soil-disturbing activities and greatest amount of acreage managed under ACEC designation.	Similar to Alternative B, except: Greatest potential for spread of weeds due to greatest amount of soil-disturbing activities and least amount of acreage managed under ACEC designation.

Table ES-4
Summary of Effects by Alternative *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
SUMMARY OF EFFECTS ON VEGETATION—RANGELANDS			
Meeting Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management requires that existing native plant communities be maintained. 11,171 acres of rangeland would be open to cross-country motorized travel, creating greatest potential for disturbance of soils and vegetation, as well as increased weed spread.	Similar to Alternative A, except: May increase amount of native vegetation through emphasis management. No rangeland would be open to cross-country motorized travel, resulting in reduced soil and vegetation disturbance and weed spread from Alternative A.	Similar to Alternative B; except: Native seedlings would be used to restore and enhance composition and structure. Greater potential than Alternative B for weed occurrences to decrease.	Similar to Alternative B, except: Greater potential than Alternatives B and C for weed occurrences to increase, with 3,159 acres of rangeland open to cross-country motorized travel.
SUMMARY OF EFFECTS ON VEGETATION—RIPARIAN AND WETLANDS			
24,290 acres of riparian habitat would be protected as Riparian Habitat Conservation Areas. 69 miles of streams and associated riparian zones would be in prescription watersheds with stream restoration emphasis.	22,847 acres of riparian habitat would be protected as Riparian Conservation Areas. 80 miles of streams and associated riparian zones would be in restoration and conservation emphasis watersheds.	27,264 acres of riparian habitat would be protected as Riparian Conservation Areas, offering the most protection of riparian areas. 81 miles of streams and associated riparian zones would be in restoration and conservation emphasis watersheds.	20,710 acres of riparian habitat would be protected as Riparian Conservation Areas, offering the least protection of riparian areas. 65 miles of streams and associated riparian zones would be in restoration and conservation emphasis watersheds.

Table ES-4
Summary of Effects by Alternative *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
SUMMARY OF EFFECTS ON WILDLIFE AND SPECIAL STATUS WILDLIFE			
Least protection of special habitats through designations of ACECs, candidate wild and scenic river segments, WSAs, and existing wilderness. Highest level of potential disturbance through timber harvest. Does not provide specific management for all special status species or emphasis for conservation or restoration.	More protection of special habitats through designations of ACECs, candidate wild and scenic river segments, WSAs, and existing wilderness than Alternative A. Lower level of potential disturbance through timber harvest than Alternatives A and D. Moderate potential for improvement in population parameters of several species based on moderate levels of ground-disturbing activities and restrictions on these activities.	Greatest protection of special habitats through designations of ACECs, candidate wild and scenic river segments, WSAs, and existing wilderness. Lowest level of potential disturbance through timber harvest. Greatest potential for improvement in population parameters of several species based on lowest levels of ground-disturbing activities and highest levels of restrictions on these activities.	Less protection of special habitats through designations of ACECs, candidate wild and scenic river segments, WSAs, and existing wilderness than Alternative B. Level of potential disturbance through timber harvest slightly less than Alternative A. Least potential for improvement in population parameters of several species based on highest levels of ground-disturbing activities and the least restrictions on these activities.
SUMMARY OF EFFECTS ON AQUATIC RESOURCES, FISH, AND SPECIAL STATUS FISH			
Fish habitat quality would be improved for 66,077 acres in 39 prescription watersheds.	Similar to Alternative A, except: Fish habitat quality would be improved for 64,481 acres in ~~32~~ 28 restoration watersheds and ~~1~~ 3 conservation watersheds.	Similar to Alternative A, except: Fish habitat quality would be improved for 68,359 acres in ~~40~~ 37 restoration watersheds and 3 conservation watersheds.	Similar to Alternative A, except: Fish habitat quality would be improved for 52,118 acres in ~~27~~ 24 restoration watersheds and ~~1~~ 3 conservation watersheds.
SUMMARY OF EFFECTS ON SPECIAL STATUS PLANTS			
Least potential for ~~increases~~ improvements in special status plant population conditions and trends due to protective and recovery measures.	More potential for improvements ~~increases~~ in special status plant population conditions and trends than Alternative A.	Greatest potential for improvements ~~increases~~ in special status plant population conditions and trends due to protective and recovery measures.	Less potential for improvements ~~increases~~ in special status plant population conditions and trends than Alternative B.

Table ES-4
Summary of Effects by Alternative *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
SUMMARY OF EFFECTS ON WILDLAND FIRE MANAGEMENT			
Appropriate Management Response would guide suppression efforts.	Same as Alternative A.	Same as Alternative A.	Same as Alternative A.
Wildland fire use would be implemented in all Fire Management ~~Units~~ Areas as NEPA and Wildland Fire Implementation Plans are completed. Currently, one Fire Management ~~Unit~~ Area (Craig Mountain) has NEPA completed.	Wildland fire use would be limited compared to Alternative A. It would be restricted to portions of two Fire Management ~~Units~~Areas. This EIS would be the implementing NEPA for wildland fire use.	Wildland fire use would be implemented in all Fire Management ~~Units~~ Areas as ~~NEPA and~~ Wildland Fire Implementation Plans are completed. This EIS would be the implementing NEPA for wildland fire use.	Wildland fire use would be limited compared to Alternative A. It would be allowed in all Fire Management ~~Units~~Areas, however it would be restricted to areas without commercial forestry or grazing. This EIS would be the implementing NEPA for wildland fire use.
Prioritizing areas for fuel treatment according to WUI and FRCC status would reduce risk in the WUI and potentially reduce FRCC where treatments occur. This prioritization would result in treating the most affected vegetation types and promote restoration in these areas.	Prioritizing areas for treatment according to hazard in WUI would result in reduced risk in priority areas. This alternative would likely result in substantially less WUI fuels reduction than Alternative A (see below).	Prioritizing areas for treatment according to hazard in WUI would result in reduced risk in priority areas. This alternative would likely result in substantially less WUI fuels reduction than Alternative A (see below).	Prioritizing areas for treatment according to hazard in WUI would result in reduced risk in priority areas. This alternative would likely result in slightly more WUI fuels reduction than Alternative A (see below).
	Prioritizing treating FRCC 2 and 3 outside WUI would result in treating the most affected vegetation types and promote restoration in these areas.	Prioritizing treating FRCC 2 and 3 outside WUI would result in treating the most affected vegetation types and promote restoration in these areas.	Prioritizing treating FRCC 2 and 3 outside WUI would result in treating the most affected vegetation types and promote restoration in these areas.

Table ES-4
Summary of Effects by Alternative *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
SUMMARY OF EFFECTS ON WILDLAND FIRE MANAGEMENT *(continued)*			
Forest management activities generally contribute to accomplishing fuel reduction goals. Alternative A established a decadal area treatment (3,576 acres) higher than all alternatives except Alternative D (3,610 acres). The difference between these alternatives is less than one percent. Fuel management treatments will also occur beyond the commercial forest base.~~Forest management activities on a commercial forest base of 35,757 acres would result in the largest amount of fuels reduction and biomass utilization due to higher allowable sale quantity (6,600 thousand board feet [MBF] annually).~~	Forest management activities generally contribute to accomplishing fuel reduction goals. Alternative B established a commercial forest base of 40,598 acres, but a decadal area treatment of 2,420 acres, which is 32 percent less than Alternative A. Fuel management treatments will also occur beyond the commercial forest base.~~Forest management activities on a commercial forest base of 40,598 acres would result in 53% less fuels reduction and biomass utilization than Alternative A (probable sale quantity [PSQ] of 3,129 MBF annually).~~	Forest management activities generally contribute to accomplishing fuel reduction goals. Alternative C established a commercial forest base of 34,611 acres, but a decadal area treatment of 1,910 acres, which is 47 percent less than Alternative A. Fuel management treatments will also occur beyond the commercial forest base~~Forest management activities on a commercial forest base of 34,611 acres would result in 53% less fuels reduction and biomass utilization than Alternative A (PSQ of 3,101 MBF annually).~~.	Forest management activities generally contribute to accomplishing fuel reduction goals. Alternative D established a commercial forest base of 45,190 acres, but a decadal area treatment of 3,610 acres, which is less than one percent higher than Alternative A. Fuel management treatments will also occur beyond the commercial forest base~~Forest management activities on a commercial forest base of 45,190 acres would result in 27% less fuels reduction and biomass utilization than Alternative A (PSQ of 4,823 MBF annually).~~.

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
SUMMARY OF EFFECTS ON WILDLAND FIRE MANAGEMENT *(continued)*			
The potential WUI 5-year treatment of FRCC 2 and FRCC 3 lands is 54,763 acres and could result in the following changes to FRCC: Current FRCC FRCC 1: 10% FRCC 2: 33% FRCC 3: 57% Plan Life FRCC Potential Change FRCC 1: ~~11~~20% - ~~14~~40% FRCC 2: ~~32~~12% - ~~40~~33% FRCC 3: ~~51~~29% - ~~55~~50%	The potential WUI 5-year treatment of FRCC 2 and FRCC 3 lands would be 37,395 acres, 32% less than Alternative A, and could result in the following changes to FRCC: Plan Life FRCC Potential Change FRCC 1: 17% - ~~22~~38% FRCC 2: 12% - ~~37~~33% FRCC 3: 29% - 50~~41~~%	The potential WUI 5-year treatment of FRCC 2 and FRCC 3 lands would be 18,697 acres, 66% less than Alternative A, and could result in the following changes to FRCC: Plan Life FRCC Potential Change FRCC 1: 15% FRCC 2: 35% FRCC 3: 50%	The potential WUI 5-year treatment of FRCC 2 and FRCC 3 lands would be 56,092 acres, 2% more than Alternative A, and could result in the following changes to FRCC: Plan Life FRCC Potential Change FRCC 1: 28% FRCC 2: 39% FRCC 3: 33%

Table ES-4
Summary of Effects by Alternative *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
SUMMARY OF EFFECTS ON CULTURAL RESOURCES			
Potential impacts to cultural resources from ground-disturbing activities and cross-country motorized travel would be greatest under this alternative.	Eliminates cross-country motorized travel resulting in less potential for effects on cultural resources. Moderate level of ground-disturbing activities.	Eliminates cross-country motorized travel resulting in less potential for effects on cultural resources. Lowest level of ground-disturbing activities.	Less area than Alternative A would be open to cross-country motorized travel. Similar levels of ground-disturbing activities to Alternative A.
SUMMARY OF EFFECTS ON PALEONTOLOGICAL RESOURCES			
Risk of impacts to paleontological resources would be very low due to low potential for occurrence of these resources.	Same as Alternative A.	Same as Alternative A.	Same as Alternative A.
SUMMARY OF EFFECTS ON VISUAL RESOURCES			
Manages scenic quality somewhat less than Alternative C.	Manages scenic quality slightly less or similarly to Alternative A.	Scenic quality is most intensely managed.	Least-intensive management of scenic quality.
SUMMARY OF EFFECTS ON FOREST PRODUCTS			
Production of forest products would continue at current levels with an allowable sale quantity of 6,600 MBF.	PSQ of 3,129 MBF annually (a 42% decrease from current management) would provide less opportunity to obtain forest products from BLM-administered lands than Alternatives A or D, but slightly more opportunities than Alternative C.	PSQ of 3,101 MBF annually (a 47% decrease from current management) would provide the least opportunity to obtain forest products from BLM-administered lands of all the alternatives.	PSQ of 4,823 MBF annually (a 32% decrease from current management) would provide less opportunity than Alternative A to obtain forest products from BLM-administered lands, but more opportunities than Alternatives B or C.

Table ES-4
Summary of Effects by Alternative *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
SUMMARY OF EFFECTS ON LIVESTOCK GRAZING			
Approximately ~~7,204~~7,200 animal unit months (AUM) on 122,732 acres are currently allocated for livestock grazing. Continued implementation of BLM Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management would prevent or minimize environmental degradation and ensure good long-term site productivity, properly functioning conditions for riparian and wetland areas, ecologically healthier vegetation communities, improved water quality, and desirable native and nonnative plant and animal species and habitats.	Similar to Alternative A, except: Approximately ~~6,254~~6,263 AUMs on 105,619 acres would be allocated for livestock grazing, a 13% decrease in AUMs from current management.	Similar to Alternative A, except: Approximately 6,020 AUMs on 101,350 acres would be allocated for livestock grazing, a 16% decrease in AUMs from current management. Alternative C would provide the least opportunities for grazing.	Similar to Alternative A, except: Approximately ~~8,540~~8,549 AUMs on 135,850 acres would be allocated for livestock grazing, a 19% increase in AUMs from current management. Alternative D would the most provide opportunities for grazing.

Table ES-4
Summary of Effects by Alternative *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
SUMMARY OF EFFECTS ON MINERALS			
16% of BLM lands currently withdrawn from mining. 10% closed to mineral leasing. Wilderness area and WSAs closed to mineral material sale. No Surface Occupancy (NSO) and Controlled Surface Use (CSU) restrictions are applied on a case-by-case basis, resulting in the least restrictions (the most areas open to unrestricted mineral exploration and development).	Similar to Alternative A, except: More NSO and CSU restrictions than Alternatives A and D, but less than Alternative C. NSO lease stipulations would occur on 30% of BLM public lands and CSU on 29%.	Similar to Alternative A, except: Most NSO and CSU restrictions (the least areas open to unrestricted mineral exploration and development). NSO lease stipulations would occur on 48% of BLM public lands and CSU on 40%.	Similar to Alternative A, except: More NSO and CSU restrictions than Alternative A, but less than Alternatives B and C. NSO lease stipulations would occur on 24% of BLM public lands and CSU on 22%.
SUMMARY OF EFFECTS ON RECREATION			
Recreation would be intensely managed in three SRMAs. Most emphasis on motorized recreation opportunities and includes the most acreage for off-highway vehicle cross-country travel (see Transportation and Travel Management, below). Minor displacement of recreational activities due to surface-disturbing activities such as vegetation treatments and mineral development.	Recreation would be more intensely managed and the current setting protected through designation of an additional two SRMAs. Best meets the goal of providing a broad spectrum of recreation settings and opportunities. Greater potential for displacement of recreational activities due to surface-disturbing activities than Alternative C, but less than Alternatives A or D.	Similar to Alternative B, except: Emphasizes less motorized recreation in more primitive settings. Least displacement of recreational activities due to less surface-disturbing activities.	Similar to Alternative B, except: More emphasis on motorized recreation opportunities than Alternatives B and C. Greatest displacement of recreational activities due to surface-disturbing activities, which could further reduce the quality of recreational experiences.

Table ES-4
Summary of Effects by Alternative *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
SUMMARY OF EFFECTS ON RENEWABLE ENERGY			
Least restrictions on renewable energy development. No net change in availability of biomass fuel from fuel treatments and timber harvesting activities.	More restrictions on renewable energy development than Alternatives A and D, and less than Alternative C. Greater opportunities for biomass (due to forest vegetation acres treated) than Alternative C, and less than Alternatives A and D.	Most restrictions on renewable energy development. Fewest opportunities for biomass (due to least forest vegetation acres treated).	More restrictions on renewable energy development than Alternative A, and less than Alternatives B and C. Greater opportunity for biomass (due to more forest vegetation acres treated) than Alternatives B and C, and less than Alternative A.
SUMMARY OF EFFECTS ON TRANSPORTATION AND TRAVEL MANAGEMENT			
Travel management would be the least restrictive. 85,308 acres would be Open to cross-country motorized travel. Within Limited areas, least density of designated routes. Alternative A would have the most potential for resource impacts and user conflicts.	Travel management would be the most restrictive. No areas would be Open to cross-country motorized travel (except snowmobiles). Within Limited areas, greater density of designated routes than Alternative A, but less density than Alternative D. Alternative B would best manage travel, roads, and trails to provide access and recreational opportunities, while minimizing resource impacts and user conflicts.	Similar to Alternative B, except: Alternative C would have more potential for resource impacts and user conflicts than Alternative B, and less than Alternatives A and D.	Travel management would be more restrictive than Alternative A but less restrictive than Alternatives B and C. 23,189 acres would be Open to cross-country motorized travel, a 74% decrease from current management. Within Limited areas, greatest density of designated routes. Alternative D would have more potential for resource impacts and user conflicts than Alternatives B and C, and less than Alternative A.

Table ES-4
Summary of Effects by Alternative *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
SUMMARY OF EFFECTS ON LANDS AND REALTY			
21,213 acres where realty authorizations prohibited. Alternative A is the only alternative that would specifically prohibit realty authorizations in ACECs. Retention of 96,465 acres of land and 35,361 acres available for disposal (12,000 acres of Land and Water Conservation Fund lands not available for disposal)	750 acres where realty authorizations prohibited. More land retention (113,728 acres) and less area available for disposal (30,098 acres) than Alternative A.	Same as Alternative B.	Same as Alternative B.
SUMMARY OF EFFECTS ON AREAS OF CRITICAL ENVIRONMENTAL CONCERN AND RESEARCH NATURAL AREAS			
Special management provisions would be applied to 18% of the BLM-administered lands (25,600 acres covered by 10 ACECs), leading to more ACECs than Alternative D, and fewer than Alternatives B and C.	Special management provisions would be applied to ~~24~~25% of the BLM-administered lands (36,153 ~~34,528~~ acres covered by 12~~11~~ ACECs), leading to more ACECs than Alternatives A and D, and fewer than Alternative C.	Special management provisions would be applied to 42% of the BLM-administered lands (60,661 acres covered by 15 ACECs), leading to the most ACECs.	Special management provisions would be applied to 17% of the BLM-administered lands (23,924 acres covered by 8 ACECs), leading to the fewest ACECs.
SUMMARY OF EFFECTS ON NATIONAL TRAILS			
No anticipated impacts to 21 miles of National Trails, with no change in protection and enhancement of National Trails.	Similar to Alternative A, except increased protection and enhancement of National Trails through designation of Upper Lolo Creek ACEC~~Same as Alternative A~~.	Same as Alternative B~~Similar to Alternative A, except increased protection and enhancement of National Trails through designation of Upper Lolo Creek ACEC~~.	Same as Alternative A.

Table ES-4
Summary of Effects by Alternative *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
SUMMARY OF EFFECTS ON WILD AND SCENIC RIVERS			
Protective management of 112 miles of the Lower Salmon River and 29 additional miles of suitable river segments along Lolo, Lake, Hazard and Hard Creeks to protect free-flowing and outstandingly remarkable values. Tentative designations could limit or preclude certain activities, uses, or authorizations on public lands.~~Continuing interim management of 112 miles of eligible river segments to protect free-flowing and outstandingly remarkable values. No miles of suitable rivers or river segments recommended for inclusion in the National Wild and Scenic Rivers System.~~	Same as Alternative A except management of 29 miles of preliminarily suitable segments would be coordinated with the Idaho Department of Water Resources to protect river values~~Continuing interim management of 112 miles of eligible river segments to protect free-flowing and outstandingly remarkable values. 29 miles of suitable rivers or river segments recommended for inclusion in the National Wild and Scenic Rivers System. Tentative designations could limit or preclude certain activities, uses, or authorizations~~.	Same as Alternative B. In addition all 29 miles of suitable rivers or river segments would be recommended for inclusion in the NWSRS which would increase the segments chances of becoming designated~~Same as Alternative B~~.	Same as Alternative B~~Similar to Alternative B, except 24 miles of suitable rivers or river segments recommended for inclusion in the National Wild and Scenic Rivers System~~.
SUMMARY OF EFFECTS ON WILDERNESS AND WILDERNESS STUDY AREAS			
Protective management of one Wilderness (750 acres) and two WSAs (10,872 acres) would continue, including discretionary and nondiscretionary closures to minerals, prohibiting motorized and mechanized vehicles in wilderness areas, excluding realty authorizations and managing wilderness areas and WSAs to maintain wilderness characteristics.	Same as Alternative A.	Same as Alternative A.	Same as Alternative A.

Table ES-4
Summary of Effects by Alternative *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
SUMMARY OF EFFECTS ON WATCHABLE WILDLIFE VIEWING SITES			
Continued management of four watchable wildlife areas on 24,435 acres, with no change in efforts to designate new areas, provide information, and cooperatively manage areas.	Similar to Alternative A, except increased efforts to designate new areas, provide information, and cooperatively manage areas.	Same as Alternative B.	Same as Alternative B.
SUMMARY OF EFFECTS ON NATIVE AMERICAN TRIBAL USES			
No changes in availability, access, or land use that would affect the natural resource base used by the tribes, including fish, game, plants, minerals, and springs would occur, so no net changes in the natural resource base are expected. In time recreational uses and public presence in some areas could affect the availability of resources, disturb culturally significant areas and inhibit religious use.	Vegetation treatment programs and animal habitat enhancement could enhance traditional tribal uses for those species and habitats. However, temporary, seasonal, and permanent closures of roads and other areas for treatment programs, public health and safety, or other reasons, while protecting resources, could also limit tribal access to and availability of resources in those areas. Increased recreational uses and public presence in some areas could affect the availability of resources, disturb culturally significant areas, and inhibit religious use.	Same as Alternative B.	Same as Alternative B.

Table ES-4
Summary of Effects by Alternative *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
SUMMARY OF EFFECTS ON NATIVE AMERICAN TRIBAL USES *(continued)*			
No changes to access or impacts on cultural resource sites, ethnographic resources, or traditional cultural properties are expected.	Ground disturbances, possible erosion, and increased public access associated with most resource management objectives could directly affect culturally significant areas and tribal use. Temporary, seasonal, and permanent closures of roads and other areas for treatment programs or other reasons, while protecting resources from additional public access and potential vandalism and looting, could also limit tribal access to and availability of resources in those areas. Additional efforts above and beyond those of current management to increase tribal consultations could better protect tribal use, tribal access, and cultural resources. Alterations in the setting of traditional cultural properties and ethnographic resource collection areas by promoting incompatible uses, such as harvesting, prescribed fires, Visual Resource Management designations, and increased recreational and motorized uses, could affect tribal use and access.	Same as Alternative B.	Same as Alternative B.

Table ES-4
Summary of Effects by Alternative *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
SUMMARY OF EFFECTS ON NATIVE AMERICAN TRIBAL USES *(continued)*			
No changes in current management are expected. As more people use the CFO, more demands combined with static management would decrease the general ecosystem health.	Efforts to maintain native plants, animals, and habitats in general could enhance the general ecosystem, water quality, and riparian areas for tribal use.	Same as Alternative B.	Same as Alternative B.
No changes in land tenure or land use are expected. No net changes or impairments to the future exercise of treaty rights are expected.	New restrictions on actions that would otherwise increase the likelihood of impacts on tribal use.	Same as Alternative B.	Same as Alternative B.
SUMMARY OF EFFECTS ON PUBLIC SAFETY—ABANDONED MINES AND HAZARDOUS MATERIALS			
No change in potential protection of public health and safety through inventories, corrective actions, closures, and other mitigative measures aimed cleaning up abandoned mine lands and hazardous materials sites.	Increase in inventories, corrective actions, closures, and other mitigative measures over Alternatives A and D with hazardous materials sites closed to motorized vehicles.	Increase in inventories, corrective actions, closures, and other mitigative measures over Alternatives A and B. Alternative C would use ACEC designations to protect significant and at-risk closed and remediated sites.	Increase in inventories, corrective actions, closures, and other mitigative measures over Alternative A.

Table ES-4
Summary of Effects by Alternative *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
SUMMARY OF EFFECTS ON SOCIAL AND ECONOMIC CONDITIONS			
Recreation continues and increases (with population growth) as the largest contributor from CFO BLM lands to local economies. Variations across alternatives for levels of PSQ and AUMs and variations in NSO and CSU restrictions could result in small, localized changes to numbers of jobs in the timber, construction, ranching and mining industries. Levels of restoration actions also vary among alternatives resulting in small, localized changes to number of jobs in the contracting and construction industries.	Same as Alternative A	Same as Alternative A	Same as Alternative A

CHAPTER 1

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CHAPTER 1 – INTRODUCTION

1.1 INTRODUCTION

The United States (US) Department of the Interior, Bureau of Land Management (BLM), has prepared this ~~draft~~ proposed resource management plan (RMP) and final environmental impact statement (EIS). This RMP provides direction for managing public lands under the jurisdiction of the BLM's Cottonwood Field Office (CFO) in north-central Idaho, and the EIS analyzes the environmental effects that could result from implementing the alternatives addressed in this RMP. The affected lands are currently being managed per direction in the Chief Joseph Planning Unit Management Framework Plan (MFP) (BLM 1981a) and amendments to the MFP.

The land use planning process is the key tool the BLM uses to manage resources and to designate uses on public lands in coordination with federal, tribal, state, and local government, land users, and interested members of the public. Generally, an RMP does not result in a wholesale change of management direction. Accordingly, this RMP incorporates new information and regulatory guidance that have come about since the MFP and amendments. The focus of the RMP also is on providing management direction where it may be lacking or requiring clarification to resolve land use issues or conflicts. Current management direction that has proven effective and requires no change will be carried forward into this RMP, as well as through the analysis process.

The RMP is being prepared using BLM planning regulations and guidance issued under the authority of the Federal Land Policy and Management Act (FLPMA) of 1976 (43 US Code [USC] 1701 et seq.) and the BLM's Land Use Planning Handbook, H-1601-1 (BLM 2005a). An EIS is incorporated into this document to meet the requirements of the National Environmental Policy Act of 1969 (NEPA), Council on Environmental Quality (CEQ) regulations for implementing NEPA (40 Code of Federal Regulations [CFR] 1500-1508) (CEQ 1978), and requirements of the BLM's NEPA Handbook, H-1790-1 (BLM 1988a).

1.2 PURPOSE OF AND NEED FOR THE RESOURCE MANAGEMENT PLAN

The Cottonwood RMP is needed because regulatory and resource conditions have changed, as well as public demands, which warrant revisiting decisions in the 1981 MFP and its amendments. Many new laws, regulations, and policies have created additional public land management considerations. As a result, some of the decisions in the MFP and amendments are no longer valid or have been superseded by requirements that did not exist when they were prepared. Likewise, user demands and impacts have evolved, requiring new management direction.

The purpose of the RMP is to respond to resource conditions that have changed, to respond to new issues, and to provide a comprehensive framework to guide management of public lands and interests administered by the CFO with a focus on maintaining or restoring resource conditions and helping provide community stability through resource use and enjoyment. The RMP provides objectives, land use allocations, and management direction to maintain, improve, or restore resource conditions over the long term. The RMP incorporates new data, addresses land use issues and conflicts, and specifies where and under what circumstances particular activities will be allowed on BLM-administered public lands. Public lands addressed in the RMP will be managed on the basis of multiple use and sustained yield, in accordance with the FLPMA. The RMP generally does not

include a description of how particular programs or projects would be implemented or prioritized; those decisions are deferred to implementation-level planning.

1.3 DESCRIPTION OF THE PLANNING AREA

The CFO boundary defines the planning area assessed in this RMP. The planning area encompasses over 8.8 million acres in Latah, Clearwater, Nez Perce, Lewis, Idaho, and Adams Counties of north-central Idaho (**Figure 1**, Planning Area Surface Management after Snake River Water Rights Act 2004~~Land Status [see Volume IV]~~). The BLM administers about ~~1.6~~1.4 percent, or ~~143,830~~132,526 acres, of lands in the planning area. This acreage figure reflects the recent transfer of approximately 11,304 acres of public land to the Bureau of Indian Affairs to be held in trust for the benefit of the Nez Perce Tribe. The transfer was made in accordance with the Snake River Water Rights Act of 2004 (Settlement Act), Public Law 108-447, Division J, Title X, Section 6. Acreage figures or references used throughout the remainder of Chapter 1 and the RMP/EIS have not been updated to reflect this recent land transfer which represents only 0.2 percent of the public land managed by the CFO. An acreage figure of 143,830 acres has been carried through the RMP/EIS.

The BLM manages the surface and subsurface of federal lands under its jurisdiction and, in some cases, has administrative duties for mineral activities on lands managed by other federal agencies or on split-estate lands.

~~Land ownership in the planning area is~~ A majority of the 132,526 acres of BLM-administered land consists of scattered tracts intermingled with other lands administered by the federal government, Nez Perce tribal lands, State of Idaho lands, and private property. Approximately 65 percent of the planning area is administered by the federal government, including the BLM; US Department of Agriculture, Forest Service (Forest Service); National Park Service; and US Army Corps of Engineers. **Table 1-1** highlights the ownership pattern of the planning area.

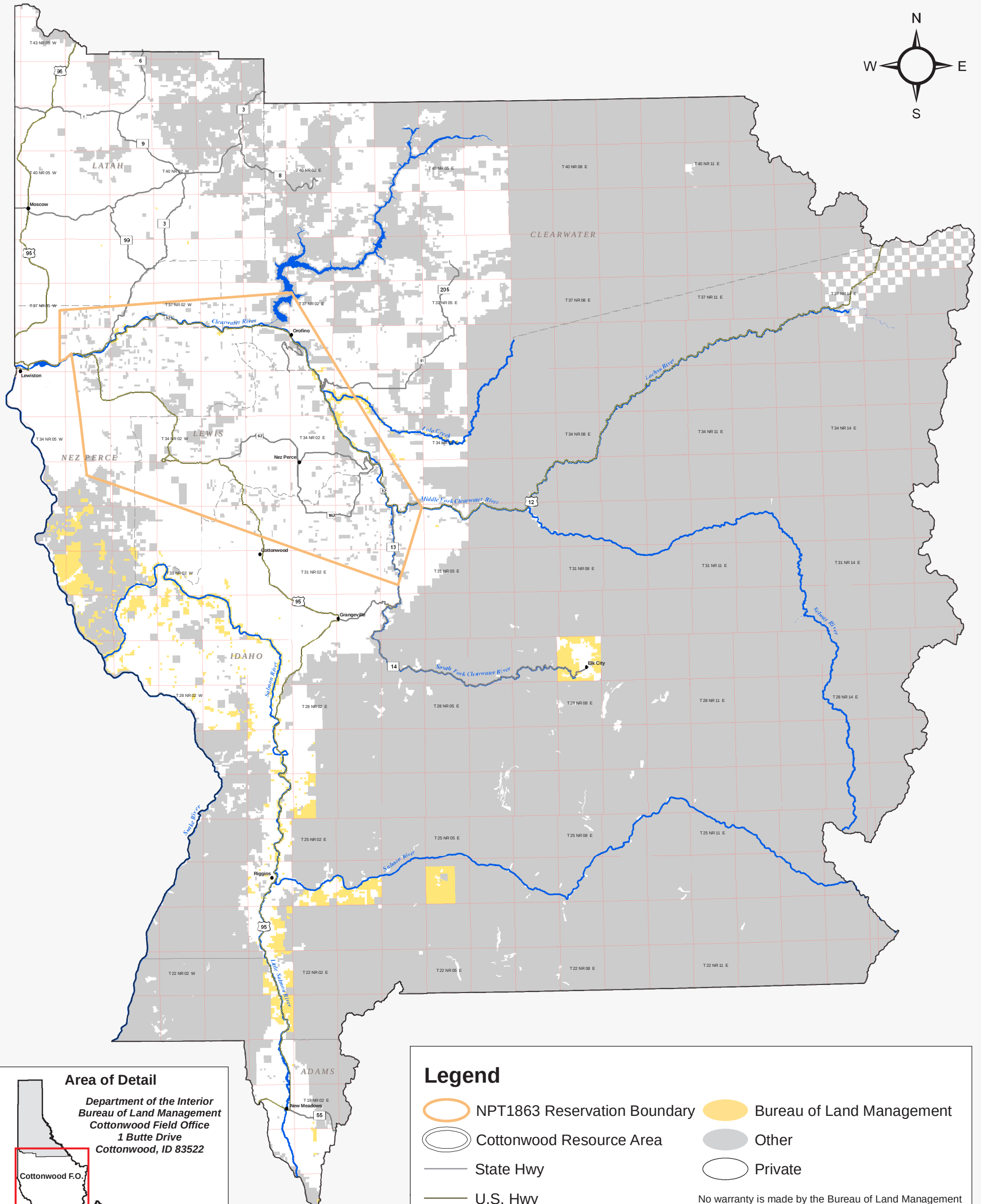
Table 1-1
Land Status within the Planning Area

Land Status	Acres	Percentage of Planning Area
BLM	143,830[1]	1.6
Forest Service	5,528,167	62.5
US Army Corps of Engineers	46,134	0.5
National Park Service	1,885	0.02
Nez Perce tribal lands	94,705[1]	1.1
State of Idaho	444,791	5.0
Private	2,581,685	29.2
Total	**8,841,197**	100

[1] Figures do not reflect the recent land transfer as mentioned above.
Source: BLM 2004a
Acreage figures are approximate projections; readers should not infer that they reflect exact measurements or precise calculations. Acreages were calculated using geographic information system technology, and there may be slight variations in total acres between resources and chapters.

MAP

Bureau of Land Management Cottonwood Field Office
Resource Management Plan & Environmental Impact Statement
Planning Area Surface Management after Snake River Water Rights Act 2004



Area of Detail

Department of the Interior
Bureau of Land Management
Cottonwood Field Office
1 Butte Drive
Cottonwood, ID 83522

Legend

- NPT1863 Reservation Boundary
- Cottonwood Resource Area
- State Hwy
- U.S. Hwy
- Major Rivers
- County
- Bureau of Land Management
- Other
- Private

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

0 5 10 20 Miles

Table Data Source: BLM 2006
Spatial Data Source: Idaho Department of Commerce, Bureau of Land Management Cottonwood F.O.
Map Created: March 2006

All data is displayed in UTM zone 11 north, NAD83

* Adams County is based from the percent of BLM lands managed by the Cottonwood Field Office only.

Management direction and actions outlined in the RMP apply only to BLM-managed public lands in the planning area and to federal mineral estate lands under BLM jurisdiction that may lie beneath other surface ownership (split estate). The CFO manages numerous blocks of BLM land, ranging in size from less than 40 acres to over 12,000 acres. No specific management measures have been developed in this RMP for private, state, and other federal lands. However, given that private and state lands are interspersed with BLM-managed public lands, these lands could be influenced or could be indirectly affected by BLM management actions.

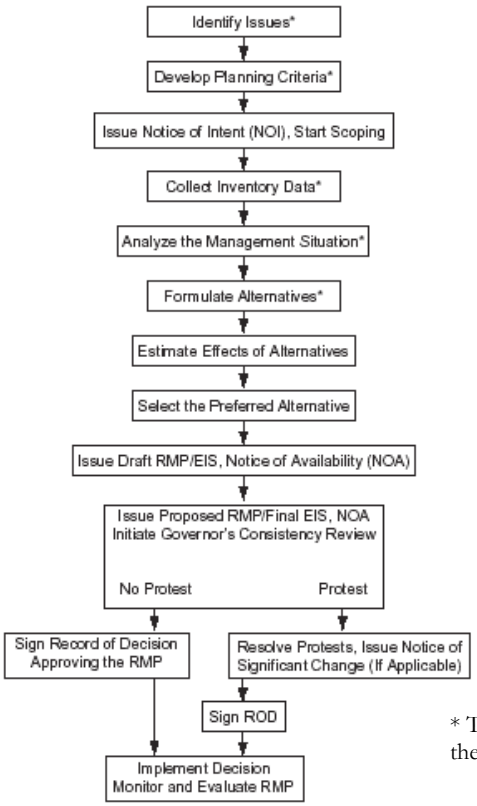
1.4 PLANNING PROCESS

An RMP guides the management of public lands in a particular area or administrative unit. RMPs are usually prepared to cover the lands administered by a certain BLM field office. An approved RMP with the record of decision (ROD) describes the following:

- Resource conditions goals and objectives;
- Allowable resource uses and related levels of production or use to be maintained;
- Land areas to be managed for limited, restricted, or exclusive resource uses or for transfer from BLM administration;
- Program constraints and general management practices and protocols;
- General implementation schedule or sequences; and
- Intervals and standards for monitoring the RMP.

Preparation of an RMP involves interrelated steps, as illustrated below and described in **Table 1-2**.

BLM Planning Process



* These steps may be revisited throughout the planning process

Table 1-2
BLM Planning Process

BLM Planning Process Step	Description	Timeframe
Step 1—Identify planning issues	Issues and concerns are identified through a scoping process that includes the public, Indian tribes, other federal agencies, and state and local governments.	September to November 2004
Step 2—Develop planning criteria	Planning criteria are created to ensure decisions are made to address the issues pertinent to the planning effort. Planning criteria are derived from a variety of sources, including applicable laws and regulations, from existing management plans, from coordinating other agencies' programs, and from the results of public and agency scoping. The planning criteria may be updated and changed as planning proceeds.	September to November 2004
Step 3—Collect data and information	Data and information for the resources in the planning area are collected based on the planning criteria.	Ongoing
Step 4—Analyze management situation	The current management of resources in the planning area is assessed.	September 2004 to January 2005
Step 5—Formulate alternatives	A range of reasonable management alternatives is developed to address issues identified during scoping.	February to August 2005
Step 6—Assess alternatives	The effects of each alternative are estimated.	September 2005 to February 2006
Step 7—Select preferred alternative	The alternative that best resolves planning issues is identified as the preferred alternative.	February 2006
Step 8—Select RMP	First, a draft RMP/EIS is issued and is made available to the public for a review period of 90 days. After comments to the draft document have been received and analyzed, it is modified as necessary, and the proposed RMP/Final EIS is published and made available for public review for 30 days. A ROD is signed to approve the RMP/EIS.	Draft RMP/EIS: Summer 2006 Proposed RMP/Final EIS: estimated ~~Winter 2006-Summer~~Spring 2008~~7~~ Approved RMP/ROD: estimated ~~Winter~~Fall~~Summer~~ 2008~~7-2008~~
Step 9—Implementation Monitoring	Management measures outlined in the approved plan are implemented on the ground, and future monitoring is conducted to test their effectiveness. Changes are made as necessary to achieve desired results.	Ongoing after RMP approval

1.5 SCOPING AND PLANNING ISSUES

The policy of the CFO is to provide opportunities for the public, various groups, other federal agencies, Native American tribal members, and state and local governments to participate

meaningfully and substantively and to give input and comments to the BLM during the preparation of the RMP/EIS. Early in the planning process, the public was invited to help the BLM identify planning issues and concerns relating to the management of BLM-administered lands and resources/uses in the planning area.

1.5.1 Scoping Process

The formal scoping period began with the publication of the notice of intent in the *Federal Register* on September 3, 2004 (**Appendix R**, Federal Register Notices). In September 2004, the BLM launched a Cottonwood RMP/EIS Web site to serve as a clearinghouse of project information while the planning effort is underway (www.cottonwoodrmp.com).

The BLM sent a newsletter to interested parties on October 15, 2004, to inform them of the Cottonwood RMP planning effort, the location of three scoping open houses in November 2004, and the opportunity to comment. The newsletter was mailed to over 1,200 individuals on the distribution list compiled by the CFO. Newspaper advertisements and news releases also were published to notify the public of the project, to announce the three scoping open houses, to request public comments, and to provide contact information. Scoping open houses were held in Riggins, Grangeville, and Lewiston, Idaho, on November 1, 3, and 4, 2004, respectively. These open houses provided an opportunity for the public to receive information, to ask questions, and to provide input (Chapter 5 further discusses scoping and public collaboration).

A Community Economic Profile Workshop was held in Grangeville, Idaho, on November 9, 2004. Twenty-five members of the public and other agencies attended the workshop and offered feedback into the economic vision of each region within the Cottonwood RMP planning area, specifically Idaho County, and how the BLM management of public lands could support the desired future of economic development.

The scoping period for receipt of public comments ended November 15, 2004. Analysis of the comments was completed and a scoping summary report was finalized in February 2005 (BLM 2005b).

1.5.2 Issue Identification

Issue identification is the first step of the nine-step BLM planning process. A planning issue is a major controversy or dispute regarding management of resources or uses on the public lands that can be addressed in a variety of ways. After considering public scoping comments, the BLM identified nine major planning issues, as follows:

1. How will the problem of invasive plant species be addressed?
2. How will forest vegetation be managed to attain desired stand structure and/or meet the range of natural variability?
3. How will special status species and their habitats be managed?
4. How will priority watersheds or areas be determined for conservation and/or restoration strategies?
5. How will motorized and nonmotorized travel be managed to provide access, while minimizing impacts on natural and cultural resources?

6. At what levels will commercial uses (minerals, forest products, livestock grazing, and recreation) be authorized?
7. Where and what types of fuels reduction will be implemented to reduce risk to the public, firefighters, property, and natural and cultural resources?
8. How will public land resources be managed in scattered or isolated parcels, given varied resource values and priorities?
9. How will future demands for recreation on public lands be addressed?

The criteria used to identify issues included identifying if the effects of actions designed to respond to the issues would: 1) approach or exceed standards or a threshold, 2) substantially change a resource, 3) be controversial, 4) offer a wide range of opportunities, or 5) cause disagreement regarding their environmental impact. These issues drove the formulation of the RMP alternatives, and addressing them has resulted in a range of management options presented in four alternatives (Chapter 2). Each fully developed alternative represents a different land use plan that addresses or resolves the identified planning issues in different ways. While other concerns are addressed in the RMP, management related to them may or may not change by alternative.

1.5.3 Issues Considered but Not Further Analyzed

During scoping, several concerns were raised that are beyond the scope of this planning effort or represented questions on how the BLM would go about the planning process and implementation. There are several issues raised in scoping that are clearly of concern to the public but that are governed by existing laws and regulations (for example, water quality). Where certain management is already dictated by law or regulation, alternatives have not been developed, but management will instead be applied as management common to all alternatives. The Cottonwood RMP Scoping Report (BLM 2005b) provides a comprehensive list of issues outside the scope of the RMP.

1.6 PLANNING CRITERIA AND LEGISLATIVE CONSTRAINTS

The FLPMA is the primary authority for the BLM's management of public lands. This law provides the overarching policy by which public lands will be managed and establishes provisions for land use planning, land acquisition and disposition, administration, range management, rights-of-way, designated management areas, and the repeal of certain laws and statutes. The NEPA provides the basic national charter for environmental responsibility and requires the consideration and public availability of information regarding the environmental impacts of major federal actions significantly affecting the quality of the human environment. In concert, these two laws provide the guidance for administration of all BLM activities.

Planning criteria are the standards, rules, and guidelines that help to guide data collection, alternative formulation, and alternative selection in the RMP-development process. In conjunction with the planning issues, planning criteria assure the planning process is focused. The criteria also help guide the final plan selection and provide a basis for judging the responsiveness of the planning options.

Preliminary planning criteria were developed prior to public scoping meetings to set the focus for planning the Cottonwood RMP and to guide decision making by topic. These preliminary criteria were introduced to the public for review in September 2004 on the project Web site, in October 2004 in the project newsletter, and in November 2004 at scoping meetings. The public was

encouraged to comment on and to suggest additions to these criteria at the meetings and through correspondence and at the Cottonwood RMP Web site. No comments were received on the preliminary planning criteria during the scoping period (through November 15, 2004).

1. The plan will comply with all applicable laws, regulations, and current policies. This includes local, state, tribal, and federal air quality standards; as well as water quality standards from the Idaho Nonpoint Source Management Program Plans.
2. The RMP planning effort will be collaborative and multijurisdictional in nature. The BLM will strive to ensure that its management decisions are complimentary to other planning jurisdictions and adjoining properties, within the boundaries described by law and federal regulations.
3. The planning process will establish new guidance and identify existing guidance upon which the BLM will rely to manage public lands within the planning area.
4. The planning area is defined as the CFO.
5. All previously established Wilderness Study Areas (WSA) will continue to be managed for wilderness values and character until Congress designates them as wilderness areas, or releases them for multiple use management.
6. The RMP will recognize all valid existing rights.
7. As part of this RMP process, the BLM will analyze areas for potential designation as Areas of Critical Environmental Concern (ACEC) in accordance with 43 CFR 1610-7-2, and river corridors for recommendation and designation under the Wild and Scenic Rivers Act.

1.6.1 Relationship to BLM Policies, Plans, and Programs

Since the development and approval of the MFP (BLM 1981a), it has been amended to provide additional land management direction. As the land use plan guidance is put into practice on the ground, implementation-level planning is directed by BLM policy and program-specific guidance. **Table 1-3** identifies approved MFP amendments incorporated into the existing land use plan and other BLM guidance considered at the implementation level planning stages. These plan amendments and guidance documents provide a perspective of the many management considerations pertinent to the planning area.

Table 1-3
Identification of Chief Joseph MFP Amendments and Other Documents Considered for Implementation-level Planning

Amendments to the Chief Joseph MFP
Land Tenure Adjustment MFP Amendment (BLM 1984a)
Land Tenure Adjustment Plan Amendment for the Emerald Empire and Chief Joseph MFPs (BLM 1989a)
Plan Amendment for the Emerald Empire and Chief Joseph MFPs to Designate 12 Areas as Research Natural Areas (RNA) and/or ACECs (BLM 1989b)

Table 1-3
Identification of Chief Joseph MFP Amendments and Other Documents Considered for Implementation-level Planning *(continued)*

BLM Policy and Program Guidance Documents Considered During Implementation-level Planning
Northern Idaho Grazing Management EIS (BLM 1981b)
North Idaho Timber Management Program EIS (BLM 1981c)
North Idaho Range Management Program Summary Report (BLM 1982a)
Lower Salmon River Cultural Resource Management Plan (BLM 1983a)
Lower Salmon River (Scenic) Recreation Management Plan (BLM 1983b)
Clearwater River Recreation Area Management Plan (BLM 1984b)
Lower Salmon River (Recreational) Recreation Area Management Plan (BLM 1988b)
MacFarlane's Four-o'clock – Long Gulch Habitat Management Plan (HMP) (BLM 1981d)
Clearwater River Islands Goose Nesting HMP (BLM 1981e)
Chaney Goose Nesting HMP (BLM 1981f)
Little Pine Bar Goose Nesting HMP (BLM 1981g)
Little Salmon River Goose Nesting HMP (BLM 1981h)
Elk City Aquatic Zone HMP (BLM 1982b)
MacFarlane's Four-o'clock – Skookumchuck HMP (BLM 1983c)
Craig Mountain HMP (BLM 1983d)
Lower Salmon River Aquatic Zone III HMP (BLM 1984c)
Brushy Ridge HMP (BLM 1984d)
Lower Salmon River Aquatic Zone I HMP (BLM 1985a)
Lucile Caves HMP (BLM 1985b)
Whiskey Creek HMP (BLM ~~1986a~~1986b)
Rattlesnake Ridge HMP (BLM ~~1986b~~1986c)
John Day Creek Ecosystem Analysis at the Watershed Scale (BLM 1999a)
Memorandum of Agreement, ESA Section 7 Programmatic Consultation and Coordination (BLM et al. 2000)
Lower Salmon River Ecosystem Analysis at the Watershed Scale (BLM 2002a)
Lower Snake River Ecosystem Analysis at the Watershed Scale (BLM 2002b)
Northwest Area Noxious Weed Control Program Final EIS (BLM 1985c)
~~Rattlesnake Ridge HMP (BLM 1986c~~1986d~~)~~
Northwest Area Noxious Weed Control Program Final EIS (BLM 1987)
Idaho Record of Decision to the Vegetation Treatment on BLM Lands in Thirteen Western States Final EIS (BLM 1991a)
Idaho Record of Decision, Recommendation for 67 WSAs in Idaho (BLM 1991b)
Update to MFPs to include Land Acquisition Management Guidelines (BLM 1993)

Table 1-3
Identification of Chief Joseph MFP Amendments and Other Documents Considered for Implementation-level Planning *(continued)*

BLM Policy and Program Guidance Documents Considered During Implementation-level Planning
Decision Record and Finding of No Significant Impact, Coeur d'Alene District Programmatic Noxious Weed Control (BLM 1994)
Decision Notice/Decision Record, Finding of No Significant Impact, Environmental Assessment for the Interim Strategies for Managing Anadromous Fish-producing Watersheds in Eastern Oregon and Washington, Idaho, and Portions of California (BLM and Forest Service 1995)
National Fire Plan: Review and Update of the 1995 Federal Wildland Fire Management Policy (US Department of Interior et al. 2001)
National Fire Plan: Federal Wildland Fire Management Policy (US Department of Interior and US Department of Agriculture 1995)
Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management (BLM 1997a) (**Appendix A** [Volume II])
National Management Strategy for Motorized Off-highway Vehicle Use on Public Lands (BLM 2001a)
National Mountain Bicycling Strategic Action Plan (BLM 2002c)
Priorities for Recreation and Visitor Services (BLM 2003)
BLM Manual 6500, Wildlife and Fisheries Management (BLM 1988d)
BLM Manual 6840, Special Status Species Management (BLM 2001b)
Executive Order 13186, Responsibilities of Federal Agencies to Protect Migratory Birds (January 10, 2001)
CFO Fire Management Plan (FMP) (BLM 2004b)
BLM North Zone FMP, CFO and Coeur d'Alene Field Office (BLM 2005c)
Montana/Idaho Airshed Group Operating Guide (2005)
Framework for Incorporating the Aquatic and Riparian Component of the Interior Columbia Basin Ecosystem Management Project (ICBEMP) into BLM and Forest Service Plan Revisions (Forest Service et al. 2004)
Cooperative Management Plan for the Clearwater River and the Craig Mountains (BLM 1997b/1997c)
Roads and Trails Terminology Report (BLM 2006)

1.7 COLLABORATION

1.7.1 Intergovernmental and Interagency Collaboration

The benefits of enhanced collaboration among agencies in the preparation of NEPA analyses include disclosing relevant information early in the analytical process, applying available technical expertise and staff support, avoiding duplication with other federal, state, tribal, and local procedures, and establishing a mechanism for addressing intergovernmental issues.

On August 26, 2004, the BLM mailed letters to 12 local, state, and tribal representatives inviting them to participate as cooperating agencies for the Cottonwood RMP. Letters were sent to the Commissioners from Adams, Clearwater, Latah, Lewis, Nez Perce, and Idaho Counties;

representatives from the Idaho Departments of Commerce/Tourism Division, Fish and Game, Lands, Parks and Recreation, and Environmental Quality; and representatives from the Nez Perce Tribe. These agency representatives declined the offer of a formal relationship as a cooperating agency, but several agency representatives expressed interest in developing a collaborative partnership with the BLM. That is, these agencies committed to working with the BLM and sharing knowledge and resources to achieve desired outcomes for public lands and communities within statutory and regulatory frameworks (BLM 2005a).

To initiate the collaborative planning process, on October 15, 2004, the BLM mailed letters, accompanied by the BLM newsletter, inviting the aforementioned federal, state, local, and tribal organizations to the three scoping open houses held during the first week of November 2004. The BLM then met with the following collaborators about the Cottonwood RMP: Nez Perce Tribe Natural Resources Subcommittee (August 3, 2004); Clearwater County Commissioners (September 27, 2004); Idaho County Commissioners; Idaho Department of Environmental Quality (IDEQ) (October 6, 2004); Nez Perce Tribe natural resources specialists (December 10, 2004); Nez Perce Tribe cultural resources specialists (January 11, 2005); Idaho Department of Fish and Game ~~Department~~, Clearwater Region (January 25, 2005); and Nez Perce Tribe Natural Resources Subcommittee (July 19, 2005).

The Coeur d'Alene District Resource Advisory Council is a 15-member advisory panel that provides advice and recommendations to the BLM on resource and land management issues for approximately 241,162 acres of federal public lands within 11 counties in northern Idaho. Membership may include a cross section of Idahoans representing energy, tourism, and commercial recreation interests, environmental, archaeological, and historic interests, and elected officials, Indian tribes, and the public at large. The Coeur d'Alene District Resource Advisory Council was updated on the purpose and status of the Cottonwood RMP at Resource Advisory Council meetings on December 3, 2004, and May 18, 2005. Detailed information regarding collaboration with the Resource Advisory Council is provided in Chapter 5.

1.7.2 Tribal Relationships and Indian Trust Assets

The unique political relationship between the US government and federally recognized Indian tribes is defined by treaties, statutes, executive orders, judicial decisions, and agreements. This relationship has created a special federal trust responsibility, involving the legal commitments and obligations of the US toward Indian tribes, Indian lands, tribal trust resources, and the exercise of tribal rights.

Indian trust resources are legal interests in assets held in trust by the federal government for federally recognized Indian tribes or nations or for individual Indians. These assets can be real property, physical assets, or intangible property rights. Examples include lands, minerals, water rights, hunting and fishing rights, other natural resources, money, or claims. The federally recognized Nez Perce Tribe has long used natural resources and conducted its social and religious activities in the planning area. ~~Between 1855 and 1863 t~~The Nez Perce Tribe and the US signed various treaties and agreements that relinquished ownership of millions of acres of land to the US, established and modified the Nez Perce Reservation to guarantee a permanent homeland for the tribe, and maintained the tribe's rights to fish, hunt, gather, and pasture its animals on open and unclaimed lands (Sisson 2004).~~maintained the tribe's rights to fish, hunt, and gather (Sisson 2004).~~

As a federal agency, the BLM has a trust responsibility to provide the conditions necessary for Nez Perce tribal members to satisfy their treaty rights. Although there are no lands in the planning area formally held in trust, the BLM manages portions of the ceded lands that are within the traditional use areas of the Tribe. Tribal members continue their traditional and cultural uses, exercise their hunting, fishing, and gathering rights, and maintain an active interest the health and sustainable management of land and water resources. Land management decision makers need to recognize these rights and trust responsibilities. Government-to-government consultation with the Nez Perce Tribe is required on land management activities and land allocations that could affect these rights.

As part of the resolution of the Nez Perce Tribe's water right claims in the Snake River Basin Water Rights Adjudication, the Snake River Water Rights Act of 2004 (Public Law ~~108-792~~108-447, Division J, Title X, Section 6) authorizes the transfer of administration of approximately ~~11,297~~11,304 acres from the CFO to the Bureau of Indian Affairs to be managed in trust for the benefit of the Nez Perce Tribe. This administrative transfer became effective upon publication of the *Federal Register* Notice (Federal Register 2007a) on May 15, 2007.~~can occur upon a finding by the Secretary of the Interior that certain requirements specified in the legislation have been satisfied. At that time, the CFO would make the appropriate changes necessary to reflect the revised CFO acreage.~~

1.7.3 Cooperative Process with National Marine Fisheries Service and US Fish and Wildlife Service for Endangered Species Act, Section 7 Consultation

To facilitate a joint planning effort for the RMP and Endangered Species Act (ESA) Section 7 consultation, the CFO has entered into a Consultation Agreement (Memorandum of Understanding) with US Fish and Wildlife Service (USFWS), Snake River Office, and National Oceanic and Atmospheric Administration, National Marine Fisheries Service (National Marine Fisheries Service) (BLM et al. 2005). This agreement establishes a cooperative process upon which ESA Section 7 consultation for preparation of the RMP may be conducted by the BLM, USFWS, and National Marine Fisheries Service. This agreement tiers to and builds on responsibilities and commitments for each agency as outlined in the national *Memorandum of Understanding, Endangered Species Act, Section 7 Programmatic Consultations and Coordination among Bureau of Land Management, Forest Service, National Marine Fisheries Service, and Fish and Wildlife Service* of August 2000, and the May 31, 1995 interagency agreement for streamlining Section 7 consultation in the Pacific Northwest. This agreement also incorporates by reference the June 4, 2004 *BLM/FS/FWS/NMFS Fisheries Memorandum on Interagency Options for Streamlining Section7 Consultation Through Sharing/Contracting Staff and Efficient Development of Consultation Documents*.

This agreement will serve to provide further definition (in addition to the August 2000 national Memorandum of Agreement to the process, products, actions, timeframe, and expectations of the BLM, USFWS, and National Marine Fisheries Service, while working together to complete Section 7 consultation and will serve as a guiding document for both agencies throughout the consultation process. Up-front coordination on biological assessments will result in a shortened timeframe for the appropriate consultation response once an agreed-to level one team biological assessment has been received by USFWS and/or National Marine Fisheries Service.

The BLM is committed to a joint planning effort resulting in a ROD for the EIS and associated RMP. The process outlined in the Memorandum of Understanding will provide ESA Section 7

programmatic coordination and consultation to complete the RMP biological assessment and biological opinion. The sharing of knowledge and awareness about the ESA and RMP framework among the three agencies will enhance future consultation efforts for resource management, protection, and recovery of endangered, threatened, proposed, and candidate species.

A critical element of the ESA Section 7 consultation process involves early coordination. Early coordination allows the BLM to make appropriate adjustments in proposed management strategies during the design phase, and enable the incorporation of candidate, proposed, and listed species habitat needs. Coordination between the BLM, National Marine Fisheries Service, and USFWS began in the initial stages of the planning process and will continue throughout the planning and consultation process. To facilitate Section 7 consultation, a draft biological assessment has been prepared for the Draft RMP/EIS. Upon completion of the Proposed RMP/Final EIS, the final biological assessment will be submitted to USFWS and National Marine Fisheries Service, and a biological opinion will be prepared.

1.8 RELATED PLANS

The BLM planning regulations require that BLM RMPs be consistent with officially approved or adopted resource-related plans of other federal, state, local, and tribal governments to the extent those plans are consistent with federal laws and regulations applicable to public lands. Plans formulated by federal, state, local, and tribal governments that relate to management of lands and resources have been reviewed and considered as the RMP/EIS has been developed. These plans include the following:

- Recovery Plan for the Pacific Bald Eagle *(Haliaeetus leucocephalus)* (USFWS 1986);
- Revised Recovery Plan for MacFarlane's Four-O'Clock *(Mirabilis macfarlanei)* (USFWS 2000);
- Canada Lynx *(Lynx canadensis)* Conservation Assessment and Strategy (Ruediger et al. 2000);
- Recovery Plan for the Northern Idaho Ground Squirrel *(Spermophilus brunneus brunneus)* (USFWS 2003);
- Draft Recovery Plan for *Silene spaldingii* (Spalding's Catchfly) (USFWS 2005a);
- Draft Salmon and Steelhead Recovery Plans in progress (National Marine Fisheries Service 2006);
- Draft Bull Trout Recovery Plans in progress (USFWS 2002);
- Idaho Comprehensive Wildlife Conservation Strategy (Idaho Department of Fish and Game 2006a);
- 2001-2006 Fisheries Management Plan (Idaho Department of Fish and Game 2006b);
- National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR 300);
- Best Management Practices for Mining in Idaho (Idaho Department of Lands 1992);
- IDEQ's Final Area-wide Risk Management Plan (IDEQ 2004);
- A View to the Future: A Comprehensive Historic Preservation Plan for Idaho (Idaho State Historic Preservation Office 2002);

- Proposed Plan Amendments and EIS for Small WSAs, Statewide (BLM 1988c); and
- Idaho's 2003–2007 Statewide Comprehensive Outdoor Recreation and Tourism Plan (Idaho State Parks and Recreation 2003).
- Section 368 of the Energy Policy Act of 2005 (designation of West-wide energy corridors) is being implemented through the current development of an interagency Programmatic EIS. The Final Programmatic EIS will provide plan amendment decisions that will address numerous energy corridor related issues, including the utilization of existing corridors (enhancements and upgrades), identification of new corridors, supply and demand considerations, and compatibility with other corridor and project planning efforts. The approved Programmatic EIS would subsequently amend the Cottonwood RMP; however, it is not likely that the identification of corridors in the Programmatic EIS would affect the CFO planning area.

1.9 UPDATES FROM THE DRAFT RESOURCE MANAGEMENT PLAN TO THE PROPOSED RESOURCE MANAGEMENT PLAN

As a result of public comment and internal BLM review, the agency's Preferred Alternative (Alternative B) presented in the May 2006 Cottonwood Draft RMP/EIS has been modified and is now considered the Proposed Action for management of BLM lands in the CFO. The Proposed RMP is a refinement of Alternative B, with consideration given to public comments, correction, and rewording for clarification. The Draft RMP/EIS was available for a 90-day review period ending on November 27, 2006. The Proposed RMP/Final EIS is designed to be used in conjunction with the Draft RMP/EIS for reference to maps and in regard to page numbers cited in the comment and response section (**Appendix U**). Both the Proposed RMP/Final EIS and Draft RMP/EIS are available on the project Web site, www.cottonwoodrmp.com.

Modifications to Alternative B focused on addressing public comments, while continuing to meet the BLM's legal and regulatory mandates. Chapter 5 of the Proposed RMP/Final EIS contains a summary of the public comment process and the comments received on the Draft RMP/EIS. All comment letters received and the BLM's responses are located in **Appendix U** (Volume III).

Updates to the Draft RMP/EIS are shown throughout this Proposed RMP/Final EIS by underlining new text (added since the Draft RMP/EIS) and striking out deleted text (~~text~~) (deleted since the Draft RMP/EIS). Changes generally include the following:

- Adjustments to Alternative B (the Proposed RMP);
- Additions to Chapter 3, Affected Environment;
- Clarifications to better explain the management proposed in the Draft RMP/EIS or the environmental consequences;
- Incorporation of new information;
- Changes to information based on inventory updates after May 2006;
- Revisions to Chapter 4, Environmental Consequences, to make corrections and reflect inventory updates;
- Additions to Chapter 5, Consultation and Coordination, to describe the public comment process on the Draft RMP/EIS;

- Additions to Chapter 6, References, to include additional references cited in the document; and
- Minor corrections, such as typographical errors.

The detailed description of the Proposed RMP (Alternative B, as edited) is included in Chapter 2, and the environmental consequences of implementing the Proposed RMP (Alternative B, as edited) are described in Chapter 4.

1.9.1 Changes to Alternative B (Preferred Alternative) (Chapter 2)

Alternative B has been adjusted as follows, based on public comment and internal review:

- Actions have been added regarding avoidance of impacts to sources of drinking water (Water Resources, Objective 1, Action 3; Objective 2, Action 6; and Objective 7, Action 1).
- An action has been added regarding project design in restoration watersheds limiting predicted increased water yield or peak flows (Water Resources, Objective 2, Action 7).
- The Vegetation—Forests goal has been edited to clarify the BLM's desire.
- Various changes have been made to further explain the BLM's forested vegetation management actions (in Vegetation—Forests). Language has been added to clarify the types of resources to which the various actions refer. This includes adding new Actions 2 and 3 to Objective 2.
- Vegetation—Forests Objective 2, Actions 2 and 3 have been moved to the Wildland Fire Ecology and Management section for clarity and consistency.
- Various changes have been made to further explain the BLM's management actions in Vegetation—Riparian and Wetlands. Language has been added to clarify the types of resources to which the various actions refer.
- Wildlife and Special Status Wildlife, Objective 9, Action 1 has been edited to reference the Elk Habitat Management Coordinating Guidelines.
- Actions 9, 10, and 11 have been added to Wildlife and Special Status Wildlife, Objective 9, regarding the BLM's public education efforts regarding wildlife, designing vegetation projects in big game habitat, and providing migratory bird habitat, respectively.
- Wildlife and Special Status Wildlife, Objective 11, Action 3 has been clarified to recognize the Idaho Department of Fish and Game's role as the agency responsible for management of wildlife and fish in Idaho, and to clarify the BLM's coordination efforts with other agencies.
- Action 4 has been added to Wildlife and Special Status Wildlife, Objective 11, regarding collaborative management efforts that maintain high quality or improve wildlife habitat, travel corridors, habitat connectivity, and wildlife security.
- Wildlife and Special Status Wildlife, Objective 13, Action 2 has been modified to indicate the BLM's coordination efforts with agencies, grazing lessees, and partners on population and habitat management of bighorn sheep within Hells Canyon (Snake River drainage) and Salmon River drainage, and to allow for transplants, reintroductions, and natural expansion of bighorn sheep populations.

- Wildlife and Special Status Wildlife, Objective 13, Action 3 has been edited, and Actions 4, 5, 6, and 7 added, to clarify the BLM's management with regards to bighorn sheep, domestic sheep, and domestic goats.
- Various changes have been made to further explain the BLM's management actions in Aquatic Resources, Fish, and Special Status Fish. Language has been added to clarify the types of resources to which the various actions refer.
- Aquatic Resources, Fish, and Special Status Fish, Objective 1, Action 10 has been added regarding the BLM's public education efforts.
- Clarifications have been made to Livestock Grazing actions to indicate allotment allocations and grazing types.
- Livestock Grazing, Objective 1, Actions 11, 15, and 16 have been edited or added to clarify the BLM's management with regards to bighorn sheep, domestic sheep, and domestic goats.
- ACECs and RNAs, Objective 10 have been edited to include the designation of the Upper Lolo Creek ACEC.
- Wild and Scenic Rivers, Actions to recommend suitable segments for congressional designation in the National Wild and Scenic Rivers System have been changed to do not recommend suitable segments in order to comply with the Memorandum of Understanding with the BLM, Forest Service, and State of Idaho (State of Idaho et al. 1991). Suitability determinations have not changed.

1.9.2 Changes to the Affected Environment (Chapter 3)

Chapter 3 has been adjusted as follows:

- Section 3.2.9, Wildlife and Special Status Wildlife, has been edited to add information regarding big game species and habitat, bighorn sheep, wildlife habitat vegetation cover types, and wildlife habitat trends.
- Section 3.2.13, Cultural Resources, has been edited to add information to address new directives for land use planning with respect to categorizing known and expected cultural resources according to their nature and relative preservation value.
- Section 3.3.7, Lands and Realty, Withdrawals, has been updated to reflect the approval of the renewal of the withdrawal on the Salmon River.

1.9.3 Changes to Appendices (Volumes II and III)

The appendices have been adjusted as follows:

- **Appendix B** (Best Management Practices – Alternatives B, C, and D) has been revised to clarify best management practices.
- **Appendix C** (Conservation and Restoration Watersheds – Alternatives B, C, and D) has been revised to clarify and provide consistent supporting rationale for identification of conservation and restoration watersheds for specific alternatives. Identification of management strategies that may occur in conservation and restoration watersheds was also added to this appendix.
- **Appendix D** (Desired Future Conditions for Forest Vegetation/Wildlife Habitat – Alternatives B and C) has been revised to provide additional clarification for desired future

conditions for forest vegetation and wildlife habitat, and additional management direction for snag management.

- **Appendix F** (Aquatic and Riparian Management Strategy – Alternatives B, C, and D) has been revised to incorporate additional ICBEMP direction, recommendations from reviewers, and identified during the ESA consultation process.
- **Appendix I** (Grazing AUMs by Allotment – Alternatives A, B, C, and D) has been revised to include the type of livestock use on each allotment.
- **Appendix K** (Final Wild and Scenic Rivers Eligibility and Suitability Study) has been revised to finalize the study.
- **Appendix R** (Federal Register Notices) has been revised to include all Federal Register notices printed to date for this project.
- New **Appendix U** (Comments Received on Cottonwood Draft RMP/EIS) has been added to capture all written comments on the Draft RMP/EIS and the BLM's response to each comment.
- New **Appendix V** (Conservation Measures for Listed Species) has been added to incorporate species-specific conservation measures that were identified and recommended during the ESA consultation process.
- New **Appendix W** (Desired Conditions and Watershed and Aquatic Condition Indicators) has been added to provide additional information and clarification concerning the rating criteria for watershed and aquatic condition indicators.

1.9.4 Changes to Maps (Volume IV of the Cottonwood Draft RMP/EIS)

No maps have been substantially revised since the Cottonwood Draft RMP/EIS. One map from the Draft RMP/EIS, **Figure 1**, which depicts Planning Area Surface Management, was revised per the Snake River Water Rights Act of 2004. This revised figure is included in this chapter to show the administrative transfer of 11,304 acres from the BLM to the Bureau of Indian Affairs effective May 15, 2007.

One minor change has been made to **Figure 38** in Volume IV of the Cottonwood Draft RMP/EIS. That map inadvertently omits a 25-acre area that should have been shown as an area for disposal. The 25-acre area is currently leased to Bennett Forest Industries. The area was a former industrial site and is being vacated. The final disposal acres will be determined by an implementation-level follow-on NEPA analysis at a later date.

Minor changes have been made to **Figures 3**, **4**, and **5** in Volume IV of the Cottonwood Draft RMP/EIS. Several watersheds identified as Conservation or Restoration watersheds (see **Appendix C**) were not mapped as such. Refer to **Tables C-1**, **C-2**, and **C-3** (Volume II) for the complete listing of these watersheds.

The Draft RMP/EIS included a discrepancy in the Marshall Mountain WSA map, **Figure 46** in Volume IV of the Cottonwood Draft RMP/EIS. The WSA boundary mistakenly did not include an area excluded from the original wilderness inventory. The excluded area was included in the maps in the *North Idaho Proposed MFP Amendment and Final EIS for Wilderness* (BLM 1986a). This excluded area includes a road, cabins, and mining operation. The map and acreage have been corrected. The acreage difference is less than one percent of the current total acreage.

Because no substantial changes have been made to maps, the only map (**Figure 1**) included with this Proposed RMP/Final EIS is related to the May 15, 2007 administrative transfer of 11,304 acres, in Section 1.3 (Chapter 1). All other maps are incorporated herein by reference and are included in the Cottonwood Draft RMP/EIS, Volume IV. Copies of the Cottonwood Draft RMP/EIS Volume IV maps are available on the project website at www.cottonwoodrmp.com, or upon request from BLM (telephone (208) 962-3784 or email information@cottonwoodrmp.com).

~~1.9~~1.10 IMPLEMENTATION, ~~AND~~ MONITORING, AND MODIFICATION OF THE RESOURCE MANAGEMENT PLAN

1.10.1 Implementation

Implementation of the RMP would begin when the Idaho BLM State Director signs the ROD for the RMP. Decisions in the RMP would be tied to the BLM budgeting process. An implementation schedule would be developed, providing for the systematic accomplishment of decisions in the approved RMP. During implementation of the RMP, additional documentation required to comply with NEPA would be required, such as environmental assessments. Environmental assessments can vary from a simple statement of conformance with the ROD to more-complex documents that analyze several alternatives. An environmental assessment documents NEPA requirements for site-specific actions.

As discussed in the following sections, i~~I~~mplementation of the RMP would be monitored, and the RMP would be evaluated periodically. Revisions or amendments to the RMP may be necessary to accommodate changes in resource needs, policies, or regulations. Other decisions would be issued in order to fully implement the RMP.

1.10.2 Adaptive Management

This Proposed RMP was developed based on the ecosystem management approach. The ecosystem management approach focuses on the ecological system instead of a single species or single resource. Thus, a natural resource is not viewed as a thing or an object but as a function that a thing or an object may perform or as an operation in which it may take part within the system (Zimmerman 1951). The art of ecosystem management is managing the system to maximize the functions of resources for predetermined desired conditions. Before one can implement ecosystem management, two inherent rules must be understood. First, natural ecosystems are incredibly complex and our understanding of them is limited (Leslie et al. 1996). Second, unlike tangible objects (for example, trees), resources (for example, timber) change in response to ecological, social, and institutional events, including the following:

- Societal tastes and values;
- Knowledge;
- Technology;
- Laws and institutions; and
- The ecosystem (Salazar and Lee 1990).

Thus, the greatest hurdle to overcome in effective ecosystem management is uncertainty. To mitigate uncertainty, the BLM will use adaptive management.

Adaptive management recognizes that there is incomplete data when dealing with natural resources and that through continued research and monitoring of the effects of management practices, new information will be developed. This information can be reevaluated and incorporated into the management plan, and practices can be adjusted accordingly. Thus, adaptive management is the "process of implementing policy decisions as scientifically driven management experiments that test predictions and assumptions in management plans and that use the resulting information to improve plans" (Noss and Cooperider 1994). The adaptive management process is illustrated in **Figure 1-1**.

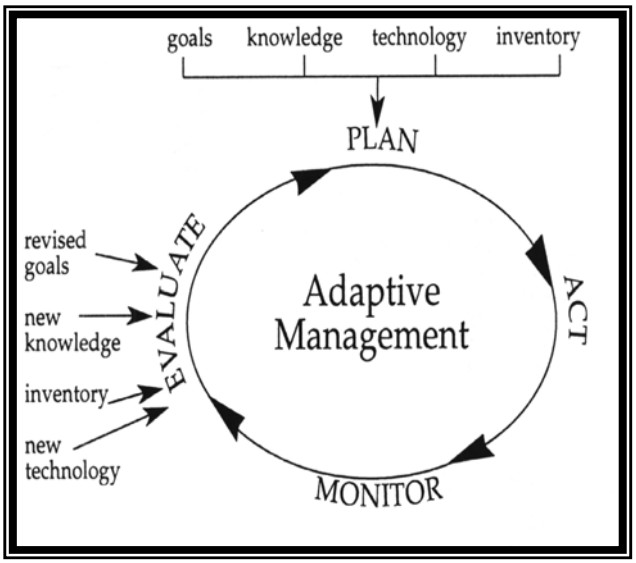


Figure 1-1: Adaptive Management Strategy

1.10.3 Monitoring

Monitoring is an essential component of the adaptive management strategy. Monitoring data is used to assess resource conditions, identify resource conflicts, determine if resource objectives are being met, and periodically refine and update desired conditions and management strategies. The BLM planning regulations (43 CFR 1610.4-9) require monitoring of approved RMPs on a continual basis with formal evaluations conducted at periodic intervals. The Proposed RMP decisions in Chapter 2 incorporate monitoring measures for a variety of resources. As discussed in Section 10.1.1, the implementation and funding schedule that would be completed following approval of the RMP would incorporate detailed monitoring plans and schedules necessary to implement RMP decisions.

1.10.4 Resource Management Plan Modification

Once approved, the Cottonwood RMP will be kept up to date through approved plan modification procedures including plan maintenance, plan amendments, or plan revision. The appropriate type of plan modification will be determined by monitoring and comprehensive land use plan evaluation.

Plan Maintenance

RMP maintenance is the process of further refining or documenting a previously approved decision in an RMP (43 CFR 1610.5-4). The scope of resource uses or restrictions cannot be expanded, and the terms, conditions, or decisions of the approved RMP cannot be changed. Plan maintenance is a

continual process to ensure the plan reflects the current status of decision implementation and knowledge of resource conditions.

Plan Amendments

RMP amendments are prepared to change one ore more of the terms, conditions, or decisions of the approved RMP (43 CFR 1610.5-5). An RMP may be amended to consider a new proposal or action that does not conform to the RMP; implement new or revised policy that changes land use planning decisions; respond to new, intensified, or changed uses on public lands; or consider new information from resource assessments, monitoring, or scientific studies that change land use planning decisions.

The RMP amendment process is essentially the same as the RMP development process. The primary difference is that the RMP amendment process may be completed through the NEPA environmental assessment process rather than through the EIS process, depending on the level of complexity.

Plan Revision

An RMP revision is the preparation of a new RMP to replace an existing one (43 CFR 1610.5-6). Revisions of the RMP may be necessary to accommodate changes in resource or user needs, policies, or regulations. RMP revisions are prepared using the same procedures and documentation as for new RMPs.

CHAPTER 2

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CHAPTER 2 – ALTERNATIVES

2.1 INTRODUCTION

This chapter is a discussion of the alternatives that are different approaches to managing public lands resources and uses in the CFO. This chapter also contains an explanation of the alternative development process. Although this chapter presents the range of alternatives considered, only measures in Alternative B are part of the Proposed RMP. Measures presented in alternatives A, C, and D which differ from Alternative B will not be carried forward. Each alternative is a complete and reasonable set of desired future conditions (DFCs) based on the following:

- Resource management goals and objectives;
- Management actions to meet resource goals and objectives, where appropriate; and
- The allocations of land and resources/uses to facilitate multiple resource management.

These components of each alternative are integral in guiding future management of the public lands resources and uses in the CFO planning area. Four management alternatives ("no action" and three "action" alternatives) are presented in detail in this chapter and provide a range of choices for resolving the planning issues identified in Chapter 1. The three action alternatives also include those current management actions found in the no action alternative that would be carried forward into future management.

Analysis of impacts that would be associated with the alternatives is required by BLM planning regulations and CEQ regulations in 40 CFR 1500. Based on this comparative analysis, BLM managers are able to choose a preferred alternative.

2.2 HOW TO READ THIS CHAPTER

Chapter 2 begins with introductory materials regarding the development of the alternatives for the Cottonwood RMP/EIS, followed by a general narrative description of the alternatives. The chapter continues with a discussion of the alternatives considered but eliminated from further detailed analysis. The greater part of this chapter is provided in table format. **Table 2-1** (Cottonwood RMP Alternatives A, B, C, and D) includes all resources managed by the BLM in the CFO planning area. Within this table, only management measures presented in Alternative B are considered the Proposed RMP. All measures presented in alternatives A, C, and D which differ from Alternative B will not be carried forward and are included only for reference. Organized by resource, the table provides in-depth descriptions of the DFCs, management objectives, and management actions for each alternative. CFO resources and programs are divided into four categories and occur in the following order:

Resources
Air Quality
Geology
Soils
Water Resources
Vegetation—Forests
Vegetation—Weeds

Vegetation—Rangelands
Vegetation—Riparian and Wetlands
Wildlife and Special Status Wildlife
Aquatic Resources, Fish, and Special Status Fish
Special Status Plants
Wildland Fire Management
Cultural Resources
Paleontological Resources
Visual Resources
Resource Uses
Forest Products
Livestock Grazing
Minerals
Recreation
Renewable Energy
Transportation and Travel Management
Lands and Realty
Special Designations
Areas of Critical Environmental Concern and Research Natural Areas
~~Back Country Byways~~
National Trails
Wild and Scenic Rivers
Wilderness and Wilderness Study Areas
Watchable Wildlife Viewing Sites
Social and Economic Conditions
Native American Tribal Uses
Public Safety—Abandoned Mines and Hazardous Materials
Social and Economic Conditions

Table 2-2 is a summary of the impacts and differences among alternatives from implementing each alternative. The effects of the various management actions in each alternative are discussed in detail in Chapter 4, Environmental Consequences.

Acreage and other numbers used in the alternatives are approximate and serve for comparison and analytic purposes only. Data from geographic information systems (GIS) have been used in developing acreage calculations. Readers should not infer that they reflect exact measurements or precise calculations.

2.3 DEVELOPMENT OF ALTERNATIVES

The goal in formulating alternatives for an RMP and EIS is to identify combinations of management practices to resolve planning issues and provide guidance where direction for a resource or use is currently lacking or is insufficient in the existing planning documents. Each alternative is to

represent a complete and reasonable interdisciplinary land use plan to guide future management of the public lands resources/uses in the planning area. As discussed in Chapter 1, the CFO used a collaborative approach in developing the alternatives.

The CFO implemented the first five steps of the BLM Planning Process (see **Table 1-2** in Chapter 1) in developing alternatives: issue identification, planning criteria development, scoping, data collection, and assessment of current management. The issue identification and assessment of current management process began in 2003, when the BLM RMP interdisciplinary team extensively reviewed current land management decisions/direction from the Chief Joseph MFP (BLM 1981a). CFO team members identified key direction for resources/uses that could be carried forward into a new land use plan. They also identified resources/uses that need new management direction to address current laws, regulations, and policies or to respond to changes in conditions on the public lands managed by the CFO (see **Figure 1** in Chapter 1~~ Volume IV~~). In addition to scoping and collaboration efforts, the CFO identified nine major planning issues and carried them forward during the alternative-development phase. Planning issues are provided in detail in Chapter 1, Introduction.

Following the close of the scoping period in November 2004, the BLM began the alternative development process by assembling an interdisciplinary team consisting primarily of BLM resource specialists. The BLM also coordinated with the Nez Perce Tribe, Idaho Department of Fish and Game, planning area counties, USFWS, National Marine Fisheries Service, and other agencies (discussed further in Chapter 1, Section 1.7). Between November 2004 and July 2005, the interdisciplinary team, in conjunction with other agencies as necessary, developed management goals and objectives and subsequent management actions to meet those goals and objectives. During this process, consideration was given to public comments received during the public scoping process.

2.3.1 Alternatives Developed

Four management alternatives were developed to address nine major planning issues. To begin the alternative-development process, the interdisciplinary team identified current conditions, goals, and DFCs in consideration of public comment received through scoping, as well as direction established by BLM-wide initiatives and mandates. The development of management alternatives was guided by provisions of FLPMA and NEPA, as well as planning criteria listed in Chapter 1. Other laws, as well as BLM planning regulations and policy, also directed alternative considerations. All alternatives focus on appropriate land use plan-level decisions.

Each alternative provides direction for resource programs based on the development of specific goals and objectives and management actions. Each alternative describes specific issues influencing land management and emphasizes a different combination of resource uses, allocations, and restoration measures to address issues and resolve conflicts among users. Resource program goals are met in varying degrees across alternatives. Management scenarios for programs not tied to major planning issues or mandated by laws and regulations often contain few or no differences in management between alternatives. Alternatives may result in different long-term conditions, and established objectives may take longer than the life of the RMP to achieve.

Alternative A, the no action alternative, is a continuation of the current management and is based on existing planning decisions and amendments. Alternatives B, C, and D, the action alternatives, were developed with input received from scoping and from interdisciplinary team expertise.

2.4 GENERAL DESCRIPTION OF EACH ALTERNATIVE

All management under any of the alternatives would comply with state and federal laws, regulations, policies, and standards. Adaptive management would be incorporated across all alternatives as a process of monitoring, evaluating, and incorporating new and changing information into the ongoing management of resources and their uses.

As described above, each resource contains a goal or goals, objectives, and management actions to achieve those established goals and objectives. Resource goals do not vary by alternative, so ensuring that a level of consideration was provided to multiple and conflicting programs. Goals also served to direct the overall objectives and actions proposed within each of the alternatives. Standard operating procedures that result from law and regulation sometimes guided the goal statement, and thus the goal would be achieved under all alternatives.

Actions that are applicable to all alternatives are indicated by denoting those objectives and/or actions that are the "Same as Alternative A." These particular objectives and actions would be implemented regardless of which alternative is ultimately selected. For example, objectives and actions taken under air quality to meet the goal of complying with laws and regulations to protect public health and safety would be the same whether under Alternative A, B, C, or D. Similarly, actions that are applicable to more than one alternative, but not all alternatives, are indicated by denoting those objectives or actions as the "Same as Alternative B."

The management guidance that is common to all alternatives includes many decisions required in a land use plan and also brings forward relevant direction from the existing land use plan, the Chief Joseph MFP (BLM 1981a), and subsequent amendments and supplements. Agencies frequently do not have much discretion to vary proposed management procedures across alternatives and still comply with existing laws, regulations, and policies.

2.4.1 Alternative A (No Action)

Alternative A is the continuation of current management. Referred to as the no action alternative, it would continue present management practices based on the existing land use plan and plan amendments. The Chief Joseph MFP (BLM 1981a), as well as all amendments and revisions identified in Chapter 1, **Table 1-3** (Identification of Chief Joseph MFP Amendments and Other Documents Considered for Implementation-level Planning), would continue to guide management actions on CFO-administered lands. Direction contained in existing laws, regulations, policies, and standards would also continue to be implemented, sometimes superseding provisions of the 1981 MFP. Adopting the no action alternative, or current management (Alternative A), would preclude opportunities to incorporate new BLM direction and regulatory protective measures for newly listed species without undertaking numerous land use plan amendments. Key components of Alternative A include the following:

- Continue managing special status species and their habitats to provide for their continued presence in accordance with applicable laws and regulations;
- Manage wildland fire to protect people, property, and commodity resources;
- Continue to manage resource uses, such as grazing, mineral and energy development, and recreation to balance development and protect resources;

- Offer about 6,600 thousand board feet (MBF) as an Allowable Sale Quantity (ASQ) of saw timber from the commercial forest land base of 35,757 acres~~ (estimate treating 358 acres per year)~~;
- Continue to manage land tenure adjustments to protect resources while supporting appropriate development and improved public access to public lands;
- Continue to manage in accordance with Interim Strategies for Managing Anadromous Fish-producing Watersheds in Eastern Oregon and Washington, Idaho, and Portions of California (PACFISH) guidance (MFP Supplement for Fisheries and Water Quality Objectives [BLM 1985d]) to achieve or maintain riparian management objectives. Implement Riparian Habitat Conservation Area (RHCA) buffers totaling 24,290 acres to protect riparian areas and wetlands;
- Manage to achieve or maintain water quality and fisheries objectives within 39 prescription watersheds totaling 66,077 acres;
- Do not apply DFC standards on forest lands;
- Use Recreation Opportunity Spectrum (ROS) criteria to manage recreation activities, including 14,381 acres Primitive; 18,816 acres Semi-primitive Nonmotorized; 26,206 acres Semi-primitive Motorized; 55,988 acres Roaded-Natural; 27,349 acres Semi-Urban; 40 acres Urban; and 1,046 acres undesignated;
- Manage the Salmon River Scenic (16,245 acres), Salmon River Recreational (6,899 acres) and Clearwater River (3,583 acres) Special Recreation Management Areas (SRMA) for intensive recreation management;
- On 60 percent of BLM-administered lands in the CFO, continue to allow the public to travel cross-country (Open designation) with motorized vehicles. On 28 percent of BLM-administered lands, limit motorized vehicle to designated routes (Limited designation). On 12 percent of BLM-administered lands, do not allow motorized vehicle travel by the public yearlong (Closed designation); and
- Continue to manage existing special management areas, which include four ACECs (Craig Mountain, Elk City Landfill and American Hill Lake, Lower Lolo Creek, and Lower Salmon River ACECs totaling 23,366 acres) and six ACEC/RNAs (Captain John Creek, Lower and Middle Cottonwood Islands, Lucile Caves, Wapshilla Ridge, Long Gulch, and Skookumchuck ACEC/RNAs totaling 2,231 acres).

2.4.2 Alternative B (Proposed Resource Management Plan)

Alternative B is the agency's preferred alternative based on interdisciplinary team recommendations, analysis of environmental consequences of the alternatives, ~~and~~ public input during scoping, and comments received on the Draft RMP. Alternative B is the Proposed RMP. Alternative B emphasizes a balanced level of protection, restoration, and commodity production to meet needs for resource protection and resource use. This alternative reflects recommendations made by the interdisciplinary team in response to issues identified through the assessment of current management and concerns raised during public scoping. Key components of Alternative B include the following:

- Manage special status species with an emphasis on maintaining and improving habitat to provide for species' continued presence and conservation;

- Treat fuels on 40 percent of CFO lands (wildland-urban interface [WUI] or non-WUI) classified as moderate or high risk fire regime condition class (FRCC) 2 or 3 in any five-year period;
- Manage minerals and energy resources to balance development and protect resources;
- Offer 3,129 MBF as a Probable Sale Quantity (PSQ) of saw timber per year from the commercial forest land base of 40,598 acres~~ (estimate treating 242 acres per year)~~;
- Manage land tenure adjustments to improve resource management efficiency and protect public benefit, while supporting appropriate development and improved public access to public lands;
- Protect high-value resources through land withdrawals and protect resources through conservation easements;
- Implement the Aquatic and Riparian Management Strategy (**Appendix F**, Alternative B) (see Volume II~~I~~) to achieve or maintain riparian management objectives. Implement Riparian Conservation Area (RCA) buffers totaling 22,847 acres to protect riparian areas and wetlands;
- Strive to achieve or not preclude attainment of fisheries and riparian management objectives within ~~32~~28 restoration watersheds and ~~one~~ three conservation watershed totaling 64,481 acres;
- Apply DFC standards on 28,789 acres of forest lands;
- Use ROS criteria to manage recreation activities, including 6,200 acres Primitive; 36,495 acres Semi-primitive Nonmotorized; 23,593 acres Semi-primitive Motorized; 54,867 acres Roaded-Natural; 22,478 acres Rural; and 40 acres Urban (the same as Alternatives C and D);
- Manage the Salmon River Scenic (16,245 acres), Salmon River Recreational (6,899 acres), Clearwater River (3,583 acres), Lolo Creek (3,635 acres), Craig Mountain Wildlife Management Area (WMA) (24,884 acres) SRMAs for intensive recreation management (the same as Alternatives C and D);
- On BLM-administered lands in the CFO, do not allow the public to travel cross-country (Open designation) with motorized vehicles. On 87 percent of BLM-administered lands, limit motorized vehicle to designated routes (Limited designation). On 13 percent of BLM-administered lands, do not allow motorized vehicle travel by the public yearlong (Closed designation); and
- Create new special management areas where special values warrant such designation. Management would create or expand ~~five~~ six ACECs (Lower Salmon River, East Fork American River, American River Historic Sites District, Salmon River, Upper Lolo Creek, and Lower Lolo Creek ACECs totaling 34,187 acres~~32,562 acres~~), would maintain or reduce in size six existing ACEC/RNAs (Captain John Creek, Lower and Middle Cottonwood Islands, Wapshilla Ridge, Long Gulch, Lucile Caves, and Skookumchuck ACEC/RNAs totaling 1,966 acres, an overall reduction from Alternative A), and would ~~recommend~~ manage to protect four river segments (Lolo, Lake, Hazard, and Hard Creeks totaling 29.34 miles) found eligible and suitable for inclusion in the National Wild and Scenic Rivers System (NWSRS).

2.4.3 Alternative C

Alternative C emphasizes management strategies to preserve and protect ecosystem health across the CFO. This alternative includes active and specific measures to protect and enhance habitat for fish and wildlife, including special status species. This alternative reflects a reduction in resource production goals for forest products, forage, and minerals. Alternative C is the environmentally preferable alternative. Key components of Alternative C include the following:

- Manage special status species and vegetation with an emphasis on maintaining and improving important habitats;
- Treat fuels on 20 percent of CFO lands (WUI or non-WUI) classified as moderate or high risk FRCC 2 or 3 in any five-year period;
- Manage minerals and energy resources to provide for development, but with an emphasis on maximum conservation and protection of resources;
- Offer 3,101 MBF as a PSQ of saw timber per year from the commercial forest land base of 34,611 acres ~~(estimate treating 191 acres per year)~~;
- Manage land tenure adjustments to improve resource management efficiency and protect public benefit while supporting appropriate development and improved public access to public lands; place more emphasis on protecting high-value resources through conservation easements;
- Implement the Aquatic and Riparian Management Strategy (**Appendix F**, Alternative C) (see Volume II~~I~~) to maintain riparian management objectives. Implement RCA buffers totaling 27,624 acres to protect riparian areas and wetlands;
- Strive to achieve or not preclude attainment of fisheries and riparian management objectives within ~~32~~ 37 restoration watersheds and ~~one~~ 3 conservation watersheds totaling 68,359 acres;
- Apply DFC standards on 28,087 acres of forest lands;
- Use ROS criteria to manage recreation activities, including 6,200 acres Primitive; 36,495 acres Semi-primitive Nonmotorized; 23,593 acres Semi-primitive Motorized; 54,867 acres Roaded-Natural; 22,478 acres Rural; and 40 acres Urban (the same as Alternatives B and D);
- Manage the Salmon River Scenic (16,245 acres), Salmon River Recreational (6,899 acres), Clearwater River (3,583 acres), Lolo Creek (3,635 acres), Craig Mountain WMA (24,884 acres) SRMAs for intensive recreation management (the same as Alternatives B and D);
- On BLM-administered lands in the CFO, do not allow the public to travel cross-country (Open designation) with motorized vehicles. On 87 percent of BLM-administered lands, limit motorized vehicle to designated routes (Limited designation). On 13 percent of BLM-administered lands, do not allow motorized vehicle travel by the public yearlong (Closed designation). Under Alternative C, additional controls and restrictions would be implemented to emphasize the conservation and protection of resources such as wildlife, special status species, vegetation, soils, air quality, and riparian areas, while providing opportunities for off-highway vehicle (OHV) use through the development of trails and decreasing route densities; and
- Create new special management areas where special values warrant such designation. Management would create or expand nine ACECs (American River Historic Sites District, Craig Mountain, East Fork American River, Little Salmon River, Upper Lolo Creek, Lower

Lolo Creek, Lower Salmon River, Partridge/Elkhorn, and Salmon River ACECs totaling 58,695 acres), would maintain, or reduce in size, six existing ACEC/RNAs (Captain John Creek, Lower and Middle Cottonwood Islands, Wapshilla Ridge, Long Gulch, Lucile Caves, and Skookumchuck ACEC/RNAs totaling 1,966 acres), and would recommend four river segments (Lake, Hazard, Hard, and Lolo Creeks totaling 29.34 miles) found eligible and suitable for inclusion in the NWSRS.

2.4.4 Alternative D

Alternative D emphasizes commodity production, amenities, and services. Preservation would be secondary to restoring ecosystem health and vigor in forests, upland, and riparian areas. Economic return and community stability would be key considerations in management direction. Protection and enhancement of resources would be secondary, except as mandated by laws, regulations, and policies. Key components of Alternative D include the following:

- Manage special status species and habitats with an emphasis on maintaining and improving important terrestrial and aquatic habitats, but at a lower level than under Alternatives B and C;
- Treat fuels on 60 percent of CFO lands (WUI or non-WUI) classified as moderate or high risk FRCC 2 or 3 in any five-year period;
- Manage minerals and energy resources to maximize development, while meeting the minimal needs for the conservation and protection of resources;
- Offer 4,823 MBF as a PSQ of saw timber per year from the commercial forest land base of 45,190 acres ~~(estimate treating 361 acres per year)~~;
- Manage land tenure adjustments to improve resource management efficiency and protect public benefit, while supporting appropriate development and improved public access to public lands;
- Implement the Aquatic and Riparian Management Strategy (**Appendix F**, Alternative D) (see Volume II~~I~~) to achieve or maintain riparian management objectives. Implement RCA buffers totaling 20,710 acres to protect riparian areas and wetlands;
- Strive to achieve or not preclude attainment of fisheries and riparian management objectives within ~~27~~ 24 restoration watersheds and ~~one~~ three conservation watersheds totaling 52,118 acres;
- Do not apply DFC standards on forest lands;
- Use ROS criteria to manage recreation activities, including 6,200 acres Primitive; 36,495 acres Semi-primitive Nonmotorized; 23,593 acres Semi-primitive Motorized; 54,867 acres Roaded-Natural; 22,478 acres Rural; and 40 acres Urban (the same as Alternatives B and C);
- Manage the Salmon River Scenic (16,245 acres), Salmon River Recreational (6,899 acres), Clearwater River (3,583 acres), Lolo Creek (3,635 acres), Craig Mountain WMA (24,884 acres) SRMAs for intensive recreation management (the same as Alternatives B and C);
- On 16 percent of BLM-administered lands in the CFO, allow the public to travel cross-country (Open designation) with motorized vehicles. On 71 percent of BLM-administered lands, limit motorized vehicle to designated routes (Limited designation). On 13 percent of BLM-administered lands, do not allow motorized vehicle travel by the public yearlong (Closed designation); and

- Continue to manage two ACECs (Lower Salmon River and Salmon River ACECs totaling 21,958 acres) and maintain or reduce six ACEC/RNAs (Long Gulch, Lower and Middle Cottonwood Islands, Captain John Creek, Wapshilla Ridge, Lucile Caves, and Skookumchuck ACEC/RNAs totaling 1,966 acres) and would manage to protect four river segments (Lolo, Lake, Hazard, and Hard Creeks totaling 29.34 miles) found eligible and suitable for inclusion in the NWSRS. ~~One river segment, Lolo Creek, found eligible and suitable for inclusion in the NWSRS would be recommended for inclusion.~~

2.5 ALTERNATIVES CONSIDERED BUT NOT ANALYZED IN DETAIL

The BLM interdisciplinary team members discussed and considered different alternatives concepts and approaches based on professional expertise and public comments received during scoping. These alternatives were eventually dismissed because they do not meet the purpose of and need for the RMP or they violate laws, regulations, policies, or the BLM's multiple use mandate. Specific alternatives that were dismissed are detailed below.

Maximize Resource Protection by Eliminating Some or All Human Use in CFO. This alternative would have substantially restricted or eliminated all or some human use, including OHV use, boating, and livestock grazing within the CFO. This violates the FLPMA, which mandates that BLM lands provide multiple use opportunities. As such, this alternative was dismissed from further consideration.

Exclusive Use or Protection. The BLM did not consider alternatives and general management options proposing exclusive or maximum development, production, or protection of one resource at the expense of other resources/uses. The FLPMA mandates the BLM to manage public lands for multiple use and sustained yield. This eliminates alternatives such as closing all public lands to grazing or mineral leasing or managing only for fish, wildlife, and wilderness values at the exclusion of other resource considerations. In addition, resource conditions do not warrant planning area-wide prohibition of any particular use. Each alternative considered allows for some level of support, protection, or use of all resources in the CFO planning area. In some instances, the alternatives analyzed in detail do include various considerations for eliminating or maximizing individual resource values or uses in specific areas where conflicts exist.

Allow Unregulated Recreation. This alternative would have allowed unencumbered, unregulated recreation in CFO. Allowing unregulated recreation would mean that users could travel anywhere on CFO planning area public lands via automobile, OHV, mountain bike, foot, or horseback. In addition, private and commercial users would be allowed unregulated access to and use of the Snake, Salmon, and Clearwater Rivers. Such use would lead to increased user days and more user conflicts throughout the CFO, which would lead to additional impacts on the natural, cultural, scenic, wilderness, and recreational resources. As such, these resources would not be protected. Therefore, this alternative was dismissed from further consideration.

2.6 COMPARISON OF ALTERNATIVES

Table 2-1, Description of Alternatives A, B, C, and D, provides the four alternatives. In general, only those resources and uses that have been identified as being a major planning issue have differences between the alternatives. Actions that are applicable to all alternatives are indicated by denoting those objectives or actions that are the "Same as Alternative A." These particular

objectives and actions would be implemented regardless of which alternative is ultimately selected. Similarly, actions that are applicable to more than one alternative, but not all alternatives, are indicated by denoting those objectives or actions as the "Same as Alternative B," for example.

Table 2-1
Description of Alternatives A, B, C, and D

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
AIR QUALITY **Goal: Comply with laws and regulations to meet public health and safety requirements.**			
Objective 1. Manage prescribed fire and wildland fire use in a manner to minimize degradation of the airshed.	**Objective 1. Same as Alternative A.**	**Objective 1. Same as Alternative A.**	**Objective 1.** Same as Alternative A.
Action 1. Manage wildland fire, to include prescribed fire, while meeting federal and IDEQ air quality and opacity standards and follow related regulations. This includes applicable Tribal regulations under the US Environmental Protection Agency's (US EPA) Federal Air Rules for Reservations.	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.
Action 2. Include minimization of impacts to air quality as a criterion in Wildland Fire Situation Analysis, Wildland Fire Implementation Plans, and Prescribed Fire Burn Plans.	**Action 2.** Same as Alternative A.	**Action 2.** Same as Alternative A.	**Action 2.** Same as Alternative A.
Objective 2. Cooperate with other members of the Montana/Idaho Airshed Group on smoke management.	**Objective 2. Same as Alternative A.**	**Objective 2. Same as Alternative A.**	**Objective 2. Same as Alternative A.**
Action 1. Coordinate smoke management through the Montana/Idaho Airshed Group and, when smoke is expected to impact reservation lands, the Nez Perce Tribe.~~Follow procedures outlined in the Montana/Idaho Airshed Group Smoke Management Plan.~~	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
Action 2. Planned activities shall be conducted in accordance with the Idaho State Implementation Plan of the Clean Air Act (upon completion), and other plans and policies that control smoke emission on public lands.	**Action 2.** Same as Alternative A.	**Action 2.** Same as Alternative A.	**Action 2.** Same as Alternative A.
Action 3. Ensure treatments using prescribed fire are consistent with US EPA Interim Air Quality Policy on Wildland and Prescribed Fires, or more current direction.	**Action 3.** Same as Alternative A.	**Action 3.** Same as Alternative A.	**Action 3.** Same as Alternative A.
Objective 3. Ensure that all authorized activities on public lands meet federal and IDEQ air quality standards and regulatory requirements.	**Objective 3. Same as Alternative A.**	**Objective 3. Same as Alternative A.**	**Objective 3. Same as Alternative A.**
Action 1. Prescribe and implement best management practices (BMPs) to reasonably prevent degradation of air quality when authorizing actions.	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.
Action 2. Specify that compliance with federal and IDEQ standards is required when authorizing actions.	**Action 2.** Same as Alternative A.	**Action 2.** Same as Alternative A.	**Action 2.** Same as Alternative A.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
GEOLOGY **Goal: Provide opportunities for the use of geologic resources while protecting resource values.**			
Objective 1. Identify and allow for appropriate uses of significant geologic features.	**Objective 1. Promote the scientific, educational, and recreational use and access to unique features.**	**Objective 1. Same as Alternative B.**	**Objective 1. Same as Alternative B.**
Action 1. No similar action.	**Action 1.** Identify where unique geologic features exist.	**Action 1.** Same as Alternative B.	**Action 1.** Same as Alternative B.
Action 2. No similar action.	**Action 2.** Develop plans for interpretive, recreational trails and informative sites near unique features.	**Action 2.** Same as Alternative B.	**Action 2.** Same as Alternative B.
SOILS **Goal: Maintain and restore watershed health, soil productivity, and areas of fragile soils.**			
Objective 1. Ensure that management actions for other resources incorporate adequate soil protection.	**Objective 1. Same as Alternative A.**	**Objective 1. Same as Alternative A.**	**Objective 1. Same as Alternative A.**
Action 1. Implement 1981 MFP Road Guidelines and 1985 Riparian Management Guidelines.	**Action 1.** Implement BMPs (**Appendix B**, BMPs [see Volume II~~I~~]) for soil-disturbing activities.	**Action 1.** Same as Alternative B.	**Action 1.** Same as Alternative B.
Action 2. Apply appropriate reclamation and measures to mitigate adverse impacts to soils and water resources on impacted sites.	**Action 2.** Same as Alternative A.	**Action 2.** Same as Alternative A.	**Action 2.** Same as Alternative A.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
Objective 2. Manage soil-disturbing activities to protect landslide-prone areas and minimize potential for mass wasting.	**Objective 2. Same as Alternative A.**	**Objective 2. Same as Alternative A.**	**Objective 2. Same as Alternative A.**
Action 1. During project development, inventory and record~~identify and map~~ sensitive land types (e.g., highly erosive soils, unstable or landslide prone land types, slopes exceeding 55 percent).	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.
Action 2. Design projects to avoid or minimize the potential for adverse impacts in landslide prone areas and sensitive land types and adjacent areas.	**Action 2.** Same as Alternative A.	**Action 2.** Same as Alternative A.	**Action 2.** Same as Alternative A.
Action 3. Inventory and prioritize existing roads on sensitive land types for restoration (decommissioning, obliteration, partial recontouring).	**Action 3.** Same as Alternative A.	**Action 3.** Same as Alternative A.	**Action 3.** Same as Alternative A.
Action 4. Assess naturally occurring failures for potential stabilization and/or restoration.	**Action 4.** Same as Alternative A.	**Action 4.** Same as Alternative A.	**Action 4.** Same as Alternative A.
Action 5. No similar action.	**Action 5.** Before authorizing any soil-disturbing activity on slopes exceeding 55 percent and/or in areas exhibiting potential slope instability, evaluate to determine potential landslide risk. Landslide-risk delineation and evaluation shall include field assessment by an interdisciplinary team. When high-risk landslide areas are	**Action 5.** Same as Alternative B.	**Action 5.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
	identified, avoid management activities that would adversely affect slope stability.~~An interdisciplinary team will identify site specific design features and BMPs where necessary to minimize accelerated erosion or mass wasting risks when activities are proposed that:~~ • ~~contribute to accelerated soil movement, and/or~~ • ~~occur in areas identified as having mass wasting potential or have indicators of potential slope instability.~~		
Action 6. No similar action.	**Action 6.** A 100-foot slope distance (or greater where warranted) landslide protection zone will be implemented around landslides and landslide-prone areas.	**Action 6.** Same as Alternative B.	**Action 6.** Same as Alternative B.
WATER RESOURCES **Goal: Manage water resources to protect beneficial uses and to meet or exceed state and federal water quality standards. Maintain or improve the chemical, physical, and biological integrity of water resources.**			
Objective 1. Comply with all state and federal requirements to protect ~~public~~ water quality~~s~~.	**Objective 1. Same as Alternative A.**	**Objective 1. Same as Alternative A.**	**Objective 1. Same as Alternative A.**
Action 1. Implement 1981 MFP Road Guidelines and 1985 Riparian Management Guidelines.	**Action 1.** Implement all applicable BMPs (**Appendix B**, BMPs [see Volume II~~I~~]) to limit nonpoint source pollution and minimize degradation of water quality.	**Action 1.** Same as Alternative B.	**Action 1.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
Action 2. No similar action.	**Action 2.** Conduct implementation and effectiveness monitoring commensurate with the level of on-the-ground activities and BMPs. Incorporate adaptive changes to management direction in response to monitoring results. The appropriate monitoring will be identified during project development and assessment.	**Action 1.** Same as Alternative B.	**Action 1.** Same as Alternative B.
Action 3. No similar action.	**Action 3.** Land uses involving hazardous materials will include appropriate spill contingency plan and project design measures to avoid impacts to sources of drinking water.	**Action 3.** Same as Alternative B.	**Action 3.** Same as Alternative B.
Objective 2. Protect and maintain watersheds so that they appropriately capture, retain, and release water of quality that meets or exceeds state and federal standards.	**Objective 2. Same as Alternative A.**	**Objective 2. Same as Alternative A.**	**Objective 2. Same as Alternative A.**
Action 1. Identify and confirm specific identified watershed problems and sources, inventory road erosion problem areas, inventory ground and surface water sources, and evaluate flood damage areas.	**Action 1.** Identify all applicable or appropriate state and federal standards for each 6th hydrologic unit code (HUC) watershed containing BLM land and determine or estimate (with respect to those standards) the status of receiving waters that drain or receive drainage from BLM land.	**Action 1.** Same as Alternative B.	**Action 1.** Same as Alternative B.
Action 2. Monitor programs for trend, utilization, actual use, water quality,	**Action 2.** Conduct implementation and effectiveness monitoring	**Action 2.** Same as Alternative B.	**Action 2.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
aquatic wildlife, and other programs in accordance with BLM policy.	commensurate with the level of on-the-ground activities. Adaptively change management direction to avoid adverse effects on water quality. The appropriate implementation and effectiveness monitoring will be identified during project development and assessment. For ongoing activities and programs, develop interdisciplinary monitoring plans as needed.		
Action 3. Develop plans to alleviate watershed problems where public lands have been identified as contributing source.	**Action 3.** If receiving waters are nonconforming (nonachievement or maintenance) of designated beneficial uses, state and federal water quality standards and total maximum daily loads [TMDLs]), evaluate contributing sources on BLM land. Identify potential source reduction/remediation options, and feasibility of implementation. If action is required or warranted, develop an action plan. Implement actions based on urgency, cost-effectiveness, or other criteria.	**Action 3.** Same as Alternative B.	**Action 3.** Same as Alternative B.
Action 4. No similar action.	**Action 4.** Cooperate with adjacent landowners, agencies, tribes, individuals, communities, and municipalities to meet achievement or maintenance of designated beneficial uses, state and federal water quality standards, and TMDLs.	**Action 4.** Same as Alternative B.	**Action 4.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
Action 5. Promote activities that help achieve fisheries and water quality objectives and DFCs in prescription watersheds (BLM 1985d and 1989c).	**Action 5.** Promote activities that help achieve, or do not preclude achievement of, DFCs in restoration watersheds (**Appendix C**, Conservation and Restoration Watersheds, Alternative B [see Volume II~~I~~]). Restoration subwatersheds were identified because biological and physical processes and functions do not reflect natural conditions because of past and long-term land disturbances.	**Action 5.** Same as Alternative B, except refer to **Appendix C**, Conservation and Restoration Watersheds, Alternative C (see Volume II~~I~~).	**Action 5.** Same as Alternative B, except refer to **Appendix C**, Conservation and Restoration Watersheds, Alternative D (see Volume II~~I~~).
Action 6. No similar action.	**Action 6.** Watersheds that provide water for public consumption should be managed to meet state water quality standards established for the protection of drinking water quality, and land management activities should be consistent with applicable state source water protection plans.	**Action 6.** Same as Alternative B.	**Action 6.** Same as Alternative B.
Action 7. No similar action.	**Action 7.** In restoration watersheds, project design should limit predicted increased water yield or peak flows to less than 15 percent above baseline. Equivalent clearcut area is an accepted surrogate technique for indicating increased water yield and typically should remain below 30 percent equivalent clearcut area based upon channel sensitivity.	**Action 7.** Same as Alternative B.	**Action 7.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
Objective 3. Manage streams to maintain or restore designated beneficial use support status and, where feasible, achieve delisting of Clean water Act 303(d)-listed stream segments.	**Objective 3. Same as Alternative A.**	**Objective 3. Same as Alternative A.**	**Objective 3. Same as Alternative A.**
Action 1. No similar action.	**Action 1.** Cooperate with adjacent landowners, agencies, tribes, and others to meet beneficial use criteria.	**Action 1.** Same as Alternative B.	**Action 1.** Same as Alternative B.
Action 2. No similar action.	**Action 2.** Do not implement management actions that preclude maintenance or achievement of defined designated beneficial uses. Implement appropriate restoration actions to support achievement of defined designated beneficial uses.	**Action 2.** Same as Alternative B.	**Action 2.** Same as Alternative B.
Objective 4. Maintain fish habitat by pursuing water quality and watershed health objectives.	**Objective 4. No similar objective. See Objective 2 for corresponding management regarding protecting and maintaining watersheds.**	**Objective 4. Same as Alternative B.**	**Objective 4. Same as Alternative B.**
Action 1. Supplement (Addendum 1 [BLM 1989c]) existing fisheries and water quality objectives (BLM 1985d) with updated tables depicting objective watersheds and allowable threshold criteria.	**Action 1.** No similar action. See Objective 2, Action 5 for corresponding management regarding DFCs in restoration watersheds (**Appendix C**, Conservation and Restoration Watersheds, Alternative B [see Volume II~~I~~]).	**Action 1.** Similar to Alternative B, refer to **Appendix C**, Conservation and Restoration Watersheds, Alternative C (see Volume II~~I~~).	**Action 1.** Similar to Alternative B, refer to **Appendix C**, Conservation and Restoration Watersheds, Alternative D (see Volume II~~I~~).

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
Action 2. Supplement (Addendum 2 [BLM 1989d]) existing fisheries and water quality objectives (BLM 1985d) for specific Management Indicator Species, stream channel type, and DFC criteria for objective watersheds.	**Action 2.** No similar action. See Objective 2, Action 5 for corresponding management regarding DFCs in restoration watersheds (**Appendix C**, Conservation and Restoration Watersheds, Alternative B [see Volume II~~I~~]).	**Action 2.** Same as Alternative B, except refer to **Appendix C**, Conservation and Restoration Watersheds, Alternative C (see Volume II~~I~~).	**Action 2.** Same as Alternative B, except refer to **Appendix C**, Conservation and Restoration Watersheds, Alternative D (see Volume II~~I~~).
Objective 5. Secure water rights to ensure water availability for multiple use management.	**Objective 5. Same as Alternative A.**	**Objective 5. Same as Alternative A.**	**Objective 5. Same as Alternative A.**
Action 1. Prepare necessary documentation in support of water rights program.	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.
Action 2. Maintain claim files, data bases, and ~~maps~~ data for water rights.	**Action 2.** Same as Alternative A.	**Action 2.** Same as Alternative A.	**Action 2.** Same as Alternative A.
Action 3. Review other federal, state, and private water right applications and provide appropriate response.	**Action 3.** Same as Alternative A.	**Action 3.** Same as Alternative A.	**Action 3.** Same as Alternative A.
Objective 6. Prevent or reverse impacts to flood-prone areas.	**Objective 6. Same as Alternative A.**	**Objective 6. Same as Alternative A.**	**Objective 6. Same as Alternative A.**
Action 1. No actions would be permitted that would cause definable adverse impacts to the natural and beneficial functions of flood-prone areas.	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.
Action 2. No similar action.	**Action 2.** Identify opportunities for restoration of impaired flood-prone areas, including removal of hazardous materials and nonessential structures	**Action 2.** Same as Alternative B.	**Action 2.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
	that adversely impact function of flood-prone areas.		
Objective 7. Comply with all state and federal requirements to protect groundwater.	**Objective 7. Same as Alternative A.**	**Objective 7. Same as Alternative A.**	**Objective 7. Same as Alternative A.**
Action 1. Land management activities shall provide for protection and maintenance of aquifers.~~Land management activities should provide for protection and/or maintenance of aquifers, protection from risks, and anticipated ground water uses.~~	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.
VEGETATION—FORESTS **Goal: Manage forests to maintain or improve ~~forest vigor~~forest health, composition, structure, ~~and~~ diversity consistent with site potential, and Historical Range of Variability.**			
Objective 1. Implement various management strategies on particular tracts of forest as needed.	**Objective 1. Manage for ~~forest vigor~~forest health and/or habitat diversity in DFC blocks (Figure 6; see Volume IV of the Draft RMP/EIS) of 1,000 or more forested acres.**	**Objective 1. Manage for ~~forest vigor~~forest health and/or habitat diversity in DFC blocks (Figure 7; see Volume IV of the Draft RMP/EIS) of 500 or more forested acres.**	**Objective 1. No similar objective.**
Action 1. Intensive Management: 24,257 acres are classified for intensive forest practices and will be managed to maximize timber production on a sustained yield basis.	**Action 1.** Design treatment projects to enhance ~~forest vigor~~forest health and/or habitat diversity (consistent with **Appendix D**, Desired Future Conditions for Forest Vegetation/Wildlife Habitat, Alternative B [see Volume II~~I~~]) ~~where consistent with fuels reduction goals in~~	**Action 1.** Same as Alternative B, except refer to **Appendix D**, Desired Future Conditions for Forest Vegetation/Wildlife Habitat, Alternative C (see Volume II~~I~~).	**Action 1.** No similar action.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
	~~areas identified in community wildfire protection plans as WUI.~~		
Action 2. Extensive Management: 11,500 acres are classified for extensive management and will be managed for timber production on a sustained yield basis; however, few intensive practices will be applied.	**Action 2.** To the extent practicable, emphasize retention of large tree size ponderosa pine *(Pinus ponderosa)*; western larch *(Larix occidentalis)*; and/or Douglas-fir *(Pseudotsuga menziesii)* in dry conifer sites. ~~Manage species composition of the large tree size preferring ponderosa pine *(Pinus ponderosa)*, western larch *(Larix occidentalis)*, and/or Douglas-fir *(Pseudotsuga menziesii)*.~~	**Action 2.** Same as Alternative B.	**Action 2.** No similar action.
Action 3. Custodial Management: 37,549 acres are classified for custodial forest management and will not be managed for timber production.	**Action 3.** Use site-specific analysis to determine adequate/appropriate canopy closure for large tree class.	**Action 3.** Same as Alternative B.	**Action 3.** No similar action.
~~**Objective 2. Adopt the Idaho Forest Practices Act as guidance for timber harvest activities.**~~	~~**Objective 2. Within municipal watersheds and WUIs, manage existing old growth stands to maintain and/or contribute to the restoration of pre-fire suppression characteristics.**~~	~~**Objective 2. Same as Alternative B.**~~	~~**Objective 2. Same as Alternative B.**~~
Action ~~1~~4. Apply direct control measures recommended by the US Forest Service Insect and Disease Center on a case-by-case basis to forest management areas and areas of high visual or recreation value as funding and manpower are made available.	**Action ~~1~~4.** Define old growth according to best science and local knowledge.	**Action ~~1~~4.** Same as Alternative B.	**Action ~~1~~4.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
~~**Action 2.** No similar action.~~	~~**Action 2.** Utilize community wildfire protection plans to identify municipal watersheds and WUIs.~~	~~**Action 2.** Same as Alternative B.~~	~~**Action 2.** Same as Alternative B.~~
~~**Action 3.** No similar action.~~	~~**Action 3.** Identify and record old growth stands. Use field inventory to determine if they meet the pre-fire suppression criteria.~~	~~**Action 3.** Same as Alternative B.~~	~~**Action 3.** Same as Alternative B.~~
Objective ~~3~~2. Treat areas by FRCC priority~~. per the FMP.~~	**Objective ~~3~~2. In areas not included in Objective 1 (DFC blocks identified on Figure 6 [see Volume IV of the Draft RMP/EIS]) manage for multiple resource values that include but are not limited to habitat management, grazing, etc.~~or Objective 2 (within municipal watersheds and WUIs), manage for multiple resource values.~~**	**Objective ~~3~~2. Same as Alternative B, except refer to Figure 7 (see Volume IV of the Draft RMP/EIS).**	**Objective ~~3~~2. Same as Alternative B.**
Action 1. Highest hazard and risk areas or FRCC 2 and 3 forested lands in WUI areas will be the priority for treatment. Lower hazard/risk areas and FRCC 1 in WUI will be the next priority.~~FRCC 2 and FRCC 3 forested lands in WUI areas will be the priority for treatment; forest lands in FRCC 1 in WUI areas will be the next priority. Stands in Historic Fire Regime I, II, and III will be treated to enable fire to play its natural role. Dry ponderosa pine and dry conifer cover types,~~	**Action 1.** Perform site-specific analysis on forest vegetation project proposals.	**Action 1.** Same as Alternative B.	**Action 1.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
~~whitebark pine stands and old growth stands are considered to be priority forest vegetation communities to be treated to alter forest structure to bring these vegetation communities to their desired future conditions.~~			
Action 2. No similar action.	**Action 2.** When applying treatments in the vicinity of stands which are large tree and/or old growth stands, these treatments will contribute toward the restoration of the structure and composition of old growth stands according to the pre fire-suppression old growth characteristics.	**Action 2**. Same as Alternative B.	**Action 2.** No similar action.
Action 3. No similar action.	**Action -3**. In the stands described in Action 2, if outbreaks of insect or disease, or mortality related to wildland fire or other disturbance, threaten the structure, silvicultural treatments may be applied that reduce potential mortality. These treatments would attempt to maximize retention of the structure while minimizing loss due to the disturbance.	**Action 3.** Same as Alternative B.	**Action 3.** No similar action.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
VEGETATION—WEEDS **Goal: Prevent establishment of new invasive plant species and reduce infested acreage of established invasive plant species.**			
Objective 1. Continue weed control efforts by working with partner agencies to inventory, prevent, control, and monitor weed populations.	**Objective 1. Work with partners in coordinated weed management areas to develop and implement annual treatment strategies.**	**Objective 1. Same as Alternative B.**	**Objective 1. Same as Alternative B.**
Action 1. Follow current direction in the BLM's Partners Against Weeds: An Action Plan for the Bureau of Land Management (BLM 1996) that prescribes a cooperative, integrated approach.	**Action 1.** Prioritize the use of BLM resources in areas with established partnerships.	**Action 1.** Same as Alternative B.	**Action 1.** Same as Alternative B.
Action 2. Maintain Cooperative Weed Management Areas throughout the planning area.	**Action 2.** No similar action. Cooperative Weed Management Areas are addressed in Objective 1 above.	**Action 2.** Same as Alternative B.	**Action 2.** Same as Alternative B.
Action 3. No similar action.	**Action 3.** Support or conduct weed inventories with partners to provide for the efficient prioritization of weed control activities.	**Action 3.** Same as Alternative B.	**Action 3.** Same as Alternative B.
Action 4. No similar action.	**Action 4.** Support or conduct education and awareness activities with partners. Utilize local, state, and national expertise and outreach opportunities.	**Action 4.** Same as Alternative B.	**Action 4.** Same as Alternative B.
Action 5. No similar action.	**Action 5.** Implement prevention activities (**Appendix E**, Best Management Practices for Weed	**Action 5.** Same as Alternative B.	**Action 5.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
	Prevention [see Volume II]) as part of field activities to avoid contributing to spread of invasive plants from BLM actions.		
Action 6. No similar action.	**Action 6.** Implement invasive plant control methods including, but not limited to, physical, mechanical, biological, and chemical control.	**Action 6.** Same as Alternative B.	**Action 6.** Same as Alternative B.
Action 7. No similar action.	**Action 7.** Rehabilitate treated areas to provide competitive plant communities and avoid establishment of invasive plant populations.	**Action 7.** Same as Alternative B.	**Action 7.** Same as Alternative B.
Action 8. No similar action.	**Action 8.** Monitor control and rehabilitation projects to document results and provide a record for future activities. When funding is available, control activities will be monitored annually and Rehabilitation activities will be monitored two years post treatment.	**Action 8.** Same as Alternative B.	**Action 8.** Same as Alternative B.
Objective 2. Rehabilitate areas that have been affected by weeds.	**Objective 2. No similar objective.**	**Objective 2. Same as Alternative B.**	**Objective 2. Same as Alternative B.**
Action 1. Identify areas where rehabilitation or restoration would be cost effective and successful.	**Action 1.** No similar action.	**Action 1.** Same as Alternative B.	**Action 1.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
Objective 3. No similar objective.	**Objective 3. Outside of weed management areas, implement treatment strategies in accordance with other resource goals.**	**Objective 3. Same as Alternative B.**	**Objective 3. Same as Alternative B.**
Action 1. No similar action.	**Action 1.** Conduct weed inventories to provide for the efficient prioritization of weed control activities.	**Action 1.** Same as Alternative B.	**Action 1.** Same as Alternative B.
Action 2. No similar action.	**Action 2.** Implement prevention activities (**Appendix E**, Best Management Practices for Weed Prevention [see Volume II~~I~~]) as part of field activities to avoid contributing to spread of invasive plants from BLM actions.	**Action 2.** Same as Alternative B.	**Action 2.** Same as Alternative B.
Action 3. No similar action.	**Action 3.** Implement invasive plant control methods including, but not limited to, physical, mechanical, biological, and chemical control.	**Action 3.** Same as Alternative B.	**Action 3.** Same as Alternative B.
Action 4. No similar action.	**Action 4.** Rehabilitate treated areas to provide competitive plant communities and avoid establishment of invasive plant populations.	**Action 4.** Same as Alternative B.	**Action 4.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
VEGETATION—RANGELANDS **Goal: Maintain or improve rangeland plant community health (diversity, composition, function, and vigor) relative to site potential.**			
Objective 1. No similar objective.	**Objective 1. In perennial plant communities, maintain existing native plants and manage desirable nonnative plants for diversity, production, soil stability and nutrient cycling.**	**Objective 1. Same as Alternative B.**	**Objective 1. Same as Alternative B.**
Action 1. No similar action.	**Action 1.** Monitor rangelands on an annual basis in accordance with priority and assess rangelands in relation to standards and guides a minimum of every 10 years to assure resource objectives are being met.	**Action 1.** Same as Alternative B.	**Action 1.** Same as Alternative B.
Action 2. No similar action.	**Action 2.** When assessments determine objectives are not being met, implement interdisciplinary-based management changes or projects utilizing available technologies and plant materials. Prioritize use of native species.	**Action 2.** Same as Alternative B.	**Action 2.** Same as Alternative B.
Action 3. No similar action.	**Action 3**. Promote native plant community health in Craig Mountain and Rattlesnake Ridge to achieve resource objectives (wildlife, soils, and sensitive plant communities).	**Action 3**. Promote native plant community health in Craig Mountain, Rattlesnake Ridge, Salmon River and canyon grasslands to achieve resource objectives (wildlife, soils, and sensitive plant communities).	**Action 3**. Same as Alternative B.
Objective 2. No similar objective.	**Objective 2. Plant communities dominated by nonnative annual**	**Objective 2. Same as Alternative B.**	**Objective 2. No similar objective.**

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
	plants will be managed to promote soil stability and rehabilitation opportunities.		
Action 1. No similar action.	**Action 1.** Monitor and assess rangelands a minimum of every 10 years to assure resource objectives are being met.	**Action 1.** Same as Alternative B.	**Action 1.** No similar action.
Action 2. No similar action.	**Action 2.** When assessments determine objectives are not being met, implement interdisciplinary-based management changes or projects utilizing available technologies and plant materials. Prioritize use of native species.	**Action 2.** Same as Alternative B.	**Action 2.** No similar action.
Action 3. No similar action.	**Action 3.** Implement actions to accomplish the conversion of nonnative plant communities to desired plant communities. Consider the use of available technologies and plant materials to achieve the desired outcome.	**Action 3.** Same as Alternative B.	**Action 3.** No similar action.
VEGETATION—RIPARIAN AND WETLANDS **Goal: Maintain or improve riparian and wetland areas to achieve Proper Functioning Condition (PFC). Manage for riparian plant community types appropriate for the site.**			
Objective 1. Manage riparian habitats to protect the waterbody and adjacent environment to maintain wildlife and fish habitat, water quality, and aquatic resources	**Objective 1. Strive to improve degraded riparian and wetland vegetation relative to site potential and potential natural vegetation composition and habitat diversity.**	**Objective 1. Same as Alternative B.**	**Objective 1. Same as Alternative B.**

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
at a high natural level.			
Action 1. Improvement of riparian condition may be accomplished in a variety of ways. Examples include implementation of Riparian Management Guidelines and implementation of BMPs for riparian management units (BLM 1985d).	**Action 1.** Improvement of riparian condition may be accomplished in a variety of ways, examples include: (1) riparian restoration (e.g., plantings, seedings, recontouring, placement of topsoil, control of undesirable vegetation); (2) modifying lands uses that further degrade riparian conditions (e.g., livestock grazing; vehicle use, recreation use); and (3) implementation of Aquatic and Riparian Management Strategy (**Appendix F**, Aquatic and Riparian Management Strategy, Alternative B [see Volume II~~I~~]).	**Action 1.** Same as Alternative B, except refer to **Appendix F,** Aquatic and Riparian Management Strategy, Alternative C (see Volume II~~I~~).	**Action 1.** Same as Alternative B, except refer to **Appendix F**, Aquatic and Riparian Management Strategy, Alternative D (see Volume II~~I~~).
Action 2. Establish Riparian Management Units consistent with guidelines (BLM 1985d) and RHCAs (refer to PACFISH [BLM and Forest Service 1995]).	**Action 2.** Establish RCAs consistent with the Aquatic and Riparian Management Strategy (**Appendix F**, Aquatic and Riparian Management Strategy, Alternative B [Volume II~~I~~]).	**Action 2.** Similar to Alternative B, refer to **Appendix F**, Aquatic and Riparian Management Strategy, Alternative C (see Volume II~~I~~).	**Action 2.** Similar to Alternative B, refer to **Appendix F**, Aquatic and Riparian Management Strategy, Alternative D (see Volume II~~I~~).
Action 3. Maintain the following buffers: • Lakes – 500 ft for wildlife and scenic improvement • Major rivers – 500 ft for wildlife and scenic improvement • Class I Streams: ▪ Thermal zone – tallest tree height or 75 ft. for	**Action 3.** Use the following criteria in establishing RCAs. **Category 1 – Fish-bearing streams:** RCAs consist of the stream and the area on either side of the stream extending from the edges of the active channel to the top of the inner gorge, or to the outer edges of the 100-year floodplain, or to the outer edges of the riparian vegetation, or 300 feet slope	**Action 3.** Use the following criteria in establishing RCAs. **Category 1 – Fish-bearing streams:** RCAs consist of the stream and the area on either side of the stream extending from the edges of the active channel to the top of the inner gorge, or to the outer edges of the 100-year floodplain, or to the outer edges of the riparian vegetation, or 300 feet slope	**Action 3.** Use the following criteria in establishing RCAs. **Category 1 – Fish-bearing streams:** RCAs consist of the stream and the area on either side of the stream extending from the edges of the active channel to the top of the inner gorge, or to the outer edges of the 100-year floodplain, or to the outer edges of the riparian vegetation, or 300 feet slope

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
wildlife, thermal and scenic improvement ▪ Sediment zone – 4Xslope(%)+50ft. or tallest tree height+25% for soil protection • Class II Streams (Selected) ▪ Thermal zone – tallest tree height or 50 ft. for wildlife, thermal and scenic improvement ▪ Sediment zone – 2Xslope(%)+25 ft. for soil protection • Class II Streams (General) – 75 ft. (37.5 each side) for wildlife and thermal cover • Mechanical site preparations not allowed within sediment buffer zones PACFISH: Use the following criteria in establishing RHCAs: **Category 1 – Fish-bearing streams:** Interim RHCAs consist of the stream and the area on either side of the stream extending from the edges of the active channel to the top of the inner gorge, or to the outer edges of the 100-	distance (600 feet, including both sides of the stream channel), whichever is greatest. **Category 2 – Permanently flowing non-fish-bearing streams:** RCAs consist of the stream and the area on either side of the stream extending from the edges of the active channel to the top of the inner gorge, or to the outer edges of the 100-year floodplain, or to the outer edges of the riparian vegetation, or **150 feet** slope distance (**300 feet**, including both sides of the stream channel), whichever is greatest. **Category 3 - Ponds, lakes, reservoirs and wetlands greater than 1 acre:** RCAs consist of the body of water or wetland and the area to the outer edges of the riparian vegetation, or to the extent of the seasonally saturated soil, or **150 feet** slope distance from the edge of the maximum pool elevation of constructed ponds and reservoirs or from the edge of the wetland, pond or lake, whichever is greatest. **Category 4 – Seasonally flowing or intermittent streams, and wetlands less than 1 acre:** This category includes features with high variability in size and site-specific characteristics. The RCA is the area from the edges of	distance (600 feet, including both sides of the stream channel), whichever is greatest. **Category 2 – Permanently flowing non-fish-bearing streams:** RCAs consist of the stream and the area on either side of the stream extending from the edges of the active channel to the top of the inner gorge, or to the outer edges of the 100-year floodplain, or to the outer edges of the riparian vegetation, or **225 feet** slope distance (**450 feet**, including both sides of the stream channel), whichever is greatest. **Category 3 - Ponds, lakes, reservoirs and wetlands greater than 1 acre:** RCAs consist of the body of water or wetland and the area to the outer edges of the riparian vegetation, or to the extent of the seasonally saturated soil, or **150 feet** slope distance from the edge of the maximum pool elevation of constructed ponds and reservoirs or from the edge of the wetland, pond or lake, whichever is greatest. **Category 4 – Seasonally flowing or intermittent streams, and wetlands less than 1 acre:** This category includes features with high variability in size and site-specific characteristics. The RCA is the area from the edges of	distance (600 feet, including both sides of the stream channel), whichever is greatest. **Category 2 – Permanently flowing non-fish-bearing streams:** RCAs consist of the stream and the area on either side of the stream extending from the edges of the active channel to the top of the inner gorge, or to the outer edges of the 100-year floodplain, or to the outer edges of the riparian vegetation, or **150 feet** slope distance (**300 feet**, including both sides of the stream channel), whichever is greatest. **Category 3 - Ponds, lakes, reservoirs and wetlands greater than 1 acre:** RCAs consist of the body of water or wetland and the area to the outer edges of the riparian vegetation, or to the extent of the seasonally saturated soil, or **150 feet** slope distance from the edge of the maximum pool elevation of constructed ponds and reservoirs or from the edge of the wetland, pond or lake, whichever is greatest. **Category 4 – Seasonally flowing or intermittent streams, and wetlands less than 1 acre:** This category includes features with high variability in size and site-specific characteristics. The RCA is the area from the edges of

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
year floodplain, or to the outer edges of the riparian vegetation, or to a distance equal to the height of two site-potential trees, or 300 feet slope distance (600 feet, including both sides of the stream channel), whichever is greatest. **Category 2 – Permanently flowing non-fish-bearing streams:** Interim RHCAs consist of the stream and the area on either side of the stream extending from the edges of the active channel to the top of the inner gorge, or to the outer edges of the 100-year floodplain, or to the outer edges of the riparian vegetation, or to a distance equal to the height of one site-potential tree, or 150 feet slope distance (300 feet, including both sides of the stream channel), whichever is greatest. **Category 3 – Ponds, lakes, reservoirs and wetlands greater than 1 acre:** Interim RHCAs consist of the body of water or wetland and the area to the outer edges of the riparian vegetation, or to the extent of the seasonally saturated soil, to the extent of moderately and highly unstable areas, or to a distance equal to the height of one site-potential tree, or 150 feet slope distance from the edge of the maximum pool elevation of	the stream channel, wetland, the extent of riparian vegetation or ~~80~~ 100 **feet** slope distance, whichever is greatest. Nonforested rangeland ecosystems Category 1 and 2 streams extent of 100 year flood plain	the stream channel, wetland, the extent of riparian vegetation or **125 feet** slope distance, whichever is greatest. Nonforested rangeland ecosystems Category 1 and 2 streams extent of 100 year flood plain.	the stream channel, wetland, the extent of riparian vegetation or **50 feet** slope distance, whichever is greatest. Nonforested rangeland ecosystems Category 1 and 2 streams extent of 100 year flood plain.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
constructed ponds and reservoirs or from the edge of the wetland, pond or lake, whichever is greatest. **Category 4 – Seasonally flowing or intermittent streams, wetlands less than 1 acre, landslides, and landslide-prone areas:** This category includes features with high variability in size and site-specific characteristics. At a minimum, the interim RHCAs must include: a. the extent of landslides and landslide-prone areas b. the intermittent stream channel and the area to the top of the inner gorge c. the intermittent stream channel or wetland and the area to the outer edges of the riparian vegetation d. for Priority Watersheds, the area from the edges of the stream channel, wetland, landslide, or landslide prone area to a distance equal to the height of one site-potential tree, or 100 feet slope distance, whichever is greatest e. for watersheds not identified as Priority Watersheds, the			

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
area from the edges of the stream channel, wetland, landslide, landslide-prone area to a distance equal to the height of one-half site potential tree, or 50 feet slope distance, whichever is greatest Nonforested rangeland ecosystems Category 1 and 2 streams extent of 100 year flood plain. (refer to PACFISH [BLM and Forest Service 1995] for specific program standards and guidelines)			
Action 4. Within the buffer strips, management activities will be conducted to minimize wildlife and stream habitat disturbance and protect the soil and vegetative cover to reduce introduction of sediment into the streams. Along Class I and Selected Class II streams, no timber harvest will be permitted in the buffer except to benefit wildlife or to improve the stream habitat conditions. • In Class II and sediment buffer areas, harvesting is allowed but stream shade must be provided. • Logging methods should provide minimal soil disturbance and minimize removal of undergrowth	**Action 4.** Management activities within RCAs will be in accordance with the Aquatic and Riparian Management Strategy (**Appendix F**, Aquatic and Riparian Management Strategy, Alternative B [see Volume II~~I~~]).	**Action 4.** Same as Alternative B, except refer to **Appendix F,** Aquatic and Riparian Management Strategy, Alternative C (see Volume II~~I~~).	**Action 4.** Same as Alternative B, except refer to **Appendix F**, Aquatic and Riparian Management Strategy, Alternative D (see Volume II~~I~~).

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
vegetation and nonmerchantable trees. • Yarding within any buffer zone should be kept to a minimum and yarding through stream channels should be avoided. • Felling of trees should be outward from the stream and buffer area. • No slash or downed timber should be left in the zone between the channel high water marks.			
Objective 2. Develop management plans for specific resource areas and resource uses.	**Objective 2. Develop activity plans that support achievement of aquatic and riparian management objectives.**	**Objective 2. Same as Alternative B.**	**Objective 2. Same as Alternative B.**
Action 1. Develop aquatic HMPs for specific groups of streams occurring within aquatic management zones.	**Action 1.** Review and update as necessary existing aquatic HMPs. Prioritize where HMPs should be developed to support conservation and restoration of aquatic and riparian resources.	**Action 1.** Same as Alternative B.	**Action 1.** Same as Alternative B.
Action 2. No similar action.	**Action 2.** Updated and new aquatic HMPs will include identification of resource objectives, needed management actions, and monitoring. Updated and new HMPs will use an interdisciplinary team and coordination with appropriate state, federal, tribal, and private parties.	**Action 2.** Same as Alternative B.	**Action 2.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
Objective 3. No similar objective.	**Objective 3. Manage streams, riparian areas, and wetlands (hereafter referred to as "sites") in PFC so their condition rating is not degraded.**	**Objective 3. Same as Alternative B.**	**Objective 3. Same as Alternative B.**
Action 1. Survey watersheds to ensure that they provide for the proper infiltration, retention, and release of water appropriate to soil type, vegetation, climate, and landform to provide for proper nutrient cycling, hydrologic cycling, and energy flow.	**Action 1.** Identify and record sites at risk of degradation. This would include fish-bearing streams; perennial, intermittent, ephemeral non fish-bearing streams; and ponds, lakes, and wetlands.	**Action 1.** Same as Alternative B.	**Action 1.** Same as Alternative B.
Action 2. Survey riparian-wetland areas to ensure that they are in properly functioning condition appropriate to soil type, climate, geology, and landform to provide for proper nutrient cycling, hydrologic cycling, and energy flow.	**Action 2.** Prioritize, inventory and/or monitor riparian/wetlands sites that are "functional at risk" or "nonfunctional" every 3 to 5 years (effectiveness monitoring). ~~Emphasis will be on streams/riparian habitats that provide habitat for listed or BLM sensitive fish. Implementation monitoring will be dependent on site-specific requirements of the project or program as determined by the BLM interdisciplinary team and/or Section 7 consultation.~~	**Action 2.** Same as Alternative B.	**Action 2.** Same as Alternative B.
Action 3. Survey stream channels and flood-prone areas to ensure that they are properly functioning relative to the geomorphology and climate to provide for proper nutrient cycling, hydrologic	**Action 3.** No similar action. See Objective 3, Actions 1 and 2 for corresponding management.	**Action 3.** Same as Alternative B.	**Action 3.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
cycling, and energy flow.			
Action 4. Recreation sites should be located in "non-critical" aquatic and terrestrial habitats.	**Action 4.** Implement appropriate management activities that maintain PFC ratings for riparian and wetland habitats (see Objective 1, Actions 1 and 4 for corresponding management).	**Action 4.** Same as Alternative B.	**Action 4.** Same as Alternative B.
Objective 4. No similar objective.	**Objective 4. Move non-functional or functional-at-risk sites toward PFC.**	**Objective 4. Same as Alternative B.**	**Objective 4. Same as Alternative B.**
Action 1. Improve one-half of the 15.5 miles of streams in poor condition to fair or better condition within 15 years.	**Action 1.** If feasible, implement appropriate management activities (see Objective 1, Actions 1 and 4 for corresponding management) to restore or move sites toward PFC. This would include fish-bearing streams; perennial, intermittent, ephemeral non fish-bearing streams; and ponds, lakes, and wetlands.	**Action 1.** Same as Alternative B.	**Action 1.** Same as Alternative B.
Action 2. Ensure that surface and ground water on public lands comply with the Idaho water quality standards.	**Action 2.** Assess the factors causing sites to be non-functional or functional-at-risk.	**Action 2.** Same as Alternative B.	**Action 2.** Same as Alternative B.
Action 3. No similar action.	**Action 3.** Improve degraded riparian and wetland vegetation relative to ecological status (poor, fair, good, excellent) using appropriate Aquatic and Riparian Management Strategy guidelines (**Appendix F**, Alternative B [see Volume II~~I~~]).	**Action 3.** Similar to Alternative B, refer to **Appendix F**, Aquatic and Riparian Management Strategy, Alternative C (see Volume II~~I~~).	**Action 3.** Similar to Alternative B, except refer to **Appendix F**, Aquatic and Riparian Management Strategy, Alternative D (see Volume II~~I~~).

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
WILDLIFE AND SPECIAL STATUS WILDLIFE **Goal: Manage habitat to contribute to the conservation of special status species habitats and to maintain biological diversity of wildlife.**			
Objective 1. Manage vegetation resources in accordance with wildlife needs.	**Objective 1. No similar objective. See objectives and actions referred to in actions below for corresponding management.**	**Objective 1. Same as Alternative B.**	**Objective 1. Same as Alternative B.**
Action 1. Lands identified for less intensive wildlife management will be coordinated with other land uses and may include a variety of actions (e.g., fencing, management facilities, controls on vehicle use, and use of wildlife management guidelines during project development, etc.).	**Action 1.** No similar action. See Objective 8, Actions 2, 3, 4, and 6 for corresponding management.	**Action 1.** Same as Alternative B.	**Action 1.** Same as Alternative B.
Action 2. Terrestrial Wildlife Habitat – Identifies and prioritizes inventory, monitoring, and research needs for wildlife.	**Action 2.** No similar action. See Objective 2, Action 2 for corresponding management.	**Action 2.** Same as Alternative B.	**Action 2.** Same as Alternative B.
Objective 2. Protect, maintain, or restore habitat for threatened and endangered species in a manner that contributes to the delisting of the species.	**Objective 2. Same as Alternative A.**	**Objective 2. Same as Alternative A.**	**Objective 2. Same as Alternative A.**
Action 1. Review ongoing activities to determine if cumulative direct or indirect negative impacts to federally listed, proposed, or candidate species (see **Appendix G**, Special Status Species [Volume II~~I~~]) or their habitats	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
are occurring as a result of discretionary actions. If needed, modify the activity to avoid or minimize adverse impacts to the species and suitable habitats. Review of ongoing activities will be conducted by journey level Area Biologist/Ecologist. As needed, review of needed modifications to avoid adverse effects will include appropriate conferencing/consultation with USFWS, staff members, and BLM Field Manager.			
Action 2. Before authorizing new federal actions within areas providing suitable habitat for federally listed, proposed, and candidate species (see **Appendix G**, Special Status Species [Volume II~~I~~]), determine if cumulative direct or indirect negative impacts to the species potentially could occur as a result of discretionary actions. If needed, modify the activity to avoid or minimize adverse impacts to the species and suitable habitats.	**Action 2.** Same as Alternative A.	**Action 2.** Same as Alternative A.	**Action 2.** Same as Alternative A.
Action 3. Promote threatened, endangered, proposed, and candidate species (see **Appendix G**, Special Status Species [Volume II~~I~~]) conservation through land tenure adjustments, conservation easements,	**Action 3. Same as Alternative A.**	**Action 3.** Same as Alternative A.	**Action 3.** Same as Alternative A.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
and cooperative planning.			
Action 4. If a species is delisted, it will be managed under the appropriate USFWS delisting requirements, applicable conservation strategy, Idaho Department of Fish and Game management guidance, and/or in accordance with BLM policy for sensitive species.	**Action 4.** Same as Alternative A.	**Action 4.** Same as Alternative A.	**Action 4.** Same as Alternative A.
Action 5. The BLM will coordinate and/or consult with USFWS on recovery efforts and actions that may impact listed species.	**Action 5.** Same as Alternative A.	**Action 5.** Same as Alternative A.	**Action 5.** Same as Alternative A.
Action 6. No similar action.	**Action 6.** If a new species is listed or critical habitat is designated, the appropriate management actions would be implemented to insure that recovery for the species would not be retarded or impeded in the long term. In consultation with USFWS the appropriate conservation and restoration measures and BMPs would be identified.	**Action 6.** Same as Alternative B.	**Action 6.** Same as Alternative B.
Action 7. No similar action.	**Action 7.** Upon development of new, updated, or amended listed species recovery plan; where applicable and feasible incorporate appropriate conservation and restoration measures.	**Action 7.** Same as Alternative B.	**Action 7.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
Objective 3. Promote conservation or restoration measures to support recovery for the listed bald eagle and its habitats.	**Objective 3. Same as Alternative A.**	**Objective 3. Same as Alternative A.**	**Objective 3. Same as Alternative A.**
Action 1. Implement applicable conservation and restoration measures identified within the Pacific Bald Eagle Recovery Plan.	**Action 1.** Implement bald eagle resource management and conservation measures identified in **Appendix V**. Implement applicable conservation and restoration measures identified within the Pacific Bald Eagle Recovery Plan.~~Same as Alternative A.~~	**Action 1.** Same as Alternative B.~~Same as Alternative A.~~	**Action 1.** Same as Alternative ~~A~~B.
Action 2. In cooperation with Idaho Department of Fish and Game, USFWS, and others, update existing information to record new nesting site locations, key communal roost areas, key foraging areas, and primary winter use areas (important habitat niches). See **Appendix S** (Species-specific Habitat Definitions) (see Volume III) for bald eagle suitable habitat and other definitions.	**Action 2. Same as Alternative A.**	**Action 2.** Same as Alternative A.	**Action 2.** Same as Alternative A.
Action 3. Upon identification of important habitat niches, design and implement site specific protection, conservation, or restoration plans. As needed, review ongoing activities within 2.5 miles of bald eagle nests or within the area designated in the local bald eagle nest management plan, or	**Action 3. Same as Alternative A.**	**Action 3.** Same as Alternative A.	**Action 3.** Same as Alternative A.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
within 1 mile of communal roost sites where local consultation has not been completed.			
Action 4. Avoid implementing activities near nest sites during the breeding season (February 1 to August 15) or follow the local bald eagle plan guidance near communal roost sites and key foraging areas during the wintering season (November 1 to March 1).	**Action 4.** Same as Alternative A.	**Action 4.** Same as Alternative A.	**Action 4.** Same as Alternative A.
Action 5. Upon identification of important habitat niches, monitor bald eagle use and habitat conditions. Bald eagle use and habitat condition of nesting sites, key communal roost sites, and key foraging areas would be monitored annually.	**Action 5.** Same as Alternative A.	**Action 5.** Same as Alternative A.	**Action 5.** Same as Alternative A.
Action 6. Continue annual mid-winter bald eagle surveys for long-term trend information.	**Action 6.** Same as Alternative A.	**Action 6.** Same as Alternative A.	**Action 6.** Same as Alternative A.
Action 7. Maintain or improve habitat for bald eagle forage species within foraging areas. Emphasis management would occur within 0.5-mile of mainstem rivers or large water bodies that are utilized by bald eagles during the winter.	**Action 7.** Same as Alternative A.	**Action 7.** Same as Alternative A.	**Action 7.** Same as Alternative A.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
Action 8. Maintain or improve nesting or roosting habitat that will provide for future bald eagle use.	**Action 8.** Same as Alternative A.	**Action 8.** Same as Alternative A.	**Action 8.** Same as Alternative A.
Action 9. No similar action.	**Action 9.** Implement appropriate actions from National Bald Eagle Management Guidelines (USFWS 2006a) in the event bald eagle is delisted. Emphasis will be on avoiding or minimizing negative affects on foraging and roosting bald eagles or on any future nesting activity that may occur on BLM lands.	**Action 9.** Same as Alternative B.	**Action 9.** Same as Alternative B.
Objective 4. Promote conservation or restoration measures to support recovery for the listed Canada lynx and its habitats.	**Objective 4. Same as Alternative A.**	**Objective 4. Same as Alternative A.**	**Objective 4. Same as Alternative A.**
Action 1. Implement applicable conservation and restoration measures identified in strategy *Canada Lynx Conservation Assessment and Strategy* (Ruediger et al. 2000) and/or Recovery Plan for Canada lynx. See **Appendix S** (Species-specific Habitat Definitions) (Volume III) for lynx habitat and other definitions.	**Action 1.** Implement Canada lynx resource management and conservation measures identified in **Appendix V**. See **Appendix S** (Species-specific Habitat Definitions) (Volume III) for lynx habitat and other definitions. ~~Same as Alternative A.~~	**Action 1.** Same as Alternative ~~A~~B.	**Action 1.** Same as Alternative ~~A~~B.
Action 2. Upon finalization of the Forest Service and BLM *Northern Rockies Lynx Amendment* (Forest Service and BLM 2004), adopt and implement the selected alternative.	**Action 2.** ~~Same as Alternative A~~. When appropriate, implement applicable conservation and restoration measures identified in *Canada Lynx Conservation Assessment and Strategy* (Ruediger et al.	**Action 2.** Same as Alternative B. ~~Same as Alternative A~~.	**Action 2.** Same as Alternative B.~~Same as Alternative A~~.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
	2000), future Recovery Plan developed for Canada lynx, and any recovery plan or conservation strategy updates.		
Action 3. With new information or specific habitat surveys, update Lynx Analysis Unit maps and lynx habitat within Lynx Analysis Units that are associated with BLM lands within the planning area. Lynx Analysis Unit boundaries should not be changed unless such modification is supported by supporting rationale or is in error. Where applicable, this would be coordinated between CFO, BLM Idaho State Office, USFWS, and Forest Service.	**Action 3.** Same as Alternative A.	**Action 3.** Same as Alternative A.	**Action 3.** Same as Alternative A.
Action 4. Where applicable, 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 lynx habitats occurring in Lynx Analysis Units to achieve desired conditions in accordance with *Canada Lynx Conservation Assessment and Strategy* and/or *Northern Rockies Lynx Amendment*.	**Action 4.** ~~Same as Alternative A.~~ Where applicable, 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 lynx habitats occurring in Lynx Analysis Units to achieve desired conditions in accordance with *Canada Lynx Conservation Assessment and Strategy.*	**Action 4.** Same as Alternative B. ~~Same as Alternative A.~~	**Action 4.** Same as Alternative B. ~~Same as Alternative A.~~
Action 5. Where applicable, projects will be designed to promote current and future denning habitat in Lynx Analysis Units to achieve desired conditions in	**Action 5.** Same as Alternative A.	**Action 5.** Same as Alternative A.	**Action 5.** Same as Alternative A.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
accordance with *Canada Lynx Conservation Assessment and Strategy* and/or *Northern Rockies Lynx Amendment*.			
Action 6. Where applicable, management actions will support achievement of connectivity (i.e., travel corridors and/or travel habitat) within and between Lynx Analysis Units and/or suitable lynx habitat (**Appendix S**, Species-specific Habitat Definitions [see Volume III]).	**Action 6.** Same as Alternative A.	**Action 6.** Same as Alternative A.	**Action 6.** Same as Alternative A.
Objective 5. Promote conservation or restoration measures to support recovery for the listed gray wolf *(Canis lupus)* and its habitats.	**Objective 5. Same as Alternative A.**	**Objective 5. Same as Alternative A.**	**Objective 5. Same as Alternative A.**
Action 1. Implement applicable conservation and restoration measures identified within the Recovery Plan for the gray wolf. Emphasis will be placed on den and rendezvous sites and critical big game winter ranges with known established wolf packs. See **Appendix S** (Species-specific Habitat Definitions) (see Volume III) for gray wolf key habitat areas and other definitions.	**Action 1.** Implement gray wolf resource management and conservation measures identified in **Appendix V**. See **Appendix S** (Species-specific Habitat Definitions) (Volume III) for gray wolf key habitat areas and other definitions. ~~Same as Alternative A.~~	**Action 1.** Same as Alternative ~~A~~B.	**Action 1.** Same as Alternative B~~A~~.
Action 2. Minimize or avoid disturbance within one mile of known occupied denning sites and rendezvous areas.	**Action 2.** Same as Alternative A.	**Action 2.** Same as Alternative A.	**Action 2.** Same as Alternative A.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
Action 3. The State of Idaho is primarily responsible for management of gray wolves in Idaho. The State of Idaho has primary responsibility for managing wolves south of Interstate 90 as the designated agent for USFWS. Where applicable, the BLM will coordinate with the State of Idaho, ~~and~~ USFWS, and the Nez Perce Tribe for wolf management.	**Action 3.** Same as Alternative A.	**Action 3.** Same as Alternative A.	**Action 3.** Same as Alternative A.
Objective 6. No similar objective.	**Objective 6. Promote conservation or restoration measures to support recovery for the listed northern Idaho ground squirrel and its habitats.**	**Objective 6. Same as Alternative B.**	**Objective 6. Same as Alternative B.**
Action 1. No similar action.	**Action 1.** Implement northern Idaho ground squirrel resource management and conservation measures identified in **Appendix V** (Volume III). ~~Implement applicable conservation and restoration measures identified within the Recovery Plan for the northern Idaho ground squirrel.~~ Emphasis will occur in occupied habitats or adjacent suitable habitats. See **Appendix S**, Species-specific Habitat Definitions (Volume III), for northern Idaho ground squirrel suitable habitat and other definitions.	**Action 1.** Same as Alternative B.	**Action 1.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
Action 2. No similar action.	**Action 2.** Develop site-specific management plans for colonies/populations found on BLM lands.	**Action 2.** Same as Alternative B.	**Action 2.** Same as Alternative B.
Action 3. No similar action.	**Action 3.** In cooperation with Idaho Department of Fish and Game, USFWS, and others, survey, identify, and map populations and suitable habitats.	**Action 3.** Same as Alternative B.	**Action 3.** Same as Alternative B.
Action 4. No similar action.	**Action 4.** If populations are found on BLM lands, cooperate in monitoring northern Idaho ground squirrel population trends and habitat conditions.	**Action 4.** Same as Alternative B.	**Action 4.** Same as Alternative B.
Action 5. No similar action.	**Action 5.** Protect northern Idaho ground squirrel from adverse disturbances and impacts that would preclude recovery. Avoid disturbing activities in areas with known populations during the above-ground activity season (site dependent: late March to mid-September), and avoid adverse ground-disturbing activities at all times of the year in areas with colonies of northern Idaho ground squirrels and in suitable habitats.	**Action 5.** Same as Alternative B.	**Action 5.** Same as Alternative B.
Objective 7. Promote conservation measures for the federal candidate yellow-billed cuckoo *(Coccyzus americanus)* and its habitats.	**Objective 7. Same as Alternative A.**	**Objective 7. Same as Alternative A.**	**Objective 7. Same as Alternative A.**

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
Action 1. ~~Maintain and update records of all suitable habitat for yellow-billed cuckoo.~~ See **Appendix S** (Species-specific Habitat Definitions) (Volume III) for yellow-billed cuckoo suitable habitat and other definitions.	**Action 1.** Implement yellow-billed cuckoo resource management and conservation measures identified in **Appendix V**. See **Appendix S** (Species-specific Habitat Definitions) (Volume III) for yellow-billed cuckoo suitable habitat and other definitions.~~Same as Alternative A.~~	**Action 1.** Same as Alternative ~~A~~B.	**Action 1.** Same as Alternative ~~A~~B.
Action 2. Maintain and update records of all suitable habitat for yellow-billed cuckoo. Within suitable habitat, participate in surveys for yellow-billed cuckoo and map new populations as found. Systematic inventories will continue to be conducted in cooperation with other agencies.	**Action 2.** Same as Alternative A.	**Action 2.** Same as Alternative A.	**Action 2.** Same as Alternative A.
Action 3. In suitable habitat conduct periodic surveys to determine if these habitats are occupied.	**Action 3.** Same as Alternative A.	**Action 3.** Same as Alternative A.	**Action 3.** Same as Alternative A.
Action 4. Maintain or enhance suitable habitat, primarily large stands of cottonwoods. Where appropriate, update or develop management plans for suitable habitat, particularly in areas with known populations, as well as restoration areas.	**Action 4.** Same as Alternative A.	**Action 4.** Same as Alternative A.	**Action 4.** Same as Alternative A.
Objective 8. Manage BLM sensitive species habitats so actions do not contribute to species decline or contribute to federal listing.	**Objective 8. Same as Alternative A.**	**Objective 8. Same as Alternative A.**	**Objective 8. Same as Alternative A.**

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
Action 1. Maintain a database that includes sensitive species, identifies suitable habitats and important habitat niches (**Appendix G**, Special Status Species [Volume II~~I~~]).	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.
Action 2. Promote sensitive species surveys, monitoring, and studies that support conservation efforts while updating existing habitat records.	**Action 2.** Same as Alternative A.	**Action 2.** Same as Alternative A.	**Action 2.** Same as Alternative A.
Action 3. For each new project, compile, develop and implement appropriate species and/or habitat-specific BMPs to avoid or minimize adverse impacts to sensitive species and their habitats. Compile and develop CFO programmatic-level activity BMPs that may be used as needed for ongoing projects or for new project development.	**Action 3.** Same as Alternative A	**Action 3.** Same as Alternative A.	**Action 3.** Same as Alternative A.
Action 4. No similar action.	**Action 4.** Manage wildlife habitats using established guilds to guide project design and to strive for appropriate habitat diversity while achieving project objectives **Appendix G**, Special Status Species [Volume II~~I~~]).	**Action 4.** Activity and project design will strive to achieve habitat quality and diversity for BLM sensitive species by providing for critical habitat components and guilds for BLM sensitive species **Appendix G**, Special Status Species [Volume II~~I~~]).	**Action 4.** Same as Alternative C.
Action 5. Promote sensitive species conservation through land tenure adjustments, conservation easements, restoration projects, and cooperative	**Action 5.** Same as Alternative A.	**Action 5.** Same as Alternative A.	**Action 5.** Same as Alternative A.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
planning **Appendix G**, Special Status Species [Volume II~~I~~]).			
Objective 9. Identify areas for use restrictions and specific actions based on wildlife habitat requirements.	**Objective 9. Manage rangeland and forest vegetation habitats to provide for diversity, cover, structure, forage, and security to contribute to healthy populations of rangeland and forest dependent species and other wildlife.**	**Objective 9. Same as Alternative B.**	**Objective 9. Same as Alternative B.**
Action 1. Elk Habitat Coordinating Requirements and guidelines will be followed for all actions.	**Action 1.** To minimize or avoid adverse effects to elk habitat, Elk Habitat Management Coordinating Guidelines can be used as needed during project design analysis, authorization, and implementation of land uses that affect elk habitat.~~No similar action.~~	**Action 1.** ~~No similar action.~~Same as Alternative B.	**Action 1.** No similar action.
Action 2. Improve one-half of the 3,840 acres of poor condition range to fair condition and one-half of the 13,766 acres of fair condition range to good condition within 20 years.	**Action 2.** Strive to maintain or improve ecological condition status of native grassland plant communities. Priority areas will include bighorn sheep, elk, and deer important winter and spring range areas. Emphasis management areas will include the Craig Mountain WMA and Rattlesnake Ridge areas.	**Action 2.** Strive to maintain or improve ecological condition status of native grassland plant communities. Priority areas will include bighorn sheep, elk, and deer important winter and spring range areas. Emphasis management areas will include the Craig Mountain WMA, Rattlesnake Ridge areas and Lower Salmon River.	**Action 2.** Same as Alternative B.
Action 3. No similar action.	**Action 3.** Priority subwatersheds or areas where BLM programmatic management direction will support progress towards attainment of DFC	**Action 3.** Priority subwatersheds or areas where BLM programmatic management direction will support progress towards attainment of DFC	**Action 3.** No similar action.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
	(**Appendix D**, Desired Future Conditions for Forest Vegetation/Wildlife Habitat, Alternative B [see Volume II~~I~~]) for forest wildlife habitat vegetation includes BLM forested contiguous areas that are greater than 1,000 acres.	(**Appendix D**, Desired Future Conditions for Forest Vegetation/Wildlife Habitat, Alternative C [see Volume II~~I~~]) for forest wildlife habitat vegetation includes BLM forested contiguous areas that are greater than 500 acres.	
Action 4. Lands identified for intensive wildlife management will be managed primarily for wildlife habitat enhancement (e.g., HMPs) and identifies typical Actions (e.g., prescribed burning, grazing restrictions, vehicle use restrictions/closures, management facilities, cover/forage ratios, etc.). Identify specific areas for intensive wildlife management needs and development of HMPs. Identify specific actions for area. Other activities occurring within these WMAs will comply with overall management objectives for that area. Following are areas identified for intensive wildlife management. These areas will be primarily allocated to wildlife habitat management and enhancement: (1) Craig Mountain WMA (2) Upper Cottonwood Creek Area (3) Rattlesnake Ridge Area (4) Marshall Mountain Area	**Action 4.** Develop new activity plans or update as necessary existing activity plans (e.g., HMPs) to provide for the implementation of the appropriate management and conservation measures that will promote the maintenance or enhancement of habitats for rangeland and forest dependent species and other wildlife.	**Action 4.** Same as Alternative B.	**Action 4.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
(5) Whiskey Creek Area (6) Crooked River Area (7) American River Area (8) East Fork of American River (9) Little Elk Creek Area (10) John Day Area (11) Lake Creek – French Creek Area (12) Little Salmon River Area (13) Lolo Creek Refer to **Appendix T**, Cottonwood Field Office Habitat Management Plans (Volume III), for a list of developed HMPs within the planning area and emphasis species and/or habitat management.			
Action 5. No similar action.	**Action 5.** During the development and review of new project proposals, final design criteria will consider and minimize or eliminate where possible adverse impacts to wildlife travel corridors and fragmentation of habitats when consistent with project objectives. Emphasis areas for identification and validation of travel corridors and habitat connectivity will include riparian and ridge top areas.	**Action 5.** Same as Alternative B.	**Action 5.** Same as Alternative B.
Action 6. Snag Management – Identifies snag management criteria for timber harvest areas, identifies snag maintenance levels and provisions for	**Action 6.** Manage riparian and upland areas to provide for snag-dependent species (**Appendix D**, Desired Future Conditions for Forest	**Action 6.** Same as Alternative B.	**Action 6.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
replacement snags.	Vegetation/Wildlife Habitat, Alternative B [see Volume II~~I~~]).		
Action 7. No similar action.	**Action 7.** In priority management areas for public motorized vehicle use, programmatic direction is to authorize no net increase in roads and trails open to motorized vehicle use on BLM lands and/or BLM controlled roads/trails (**Figure 48**, Motorized Vehicle Use Management–Alternatives B and D [see Volume IV of the Draft RMP/EIS]): • Craig Mountain (27,821 acres) • Lower Salmon River (22,765 acres) • John Day/Wet Gulch (3,473 acres) • Slate Creek (1,274 acres) • East of Riggins (12,521 acres) • Sheep – Hat Creek – Denny Creek (5,195 acres) • Elk Creek/Little Elk Creek (1,446 acres) • Hazard – Hard – Little Salmon River Face (3,663 acres) • Trail Creek – Boulder Creek (4,502 acres) • Marshall Mountain (11,719 acres) • Lolo Creek (5,177 acres)	**Action 7.** In priority management areas for motorized vehicle use, programmatic direction is to authorize no net increase in roads and trails open to motorized vehicle use on BLM lands and/or BLM controlled roads/trails (**Figure 49**, Motorized Vehicle Use Management–Alternative C [see Volume IV of the Draft RMP/EIS]): • Craig Mountain (27,821 acres) • Lower Salmon River (22,765 acres) • John Day/Wet Gulch (3,473 acres) • Slate Creek (1,274 acres) • East of Riggins (12,521 acres) • Elk Creek/Little Elk Creek (1,446 acres) • Trail Creek – Boulder Creek (4,502 acres) • Clearwater River Face/Pardee (1,970 acres) In priority management areas for motorized vehicle use, programmatic direction is to strive for a decrease in roads and trails open to motorized vehicle use on BLM lands and/or BLM controlled roads/trails:	**Action 7.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
	• Clearwater River Face/Pardee (1,970 acres) Programmatic direction does not apply to authorized access across BLM-managed lands to nonfederal lands. In addition to above listed "emphasis areas," general road management policy will be to maintain or improve wildlife security when possible and consistent with other resources within the planning area.	• Sheep – Hat Creek – Denny Creek (5,195 acres) • Hazard – Hard – Little Salmon River Face (3,663 acres) • Marshall Mountain (11,719 acres) • Lolo Creek (5,177 acres) • Elk City Township (12,979 acres) Programmatic direction does not apply to access across BLM-managed lands to nonfederal lands. In addition to above listed "emphasis areas," general road management policy will be to maintain or improve wildlife security when possible and consistent with other resources within the planning area.	
Action 8. No similar action.	**Action 8.** Identify and undertake opportunities to decommission, partially obliterate, or fully obliterate roads and trails not needed for long-term management (more than 10 years). Emphasis areas will be in restoration and conservation watersheds (**Appendix C**, Conservation and Restoration Watersheds, Alternative B [see Volume II~~I~~]).	**Action 8.** Same as Alternative B, except refer to **Appendix C**, Conservation and Restoration Watersheds, Alternative C.	**Action 8.** Same as Alternative B, except refer to **Appendix C**, Conservation and Restoration Watersheds, Alternative D.
Action 9. No similar action.	**Action 9.** Public education would be conducted to inform the public about special status and other native wildlife	**Action 9.** Same as Alternative B.	**Action 9.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
	species, species habitat needs, ecosystem functions, and BLM conservation and restoration management strategies.		
Action 10. No similar action.	**Action 10.** The following guidelines can be used when designing vegetation projects in big game habitat: • To provide forage areas, promote the creation of openings less than 40 acres (preferred less than 20 acres) and/or maximum width is less than 1,000 feet. • Openings should be bordered on all sides by cover not less than 800 feet wide. • Rejuvenate and enhance the shrub and herb component of big game winter ranges by simulating or promoting natural disturbance regimes for early-seral habitats.	**Action 10.** Same as Alternative B.	**Action 10.** Same as Alternative B.
Action 11. No similar action.	**Action 11.** Provide for migratory bird habitat through implementation of actions supporting habitat diversity (e.g., HRV, guilds, riparian and aquatic strategies, etc.).	**Action 11.** No similar action.	**Action 11.** No similar action.
Objective 10. No similar objective.	**Objective 10. Maintain, restore, or enhance riparian and wetland areas so that they provide habitat diversity**	**Objective 10. Same as Alternative B.**	**Objective 10. Same as Alternative B.**

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
	and healthy riparian and aquatic conditions for riparian and wetland dependent species and other wildlife species.		
Action 1. No similar action.	**Action 1.** Implement the appropriate actions to promote maintenance or enhancement of riparian areas and wetlands so that they achieve PFC and/or good or excellent ecological condition. See *Alternative B, Vegetation – Riparian and Wetlands* and **Appendix F**, Aquatic and Riparian Management Strategy, Alternative B (Volume II~~I~~).	**Action 1.** Same as Alternative B, except refer to **Appendix F**, Aquatic and Riparian Management Strategy, Alternative C (see Volume II~~I~~).	**Action 1.** Same as Alternative B, except refer to **Appendix F**, Aquatic and Riparian Management Strategy, Alternative D (see Volume II~~I~~).
Action 2. No similar action.	**Action 2.** Priority areas for implementation of riparian conservation and restoration projects are identified in **Appendix C**, Conservation and Restoration Watersheds, Alternative B (Volume II~~I~~).	**Action 2.** Same as Alternative B, except refer to **Appendix C**, Conservation and Restoration Watersheds, Alternative C (see Volume II~~I~~).	**Action 2.** Same as Alternative B, except refer to **Appendix C**, Conservation and Restoration Watersheds, Alternative D (see Volume II~~I~~).
Action 3. No similar action.	**Action 3.** Avoid or minimize the adverse impacts from projects that encroach or degrade riparian areas or stream channels and curtail attainment of riparian management objectives. See *Alternative B, Vegetation – Riparian and Wetlands* and **Appendix F**, Aquatic and Riparian Management Strategy, Alternative B (Volume II~~I~~).	**Action 3.** Same as Alternative B, except refer to **Appendix F,** Aquatic and Riparian Management Strategy, Alternative C (see Volume II~~I~~).	**Action 3.** Same as Alternative B, except refer to **Appendix F**, Aquatic and Riparian Management Strategy, Alternative D (see Volume II~~I~~).
Action 4. Limit utilization of forage in riparian areas to 50 percent of available	**Action 4.** As needed for grazing allotments, the appropriate riparian	**Action 4.** For grazing allotments, implement the following use criteria	**Action 4.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
forage.	management strategy will be implemented to prevent adverse impacts to riparian areas, fish habitat and water quality. Such may include specific riparian grazing season of use and stream bank use criteria.	along fish-bearing streams (i.e., 5th code HUC and smaller) providing habitat for federally listed fish: stubble height (6 inches); shrub utilization (30%); stream bank use (10% criteria).	
Objective 11. Manage vegetation resources in accordance with wildlife needs.	**Objective 11. Manage wildlife habitats to provide for overall species diversity.**	**Objective 11. Same as Alternative B.**	**Objective 11. Same as Alternative B.**
Action 1. No similar action.	**Action 1.** Pursue opportunities to maintain, improve, and provide adequate water sources for a variety of wildlife.	**Action 1.** Same as Alternative B.	**Action 1.** Same as Alternative B.
Action 2. No similar action.	**Action 2.** As needed, develop or compile, and implement species specific BMPs to avoid or minimize adverse impacts to a variety of game and non-game species that are dependent on forest/shrub, rangelands, and riparian habitats. (e.g., breeding/nesting habitats, young rearing habitats, important winter and spring ranges).	**Action 2.** Same as Alternative B.	**Action 2.** Same as Alternative B.
Action 3. The BLM recognizes Idaho Department of Fish and Game's role as the agency responsible for management of wildlife and fish in Idaho. The BLM will coordinate with Idaho Department of Fish and Game, Tribes, USFWS, and other partners on population	**Action 3.** Same as Alternative A.	**Action 3.** Same as Alternative A.	**Action 3.** Same as Alternative A.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
management of wildlife and habitats. Through coordination with the appropriate agencies, Tribes, USFWS, and partners; the BLM will allow for transplants, reintroductions, and natural expansion of native and other desired species populations. ~~. Coordinate with Idaho Department of Fish and Game and other partners on population management of wildlife and habitats. Allow for transplants, reintroductions, and natural expansion of native and other desired species populations.~~			
Action 4. No similar action.	**Action 4.** Because of BLM's mixed or limited amounts of ownership in many areas; pursue and prioritize management efforts that maintain high quality or improve: wildlife habitat, travel corridors, habitat connectivity, and wildlife security with partners, Tribes, state agencies, federal agencies, and private land owners.	**Action 4.** No similar action.	**Action 4.** No similar action.
Objective 12. Provide for the protection of active raptor nests.	**Objective 12. Same as Alternative A.**	**Objective 12. Same as Alternative A.**	**Objective 12. Same as Alternative A.**
Action 1. Raptor Nests – Active raptor nests will be protected by a 100-yard nondisturbance buffer.	**Action 1.** Provide a 450-foot non-disturbance and no-treatment buffer (10 to 15 acres) around occupied nests for Type 3 BLM sensitive species, such as Northern goshawk. Provide a 300-	**Action 1.** Same as Alternative B.	**Action 1.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
	foot buffer around nest for other raptors. Buffer size may be modified depending on potential for disturbance from an activity or project.~~Provide a 100-yard nondisturbance buffer around nest while nest is occupied. A larger buffer may be required depending on potential for disturbance from an activity or project. Suppression of wildland fires would be allowed within these buffers.~~		
Action 2. No similar action.	**Action 2.** Avoid implementation of discretionary land use activities that may result in adverse disturbance to nesting raptors during the occupancy period (the nesting period varies by species but is typically during the spring through early to mid-August) Such activities may include timber harvest, prescribed burning and construction/restoration projects.	**Action 2.** Same as Alternative B.	**Action 2.** Same as Alternative B.
Objective 13. No similar objective.	**Objective 13. Maintain or restore bighorn sheep (*Ovis canadensis*) habitat.**	**Objective 13. Same as Alternative B.**	**Objective 13. Same as Alternative B.**
Action 1. No similar action.	**Action 1.** Where needed, improve poor, fair, and good ecological condition canyon grassland habitats and maintain excellent quality habitat. The priority emphasis area will be in the Craig Mountain WMA.	**Action 1.** Same as Alternative B.	**Action 1.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
Action 2. No similar action.	**Action 2.** Coordinate with Idaho Department of Fish and Game, Nez Perce Tribe, US Forest Service, other appropriate state and federal agencies, grazing lessees, and partners on population and habitat management of bighorn sheep within Hells Canyon (Snake River drainage) and Salmon River drainage. Allow for transplants, reintroductions, and natural expansion of bighorn sheep populations. ~~Coordinate with Idaho Department of Fish and Game and other partners on population management of bighorn sheep within Hells Canyon and Craig Mountain WMA. Allow for transplants, reintroductions, and natural expansion of bighorn sheep populations.~~	**Action 2.** Same as Alternative B.	**Action 2.** Same as Alternative B.
Action 3. No similar action.	**Action 3.** Prohibit the authorization of domestic sheep *(Ovis aries)* or goats *(Capra hircus)* on BLM allotments within Hells Canyon (Snake River drainage) and Salmon River drainage. Exceptions are the existing four sheep allotments in the Salmon River and Little Salmon River drainages (see Actions 4 and 5 below).~~Prohibit the authorization of domestic sheep *(Ovis aries)* or goat *(Capra hircus)* grazing on BLM lands within Hells Canyon (Snake River drainage) and Lower Salmon~~	**Action 3.** Same as Alternative B.	**Action 3.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
	~~River, downriver from Maloney Creek drainage.~~		
Action 4. No similar action.	**Action 4.** The BLM will coordinate sheep grazing with lessees, Forest Service, Idaho Department of Fish and Game, Nez Perce Tribe, and other partners to assess, and where possible reduce~~,~~ risk of contact with domestic sheep and bighorn sheep. The following will be used initially by the BLM for support documentation and risk assessment for disease transmission for BLM sheep allotments: *Risk Analysis of Disease Transmission Between Domestic Sheep and Bighorn Sheep on the Payette National Forest* (Forest Service 2006). With new science, new risk analysis information, and updated bighorn sheep distribution and habitation information, risk assessments for BLM sheep allotments would be updated where applicable.~~, new science, and updated bighorn sheep distribution and habitat information.~~	**Action 4.** Same as Alternative B.	**Action 4.** Same as Alternative B.
Action 5. No similar action.	**Action 5.** BLM, through consultation, cooperation, and coordination with the grazing lessees, Idaho Department of Fish and Game, Nez Perce Tribe, Forest Service, and interested publics, will develop and implement strategies	**Action 5.** Same as Alternative B.	**Action 5.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
	to resolve resource issues between domestic sheep and bighorn sheep on the Partridge Creek allotment (36240); Marshall Mountain allotment (36284); Hard Creek allotment (36242); and Big Creek allotment (36358).		
Action 6. No similar action.	**Action 6.** No existing allotments authorized for cattle and/or horse use within the Salmon River and/or Snake River drainages will be converted to sheep or goats, when such use would result in potential risk for disease transmission to bighorn sheep populations or affects the potential for bighorn sheep expansion into suitable habitats.	**Action 6.** Same as Alternative B.	**Action 6.** Same as Alternative B.
Action 7. No similar action.	**Action 7.** Goat grazing for weed control is prohibited in Hells Canyon (Snake River drainage), downriver from Maloney Creek (Salmon River drainage), and upriver from Little Salmon River (Salmon River drainage). In other areas, goat grazing for weed control would only be authorized when such use would result in no or very low risk for transmission of disease to bighorn sheep.	**Action 7.** Same as Alternative B.	**Action 7.** Same as Alternative B.
Action 8. No similar action.	**Action 8.** Develop and implement a rapid response plan to address actions to be taken when bighorn sheep and	**Action 8.** Same as Alternative B.	**Action 8.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
	domestic sheep and goats come in contact or potential for contact with each other. The plan would address grazing lessee and agency notification and immediate actions to be taken to reduce risks for disease transmission.		
Action 9. No similar action.	**Action 9.** Gather and summarize sightings of bighorn sheep along the Salmon River canyon and other associated areas from BLM resource staff, the public, and other interested parties.	**Action 9.** Same as Alternative B.	**Action 9.** Same as Alternative B.
AQUATIC RESOURCES, FISH, AND SPECIAL STATUS FISH **Goal: Manage habitat to contribute to the conservation of special status and native fish species.**			
Objective 1. Provide for diverse and healthy aquatic habitats that contribute to the recovery of listed fish species and conservation of BLM sensitive fish species.	**Objective 1. Same as Alternative A.**	**Objective 1. Same as Alternative A.**	**Objective 1. Same as Alternative A.**
Action 1. Ensure that all ongoing and new BLM management actions support or do not retard or preclude recovery for federally listed fish (ESA), designated critical habitat, and important aquatic habitats (supporting spawning, incubation, larval development, rearing, migration corridors, and aquatic habitats for forage species). Federally listed fish currently occurring in streams and	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
rivers flowing through BLM lands include the sockeye salmon *(Oncorhynchus nerka)*, fall chinook salmon (*O. tschawytscha)*, spring/summer chinook salmon *(O. tschawytscha)*, steelhead trout *(O. mykiss)*; and bull trout (*Salvelinus confluentus*) (see **Appendix G**, Special Status Species [Volume II~~I~~]).			
Action 2. Ongoing and new activity or project review would be conducted to assess effects to Essential Fish Habitat (Section 305[b][2] of the Magnuson-Steven Act). The BLM would consult with National Marine Fisheries Service on any action that would adversely affect Essential Fish Habitat for chinook or coho salmon *(O. kisutch)* and would implement appropriate measures to avoid, mitigate, or minimize adverse effects.	**Action 2.** Same as Alternative A.	**Action 2.** Same as Alternative A.	**Action 2.** Same as Alternative A.
Action 3. Survey and maintain updated fish population information and fish distribution maps.	**Action 3.** Same as Alternative A.	**Action 3.** Same as Alternative A.	**Action 3.** Same as Alternative A.
Action 4. Survey and maintain updated aquatic habitat inventories for streams providing habitat for special status fish.	**Action 4.** Same as Alternative A.	**Action 4.** Same as Alternative A.	**Action 4.** Same as Alternative A.
Action 5. To promote conservation and restoration for special status fish, where applicable**:** (1) support	**Action 5.** Same as Alternative A.	**Action 5.** Same as Alternative A.	**Action 5.** Same as Alternative A.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
conservation easements that protect or conserve special status fish habitat; (2) land acquisitions or exchanges that promote improved management for special status fish; and (3) cooperative planning efforts that promote conservation and restoration for special status fish.			
Action 6. Do not undertake management activities that would cause long-term degradation or would retard or preclude restoration and conservation for special status and native species, and aquatic habitats.	**Action 6.** Same as Alternative A.	**Action 6.** Same as Alternative A.	**Action 6.** Same as Alternative A.
Action 7. If a new species is listed, critical habitat is designated, or recovery plan is completed, the BLM would ensure that management actions support or do not retard or prevent recovery of the species and aquatic habitats in the long term. ~~If a new species is listed, critical habitat is designated, or recovery plan is completed, the BLM would ensure that management actions support or do not retard or preclude recovery for the species and aquatic habitats. The BLM would support appropriate recovery plan objectives and actions.~~	**Action 7.** Same as Alternative A.	**Action 7.** Same as Alternative A.	**Action 7.** Same as Alternative A.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
Action 8. If a species is delisted, it would be managed under the appropriate delisting requirements, applicable conservation strategy, Idaho Department of Fish and Game management guidance, and/or in accordance with BLM policy for sensitive species.	**Action 8.** Same as Alternative A.	**Action 8.** Same as Alternative A.	**Action 8.** Same as Alternative A.
Action 9. Cooperatively with Idaho Department of Fish and Game and the Nez Perce Tribe, periodic review of BLM Idaho sensitive fish species (see **Appendix G**, Special Status Species [Volume II~~I~~]) would be conducted. BLM sensitive species may be added, dropped, or have changed status rating to reflect new information, updated data, and current population status.	**Action 9.** Same as Alternative A.	**Action 9.** Same as Alternative A.	**Action 9.** Same as Alternative A.
Action 10. No similar action.	**Action 10.** Public education would be conducted to inform the public about special status and native fish species, aquatic habitat needs, aquatic/riparian ecosystem functions, and BLM conservation and restoration management strategies. As needed, information would also be provided at key sites to inform the public about the presence of special status fish, how to identify them, and how to release them (if not legal to keep). Key sites may include recreation sites, boat ramps,	**Action 10.** No similar action.	**Action 10.** No similar action.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
	trail heads, and other public fishing access areas.		
Objective 2. Maintain genetic integrity for special status species.	**Objective 2. Same as Alternative A.**	**Objective 2. Same as Alternative A.**	**Objective 2. Same as Alternative A.**
Action 1 Support conservation measures that: (1) support genetic integrity of special status fish; (2) reduce adverse competition between special status fish and nonnative species; and (3) documentation of genetic identification that supports fisheries management.	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.
Objective 3. Manage aquatic, riparian, and wetland habitats to provide diverse and healthy conditions for aquatic species.	**Objective 3. Same as Alternative A.**	**Objective 3. Same as Alternative A.**	**Objective 3. Same as Alternative A.**
Action 1. Activities within RHCAs will be designed to minimize impacts to the riparian and aquatic habitat(s)	**Action 1.** Activities within RCAs will be designed to minimize impacts to the riparian and aquatic habitat(s) through implementation of specific standards and guides in the Aquatic and Riparian Management Strategy (**Appendix F**, Aquatic and Riparian Management Strategy, Alternative B [see Volume II~~I~~]).	**Action 1.** Same as Alternative B, except refer to **Appendix F**, Aquatic and Riparian Management Strategy, Alternative C (see Volume II~~I~~).	**Action 1.** Same as Alternative B, except refer to **Appendix F**, Aquatic and Riparian Management Strategy, Alternative D (see Volume II~~I~~).
Action 2. No similar action.	**Action 2.** For each new project, compile, develop, and implement appropriate species and/or habitat-specific BMPs to avoid or minimize	**Action 2.** Same as Alternative B.	**Action 2.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
	adverse impacts to aquatic and riparian habitats. Compile and develop CFO programmatic-level activity BMPs that may be used as needed for ongoing projects or for new project development to avoid or minimize potential for adverse effects.		
Action 3. Manage 39 watersheds as prescription watersheds (subwatersheds that generally have over 50 percent of the watershed in BLM, Forest Service, or Idaho Department of Fish and Game ownership). Fishery and water quality objectives have been identified for specific subwatersheds.	**Action 3.** Manage ~~1~~3 watersheds as ~~a~~ Conservation Watersheds (subwatersheds where watershed processes and functions that occur in a relatively undisturbed and natural landscape setting) and ~~32~~ 28 watersheds as Restoration Watersheds (subwatersheds where biological and physical processes and functions do not reflect natural conditions because of past and long-term land disturbances) (**Appendix C**, Conservation and Restoration Watersheds, Alternative B [Volume II~~I~~]).	**Action 3.** Manage 3 watersheds as Conservation Watersheds (subwatersheds where watershed processes and functions that occur in a relatively undisturbed and natural landscape setting) and ~~40~~ 37 watersheds as Restoration Watersheds (subwatersheds where biological and physical processes and functions do not reflect natural conditions because of past and long-term land disturbances) (**Appendix C,** Conservation and Restoration Watersheds, Alternative C [Volume II~~I~~]).	**Action 3.** Manage ~~1~~3 watersheds as ~~a~~ Conservation Watersheds (subwatersheds where watershed processes and functions that occur in a relatively undisturbed and natural landscape setting) and ~~27~~ 24 watersheds as Restoration Watersheds (subwatersheds where biological and physical processes and functions do not reflect natural conditions because of past and long-term land disturbances) (**Appendix C**, Conservation and Restoration Watersheds, Alternative D [Volume II~~I~~]).
Action 4. No similar action.	**Action 4.** Conduct implementation and effectiveness monitoring commensurate with the level of on-the-ground activities. The appropriate implementation and effectiveness monitoring will be identified during project development and assessment. Adaptively change management direction to contribute to recovery or conservation of special status fish.	**Action 4.** Same as Alternative B.	**Action 4.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
Action 5. No similar action.	**Action 5.** Support actions to improve upstream and downstream passage for all life stages of aquatic dependent species. An assessment of aquatic species passage barriers will be conducted. A prioritization for barriers needing removal will be prepared. All barrier removal projects will consider the potential impacts from nonnative species competition and/or genetic integrity of special status and other native fish species.~~Support actions to improve upstream and downstream passage for all life stages of aquatic dependent species.~~	**Action 5.** Same as Alternative B.	**Action 5.** Same as Alternative B.
Action 6. No similar action.	**Action 6.** Promote actions that support achievement of good quality riparian and aquatic habitats. Such actions may include, but are not limited to the following: riparian and aquatic restoration; instream fish habitat improvements; decommissioning of unneeded roads; and modification/elimination of land uses that further retard or preclude achievement of aquatic and riparian DFCs.	**Action 6.** Same as Alternative B.	**Action 6.** Same as Alternative B.
Objective ~~3~~4. Create and implement management plans and impose use restrictions for sensitive areas.	**Objective ~~3~~4. No similar objective.**	**Objective 4. Same as Alternative B.**	**Objective 4. Same as Alternative B.**

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
Action 1. Identify actions that may occur in areas identified for intensive aquatic management.	**Action 1.** No similar action.	**Action 1.** Same as Alternative B.	**Action 1.** Same as Alternative B.
Action 2. Identify actions that may occur in areas identified for less intensive aquatic management.	**Action 2.** No similar action.	**Action 2.** Same as Alternative B.	**Action 2.** Same as Alternative B.
Action 3. Identify high-priority fisheries inventory needs, priority given for drainages providing moderate or high potential for anadromous fish spawning and rearing habitat.	**Action 3.** No similar action.	**Action 3.** Same as Alternative B.	**Action 3.** Same as Alternative B.
Action 4. Identify barriers that inhibit connectivity between fish populations, such as culverts and road crossings.	**Action 4.** No similar action.	**Action 4.** Same as Alternative B.	**Action 4.** Same as Alternative B.
Objective 45. No similar objective.	**Objective 45. Manage fish-bearing lakes and adjacent lands to promote conservation of healthy aquatic habitats.**	**Objective 45. Same as Alternative B.**	**Objective 45. Same as Alternative B.**
Action 1. No similar action.	**Action 1.** Promote activities that will result in the conservation and restoration of aquatic habitats in fish-bearing lakes.	**Action 1.** Same as Alternative B.	**Action 1.** Same as Alternative B.
Action 2. Identify priority need for surveys of the Marshall Mountain lakes.	**Action 2.** Maintain updated fish population, aquatic, riparian, and wetland information for lakes occurring on BLM lands.	**Action 2.** Same as Alternative B.	**Action 2.** Same as Alternative B.
Action 3. No similar action.	**Action 3.** Prior to conducting any fish transplants or fish-removal projects	**Action 3.** Same as Alternative B.	**Action 3.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
	within lakes or ponds, develop management plan and strategy to identify long-term objectives for native species, desired nonnative species, and undesirable nonnative aquatic-dependent species.		
Action 4. No similar action.	**Action 4.** Before any fish-stocking projects in ponds or lakes are implemented, an ecological and viability evaluation would be completed for short- and long-term effects to aquatic-dependent species.	**Action 4.** Same as Alternative B.	**Action 4.** Same as Alternative B.
Objective ~~5~~6. No similar objective.	**Objective ~~5~~6. Manage watersheds to promote conservation of high-quality riparian and aquatic habitats and promote restoration in watersheds that do not provide diverse and healthy aquatic habitats.**	**Objective ~~5~~6. Same as Alternative B.**	**Objective ~~5~~6. Same as Alternative B.**
Action 1. No similar action.	**Action 1.** Design activities that result in the conservation of high-quality habitats in conservation watersheds (**Appendix C**, Conservation and Restoration Watersheds, Alternative B [see Volume II~~I~~]).	**Action 1.** Same as Alternative B, except refer to **Appendix C**, Conservation and Restoration Watersheds, Alternative C (see Volume II~~I~~).	**Action 1.** Same as Alternative B, except refer to **Appendix C**, Conservation and Restoration Watersheds, Alternative D (see Volume II~~I~~).
Action 2. No similar action.	**Action 2.** Promote activities to improve or do not retard or preclude achievement of DFCs in restoration watersheds (see **Appendix C**, Conservation and Restoration	**Action 2.** Same as Alternative B, except refer to **Appendix C**, Conservation and Restoration Watersheds, Alternative C (see Volume II~~I~~).	**Action 2**. Same as Alternative B, except refer to **Appendix C**, Conservation and Restoration Watersheds, Alternative D (see Volume II~~I~~).

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
	Watersheds, Alternative B [Volume II~~I~~]). Refer to **Appendix W** (Volume III) for aquatic and riparian desired conditions and condition rating for Watershed and Aquatic Condition Indicators which are included in the *Matrix of Pathways and Indicators of Watershed and Aquatic Condition.* Aquatic and riparian desired conditions and ~~C~~condition rating for WACIs may be changed or modified based on resource specialist's expertise and supporting rationale and documentation (see **Appendix F**, Volume II).~~Promote activities to improve or do not retard or preclude achievement of desired future conditions in restoration watersheds, such as those identified in the *Matrix of Pathways and Indicators of Watershed Condition for Listed Fish* (National Marine Fisheries Service et al. 1998), as adapted by North Central Idaho Level 1 Team. These indicators may be changed or new ones added, based on updated subbasin, watershed, or site-specific information. Also see **Appendix C**, Conservation and Restoration Watersheds, Alternative B .~~		
Action 3. No similar action.	**Action 3.** Management activities should strive for improvement or maintenance of good-quality desired	**Action 3.** Same as Alternative B, except refer to **Appendix C**, Conservation and Restoration	**Action 3.** Same as Alternative B, except refer to **Appendix C**, Conservation and Restoration

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
	conditions in conservation watersheds (see **Appendix C**, Conservation and Restoration Watersheds, Alternative B [Volume II]). Refer to **Appendix W** (Volume III) for aquatic and riparian desired conditions and condition rating for Watershed and Aquatic Condition Indicators (WACIs) which are included in the *Matrix of Pathways and Indicators of Watershed and Aquatic Condition*. Aquatic and riparian desired conditions and ~~C~~condition rating for WACIs may be changed or modified based on resource specialist's expertise and supporting rationale and documentation (see **Appendix F**, Volume II).~~Management activities should strive for improvement or maintenance of good-quality desired future conditions in conservation watersheds (see **Appendix C**, Conservation and Restoration Watersheds, Alternative B [Volume III]). Management activities should not retard or preclude achievement of, desired future conditions, such as those identified in the *Matrix of Pathways and Indicators of Watershed Condition for Listed Fish* (National Marine Fisheries Service et al. 1998), as adapted by North Central Idaho Level 1 Team. Relevant elements would include water quality, habitat~~	Watersheds, Alternative C (see Volume II~~I~~).	Watersheds, Alternative D (see Volume II~~I~~).

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
	~~elements, channel condition, flow/hydrology, watershed conditions, and riparian conditions.~~		
Action 4. Within the planning area, specific aquatic zones (i.e., similar geographic areas) have been identified for the development of Aquatic Zone HMPs. These zones are listed as follows: Elk City; Lower Salmon River I, II, and III; Little Salmon River; Clearwater River; Lolo Creek, Big Canyon, Snake River, and Marshall Mountain.	**Action 4.** Review and update as necessary existing HMPs (**Appendix T**, Cottonwood Field Office Habitat Management Plans [see Volume III]). Prioritize where HMPs should be developed or updated to support conservation and restoration.	**Action 4.** Same as Alternative B.	**Action 4.** Same as Alternative B.
Action 5. Identify potential cooperative management opportunities with Idaho Department of Fish and Game and/or private land owners for: hatching channel, fish friendly designs for culverts/bridges, and screening/rotating drum screens for irrigation diversions.	**Action 5.** No similar action.	**Action 5.** Same as Alternative B.	**Action 5.** Same as Alternative B.
Action 6. Identify drainage-specific fisheries and water quality objectives (e.g., sediment) and identify Management Indicator Species.	**Action 6.** Implement Aquatic and Riparian Management Strategy (**Appendix F**, Aquatic and Riparian Management Strategy, Alternative B [see Volume II~~I~~]).	**Action 6.** Same as Alternative B, except refer to **Appendix F**, Aquatic and Riparian Management Strategy, Alternative C (see Volume II~~I~~).	**Action 6.** Same as Alternative B, except refer to **Appendix F**, Aquatic and Riparian Management Strategy, Alternative D (see Volume II~~I~~).
Action 7. No similar action.	**Action 7.** Because of the BLM's mixed or limited amounts of ownership in many areas/watersheds, pursue and prioritize management efforts that	**Action 7.** Same as Alternative B.	**Action 7.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
	maintain high quality or improve: watershed conditions, riparian areas, and aquatic habitats with partners, tribes, state agencies, federal agencies, and private landowners.		
SPECIAL STATUS PLANTS **Goal: Maintain or restore special status species and their habitat to contribute to species recovery.**			
Objective 1. Monitor specific listed species and implement specific actions needed to maintain or restore their habitat.	**Objective 1. Manage federally listed, proposed, and candidate plants and their habitats to contribute to recovery and delisting.**	**Objective 1. Same as Alternative B.**	**Objective 1. Same as Alternative B.**
Action 1. Monitor MacFarlane's four-o'clock and several candidate and BLM sensitive plant species.	**Action 1.** Monitor populations and habitats of MacFarlane's four-o'clock (naturally occurring and transplant population at Lucile Caves exclosure) and Spalding's catchfly~~silene~~ occurring on BLM lands a minimum of once every three years after baseline trend is established (funding dependent). Baseline trend monitoring would require annual monitoring for a defined period of time to depict variations in environmental conditions, which are site dependent. Change management where applicable (i.e., adaptive management) if desired conditions or trends are not being achieved for listed plant populations. Refer to **Appendix S**, Species-specific Habitat Definitions (see Volume III), for MacFarlane's four-	**Action 1.** Same as Alternative B.	**Action 1.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
	o'clock and Spalding's catchfly ~~silene~~ suitable habitat and other definitions.		
Action 2. No similar action.	**Action 2.** Project- or activity-level actions or natural events (e.g., wildfire, severe droughts) may require annual monitoring of specific populations of federally listed, proposed, or candidate species to determine effects to species or habitats.	**Action 2.** Same as Alternative B.	**Action 2.** Same as Alternative B.
Action 3. No similar action.	**Action 3.** Implement appropriate conservation and restoration actions for any new listed, proposed, or candidate species documented as occurring on BLM lands to support delisting. Monitor trends for listed, proposed, and candidate plant populations and change management if applicable (i.e., adaptive management), when desired conditions or trends are not being achieved. As needed, update **Appendix S**, Species-specific Habitat Definitions (see Volume III), to identify new listed, proposed, or candidate species that occur on BLM lands.	**Action 3.** Same as Alternative B.	**Action 3.** Same as Alternative B.
Action 4. Designate the Long Gulch and Skookumchuck populations of MacFarlane's four-o'clock as areas to be protected.	**Action 4.** No similar action. This action was completed by designation of these areas as ACEC/RNAs.	**Action 4.** Same as Alternative B.	**Action 4.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
Action 5. Protect and monitor several candidate and BLM sensitive plant populations (candidate species).	**Action 5.** No similar action.	**Action 5.** Same as Alternative B.	**Action 5.** Same as Alternative B.
Action 6. Survey suitable habitats for new populations of listed plants. Maintain a map of BLM lands that delineates suitable habitats for listed plants and also include updated population and colony occurrences. Refer to **Appendix S**, Species-specific Habitat Definitions (see Volume III), for MacFarlane's four-o'clock and Spalding's catchfly ~~silene~~ suitable habitat and other definitions. Survey 2,000 acres of suitable habitat for MacFarlane's four-o'clock and Spalding's catchfly ~~silene~~ annually utilizing a systematic inventory (funding dependent). If additional funding permits, the CFO will target a systematic inventory of 20 percent of suitable habitat annually with a goal of surveying all suitable habitats within 5 years. Prioritize surveys and inventories to address areas of suitable habitat with a high likelihood of species occurrences. Inventories should be scheduled to complement other program needs, such as the grazing permit- or lease-renewal schedule.	**Action 6.** Same as Alternative A.	**Action 6.** Same as Alternative A.	**Action 6.** Same as Alternative A.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
Action 7. Review ongoing discretionary activities for impacts to listed plants or their habitats. Modify activities where necessary to avoid or minimize adverse impacts to listed plants.	**Action 7.** Same as Alternative A.	**Action 7.** Same as Alternative A.	**Action 7.** Same as Alternative A.
Action 8. Complete project specific inventories before authorizing discretionary new actions. Review and modify projects and activities to avoid or minimize adverse impacts to listed plants.	**Action 8.** Same as Alternative A.	**Action 8.** Same as Alternative A.	**Action 8.** Same as Alternative A.
Action 9. Consult with the USFWS on recovery efforts and on actions that may impact listed plants. See **Appendix V** for a complete list of ESA conservation measures and program specific coordination needs.	**Action 9.** Same as Alternative A.	**Action 9.** Same as Alternative A.	**Action 9.** Same as Alternative A.
Action 10. If a new plant species is listed, critical habitat is designated, or recovery plan is completed, the BLM would ensure that management actions support or do not retard or prevent recovery of the species and habitats in the long term. ~~If a new species is listed, critical habitat is designated, or recovery plan is completed, the BLM would ensure that management actions support or preclude recovery for the species and aquatic habitats. The BLM~~	**Action 10.** Same as Alternative A.	**Action 10.** Same as Alternative A.	**Action 10.** Same as Alternative A.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
~~would support appropriate recovery plan objectives and actions.~~			
Objective 2. Support Recovery Plan actions for listed plants to contribute towards recovery and delisting.	**Objective 2. Same as Alternative A.**	**Objective 2. Same as Alternative A.**	**Objective 2. Same as Alternative A.**
Action 1. Implement applicable conservation and restoration measures identified within Recovery Plan(s).	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.
Action 2. Develop new management plans or update existing plans (**Appendix T**, Cottonwood Field Office Habitat Management Plans [see Volume III]) as necessary to provide for the implementation of the appropriate management and conservation of populations of MacFarlane's four-o'clock and Spalding's catchfly ~~silene~~ occurring on BLM lands. A management plan may include a single population or several populations within a geographic area. At a minimum, the plan(s) will: identify population status and specific threats and Actions necessary to reduce or eliminate these threats; provide measures for the maintenance and/or enhancement of population(s); identify long-term monitoring and adaptive management strategies; and identify	**Action 2.** Same as Alternative A.	**Action 2.** Same as Alternative A.	**Action 2.** Same as Alternative A.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
how management will support recovery objectives.			
Action 3. Implement control measures for invasive plants that adversely impact listed plant populations. Emphasis would occur on control of invasive plants inside listed plant populations and within 0.5-mile of the perimeter of listed plant populations.	**Action 3.** Same as Alternative A.	**Action 3.** Same as Alternative A.	**Action 3.** Same as Alternative A.
Action 4. Consider establishing and maintaining new populations of listed plants (plantings) that would support recovery efforts.	**Action 4.** Same as Alternative A.	**Action 4.** Same as Alternative A.	**Action 4.** Same as Alternative A.
Action 5. Consider cooperative management efforts with adjacent landowners, State, County, or other federal agencies, to support conservation and restoration efforts.	**Action 5.** Same as Alternative A.	**Action 5.** Same as Alternative A.	**Action 5.** Same as Alternative A.
Action 6. Consider land acquisition, land exchanges, or conservation easements that support conservation and restoration efforts.	**Action 6.** Same as Alternative A.	**Action 6.** Same as Alternative A.	**Action 6.** Same as Alternative A.
Action 7. Support seed banks by collecting listed plant seeds and storing them in a long-term seed storage facility.	**Action 7.** Same as Alternative A.	**Action 7.** Same as Alternative A.	**Action 7.** Same as Alternative A.
Action 8. Working with other agencies, develop and compile a general list of BMPs that would apply to all ongoing	**Action 8.** Same as Alternative A.	**Action 8.** Same as Alternative A.	**Action 8.** Same as Alternative A.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
programs or new projects. The intent of implementing BMPs would assist with consultation and species recovery. The intent of implementing BMPs is to avoid or minimize negative impacts.			
Objective 3. Manage Idaho BLM sensitive plants and their habitats to contribute to conservation of the species and removal of the species from protective status.	**Objective 3. Same as Alternative A.**	**Objective 3. Same as Alternative A.**	**Objective 3. Same as Alternative A.**
Action 1. Monitor representative populations of Idaho BLM sensitive plants every three to five years after baseline data is collected and trend is established.	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.
Action 2. Survey suitable habitats for new populations of Idaho BLM sensitive plants. Maintain an updated data base and map for documentation of known Idaho BLM sensitive plants occurring on public lands. Periodically review and update Idaho BLM sensitive plant species list for the CFO (**Appendix G**, Special Status Species [see Volume II~~I~~]).	**Action 2.** Same as Alternative A.	**Action 2.** Same as Alternative A.	**Action 2.** Same as Alternative A.
Action 3. Complete project specific botanical inventories before authorizing new actions. If needed, modify the activity to avoid or minimize adverse impacts to Idaho	**Action 3.** Same as Alternative A.	**Action 3.** Same as Alternative A.	**Action 3.** Same as Alternative A.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
BLM sensitive plants that may contribute to federal listing.			
Action 4. Review ongoing discretionary activities for impacts to Idaho BLM sensitive plants and their habitats. Modify activities where necessary to avoid or minimize adverse impacts to Idaho BLM sensitive plants that may contribute to federal listing.	**Action 4.** Same as Alternative A.	**Action 4.** Same as Alternative A.	**Action 4.** Same as Alternative A.
Action 5. Consider cooperative management efforts with adjacent landowners, State, County, or other federal agencies, to support conservation and restoration efforts.	**Action 5.** Same as Alternative A.	**Action 5.** Same as Alternative A.	**Action 5.** Same as Alternative A.
Action 6. Maintain or improve habitat for Idaho BLM sensitive plant species to promote conservation. Prioritization for implementation of conservation measures is dependant on opportunities, with Type 2 species (**Appendix G**, Special Status Species [see Volume II~~I~~]) receiving the highest priority.	**Action 6.** Same as Alternative A.	**Action 6.** Same as Alternative A.	**Action 6.** Same as Alternative A.
Action 7. No similar action.	**Action 7.** Cooperatively with appropriate state, federal, tribal, and private individuals, conduct periodic review of BLM Idaho sensitive plant species (**Appendix S**, Special Status Species [see Volume III]). BLM sensitive species may be added,	**Action 7.** Same as Alternative B.	**Action 7.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
	dropped, or have changed status rating to reflect new information, updated data, and current population status.		
WILDLAND FIRE MANAGEMENT **Goal: Manage fuels and wildland fires to protect life and property and to protect or enhance resource values.**			
Objective 1. Provide appropriate management response to all wildland fires: ~~-prescribed,~~ wildfire~~,~~ and wildland fire use.	**Objective 1. Same as A~~*~~lternative A.**	**Objective 1. Same as Alternative A.**	**Objective 1. Same as Alternative A.**
Action 1. Delay implementation of prescribed burning projects, not including pile burning, when 30% or more of the CFO acres have burned in either a wildfire or prescribed fire in any 5-year period.	**Action 1**. Same as Alternative A.	**Action 1**. Same as Alternative A.	**Action 1**. Same as Alternative A.
Action 2. Annually, or as needed, update CFO FMP to ensure fire suppression, fuels treatment, ESR, wildland fire use, Community Assistance RMP decsions are being implemented. ~~Annually update the CFO FMP for implementing the RMP decisions regarding fire suppression, fuels treatments, emergency rehabilitation, wildland fire use, community assistance and to document changes in FRCC due to new evaluation techniques, treatments and natural events.~~	**Action 2**. Same as Alternative A.	**Action 2.** Same as Alternative A.	**Action 2.** Same as Alternative A.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
Action 3. Evaluate each unplanned fire on BLM-administered lands for wildland fire use in areas where Wildland Fire Implementation Plans have been completed (**Figure H-1**, Areas Available for Wildland Fire Use—Alternatives A and C [see **Appendix H** in Volume II~~I~~]).	**Action 3.** Evaluate each unplanned fire on BLM-administered land for wildland fire use in the Craig Mountain Area and ~~Fire Management Unit (FMU) and~~ the ~~portion of the~~ Salmon River Area ~~FMU~~ south and east of Riggins (~~**Figure H-2**, Areas Available for Wildland Fire Use—Alternative B [~~see **Appendix H**, Volume II ~~in Volume III]~~). Wildland fire use will not be considered in the Elk City ~~FMU~~Area, or other georgraphic areas identified and described in **Appendix H**~~the Clearwater FMU, or that portion of the Salmon FMU not identified above~~.	**Action 3.** Same as Alternative A (**Figure H-1**, Areas Available for Wildland Fire Use—Alternatives A and C [see **Appendix H** in Volume II~~I~~]).	**Action 3.** Evaluate each unplanned fire on BLM-administered land in areas managed for custodial forest management (**Figure 10**; see Volume IV of the Draft RMP/EIS) or areas not authorized for livestock grazing (**Figure H-3**, Areas Available for Wildland Fire Use—Alternative D [see **Appendix H** in Volume II~~I~~]). To be considered for wildland fire use, a determination must be made that the fire would not adversely impact noncustodial forest management areas or areas with authorized livestock grazing.
Action 4. Suppress wildfires using appropriate management response. Suppression activities will be guided by suppression priorities and resource protection protocols in **Appendix H**, Wildland Fire Management (see Volume II~~I~~).	**Action 4.** Same as Alternative A.	**Action 4.** Same as Alternative A.	**Action 4.** Same as Alternative A.
Action 5. During a full suppression response, strive for control status within one operational period.	**Action 5.** Same as Alternative A.	**Action 5.** Same as Alternative A.	**Action 5.** Same as Alternative A.
Action 6. When assigning suppression priorities, base the decision on relative values to be protected commensurate with fire management costs.	**Action 6.** Same as Alternative A.	**Action 6.** Same as Alternative A.	**Action 6.** Same as Alternative A.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
Action 7. When managing long-term wildland fire use events, use Wildland Fire Implementation Plans and objectives in the FMP to determine appropriate management response.	**Action 7.** Same as Alternative A.	**Action 7.** Same as Alternative A.	**Action 7.** Same as Alternative A.
Action 8. When conducting prescribed fire, use an approved burn plan to determine appropriate management actions~~When conducting prescription fire, use prescribed fire burn plan to determine appropriate management response~~.	**Action 8.** Same as Alternative A.	**Action 8.** Same as Alternative A.	**Action 8.** Same as Alternative A.
Objective 2. Treat areas within the WUI and prioritize non-WUI treatments by FRCC.	**Objective 2. Reduce hazard and the potential for stand-replacement fire in areas identified as WUI and/or in municipal watersheds as follows (as identified in the FMP, community wildfire protection plans, or other hazard/risk assessment).**	**Objective 2. Same as Alternative B.**	**Objective 2. Same as Alternative B.**
Action 1. Treat WUI areas with high or moderate hazard/risk that are also FRCC 2 or 3 followed by areas with lower hazard/risk that are in FRCC 1 and need maintenance.~~Treat WUI areas with high or moderate hazard/risk that are also FRCC 2 or 3, and areas within Stand Replacement Fire Regimes (IV, V) first, followed by areas with lower hazard/risk that are in FRCC 1 and need maintenance.~~	**Action 1.** Treat up to 40% of CFO lands classified as moderate to high hazard (i.e., FRCC 2 or 3, respectively) over any 5-year period. Fuel treatments should be designed to reduce hazard as follows: • 40% of the high hazard treated lands should move toward moderate hazard; • 30% of the moderate hazard treated lands should move	**Action 1.** Treat up to 20% of CFO lands classified as moderate to high hazard (i.e., FRCC 2 or 3, respectively) over any 5-year period. Fuel treatments should be designed to reduce hazard as follows: • 40% of the high hazard treated lands should move toward moderate hazard; • 30% of the moderate hazard treated lands should move	**Action 1.** Treat up to 60% of CFO lands classified as moderate to high hazard (i.e., FRCC 2 or 3, respectively) over any 5-year period. Fuel treatments should be designed to reduce hazard as follows: • 40% of the high hazard treated lands should move toward moderate hazard; • 30% of the moderate hazard treated lands should move

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
The following are considered the priority vegetation communities to be treated: • Douglas-fir habitat types with heavy fuel loading and pronounced mid-story; • Decadent whitebark pine stands; • Dry ponderosa pine habitat types with heavy fuel loading; • Old growth stands; and • Perennial grasslands with exotic/weed invasion.	toward low hazard; and • 30% of the treatments should be designed to maintain low hazard.	toward low hazard; and • 30% of the treatments should be designed to maintain low hazard.	toward low hazard; • 30% of the treatments should be designed to maintain low hazard.
Action 2. Use RMP objectives ~~the MFP~~ to determine where resource management objectives could be met through the use of prescribed fire.	**Action 2.** Use prescribed fire and wildland fire use in WUI where risks to public and firefighter safety can be mitigated or are low. Treat 5% to 15% of the CFO lands identified as moderate or high hazard in any 5-year period.	**Action 2.** Use prescribed fire and wildland fire use in WUI where risks to public and firefighter safety can be mitigated or are low. Treat 5% to 20% of the CFO lands identified as moderate or high hazard in any 5-year period.	**Action 2.** Use prescribed fire and wildland fire use in WUI where risks to public and firefighter safety can be mitigated or are low. Treat 15% to 30% of the CFO lands identified as moderate or high hazard in any 5-year period.
Action 3. No similar action.	**Action 3.** Using mechanical treatments, treat 2% to 6% of the CFO lands identified as moderate or high hazard in any 5-year period.	**Action 3.** Same as Alternative B.	**Action 3.** Using mechanical treatments, treat 2% to 15% of the CFO lands identified as moderate or high hazard in any 5-year period.
Action 4. No similar action.	**Action 4.** Using chemical and/or biological controls, treat 5% to 36% of the CFO lands identified as moderate or high hazard in any 5-year period.	**Action 4.** Using chemical and/or biological controls, treat 5% to 20% of the CFO lands identified as moderate or high hazard in any 5-year period.	**Action 4.** Same as Alternative B.
Action 5. Design, develop and implement hazardous fuels reduction	**Action 5.** Same as Alternative A.	**Action 5.** Same as Alternative A.	**Action 5.** Same as Alternative A.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
projects identified in or consistent with the goals of community wildfire protection plans. These projects should be developed and implemented consistent with the fuels treatment priorities and protocols displayed in **Appendix H**, Wildland Fire Management (see Volume II~~I~~).			
Action 6. Initiate maintenance and hazard fuels reduction activities to 1) reduce the potential for high severity, stand-replacement fires, regardless of FRCC or HFR , and~~Initiate maintenance and hazard fuels-reduction activities to:~~ ~~1) reduce the potential for stand-replacement fire in mixed and stand-replacement fire regime groups (II, IV, and V); and~~ 2) reduce potential fire size in areas where large, stand-replacement fires might cause adverse effects to WUI and adjacent resources.	**Action 6.** Same as Alternative A.	**Action 6.** Same as Alternative A.	**Action 6.** Same as Alternative A.
Action 7. No similar action.	**Action 7.** Emphasize biomass utilization when developing fuels-treatment projects.	**Action 7.** Same as Alternative B.	**Action 7.** Same as Alternative B.
Action 8. No similar action.	**Action 8.** Suspend livestock grazing until revegetation and soil stabilization objectives are met in prescribed burn areas.	**Action 8.** Same as Alternative B.	**Action 8.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
Action 9. Develop and support community assistance projects and plans consistent with the community assistance priorities and protocols contained in **Appendix H**, Wildland Fire Management (see Volume II~~I~~).	**Action 9.** Same as Alternative A.	**Action 9.** Same as Alternative A.	**Action 9.** Same as Alternative A.
Action 1~~1~~0. No similar action.	**Action 1~~1~~0.** Fuel-reduction treatments in WUI to protect public or firefighter safety and/or infrastructure will be designed to meet Visual Resource Management (VRM) as much as possible, while meeting hazardous fuel reduction goals.	**Action 1~~1~~0.** Same as Alternative B.	**Action 1~~1~~0.** Same as Alternative B.
Objective 3. Maintain or return vegetative communities outside the WUI to their Historic Fire Regime and to FRCC 1.	**Objective 3. Same as Alternative A.**	**Objective 3. Same as Alternative A.**	**Objective 3. Same as Alternative A.**
Action 1. Design, develop, and implement hazardous fuels-reduction projects that accomplish multiple resource objectives consistent with the fuels treatment priorities and protocols displayed in **Appendix H**, Wildland Fire Management (see Volume II~~I~~).	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.
Action 2. No similar action.	**Action 2.** Emphasize biomass utilization as the preferred solution to meet natural resource management objectives.	**Action 2.** Same as Alternative B.	**Action 2.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
Action 3. No similar action.	**Action 3.** Suspend livestock grazing for a minimum of two growing seasons in prescribed burn areas consistent with BLM Idaho State Office guidelines.	**Action 3.** Same as Alternative B.	**Action 3.** Same as Alternative B.
Action 4. No similar action.	**Action 4.** Increase the use of prescribed fire and wildland fire use activities in frequent fire regime groups (I, II , and III).	**Action 4.** Same as Alternative B.	**Action 4.** Same as Alternative B.
Objective 4. Determine appropriate management response, rehabilitation actions, and fuels treatment type based on resource values to be protected and values at risk identified in the ~~FMP~~ RMP, through the fire planning process and documented in the FMP. ~~and Appendix H, Wildland Fire Management (see Volume III).~~	**Objective 4. Same as Alternative A.**	**Objective 4. Same as Alternative A.**	**Objective 4. Same as Alternative A.**
Action 1. Use fire as a tool for site preparation and slash disposal; to reduce fire hazard; prepare areas for reforestation; reduce competition between existing or newly established trees and other vegetation, to expose mineral soil to encourage establishment of natural regeneration; for sanitation thinning; and to meet other forest management objectives.	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.
Action 2. Use non-fire fuel management strategies to meet various	**Action 2.** Same as Alternative A.	**Action 2.** Same as Alternative A.	**Action 2.** Same as Alternative A.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
resource objectives such as: • Protection of cultural resources, where there is a problem with fuel build-up, • Maintaining or improving vegetative trend for range management, • Improving forage quality and quantity and managing for specific cover/forage ratios to benefit wildlife, • Weed eradication and return to native vegetation, and • Forest management activities as described above.			
Action 3. Use rehabilitation and emergency stabilization to mitigate the adverse effects of fire on the soil, vegetation, and water resources in a cost-effective manner. These activities will be consistent with the Emergency Stabilization and Rehabilitation priorities and protocols in **Appendix H** (Volume II~~I~~).	**Action 3.** Same as Alternative A.	**Action 3.** Same as Alternative A.	**Action 3.** Same as Alternative A.
Objective 5. ~~Adopt the Idaho Forest Practices Act as guidance for timber harvest activities.~~No similar action.	**Objective 5. Within municipal watersheds and WUIs, manage existing old growth stands to maintain and/or contribute to the restoration of pre-fire suppression characteristics.**	**Objective 5. Same as Alternative B.**	**Objective 5. Same as Alternative B.**

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
Action 1. No similar action.	**Action 1.** Utilize community wildfire protection plans to identify municipal watersheds and WUIs.	**Action 1.** Same as Alternative B.	**Action 1.** Same as Alternative B.
Action 2. No similar action.	**Action 2.** Identify and record old growth stands. Use field inventory to determine if they meet the pre-fire suppression criteria.	**Action 2.** Same as Alternative B.	**Action 2.** Same as Alternative B.
CULTURAL RESOURCES **Goal 1: Preserve and protect significant cultural resources and ensure that they are available for appropriate uses.**			
Objective 1. Conduct proactive cultural resource inventories.	**Objective 1. Conduct proactive cultural resource inventories in priority areas.**	**Objective 1. Same as Alternative B.**	**Objective 1. Same as Alternative B.**
Action 1. Complete proactive cultural resource inventories.	**Action 1.** Identify priority areas based on cultural resource data.	**Action 1.** Same as Alternative B.	**Action 1.** Same as Alternative B.
Action 2. Consult with Native American tribes to identify traditional cultural properties.	**Action 2.** Same as Alternative A.	**Action 2.** Same as Alternative A.	**Action 2.** Same as Alternative A.
Objective 2. Identify cultural properties requiring physical or administrative protection measures to protect site integrity and implement necessary measures.	**Objective 2. Same as Alternative A.**	**Objective 2. Same as Alternative A.**	**Objective 2. Same as Alternative A.**
Action 1. Monitor and assess cultural resources.	**Action 1.** Monitor and assess a sample of cultural resources and/or traditional cultural properties on an annual basis to determine if cultural resource objectives are being met.	**Action 1.** Same as Alternative B.	**Action 1.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
Action 2. OHV limitations will be employed to protect cultural values at specified sites.	**Action 2.** Develop a long-term monitoring schedule within five years of the signing of the ROD for this RMP that identifies a representative sample of cultural sites and/or traditional cultural properties that will be examined on an annual basis.	**Action 2.** Same as Alternative B.	**Action 2.** Same as Alternative B.
Action 3. Implement site protection measures to protect at-risk sites.	**Action 3.** Same as Alternative A.	**Action 3.** Same as Alternative A.	**Action 3.** Same as Alternative A.
Action 4. ~~B.~~ Identify opportunities for cultural heritage education to emphasize important cultural resource values and to assist in protecting sites or areas.	**Action 4.** Same as Alternative A.	**Action 4.** Same as Alternative A.	**Action 4.** Same as Alternative A.
Objective 3. Standardize cultural site record information and evaluation documentation to allocate sites to cultural use categories.	**Objective 3. Same as Alternative A.**	**Objective 3. Same as Alternative A.**	**Objective 3. Same as Alternative A.**
Action 1. Update existing cultural records when opportunities arise.	**Action 1**. Establish a schedule to update existing cultural records and allocate sites to cultural use categories within five years of the signing of the ROD for this RMP. Information needed to better allocate resource use categories includes site characteristics, chronological placement, geomorphic relationships, and overall data potential. Methodology to collect such information may include but not be	**Action 1.** Same as Alternative B.	**Action 1.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
	limited to detailed photography, intensive mapping, excavations, geomorphic analysis, and other forms of analyses.		
Action 2. Nominate eligible sites or areas to the National Register of Historic Places.	**Action 2.** Same as Alternative A.	**Action 2.** Same as Alternative A.	**Action 2.** Same as Alternative A.
Objective 4. Develop cultural resource management plans for significant cultural resources or traditional cultural properties.	Objective 4. Same as Alternative A.	**Objective 4. Same as Alternative A.**	**Objective 4. Same as Alternative A.**
Action 1. Continue to implement the Lower Salmon River Cultural Resource Management Plan.	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.
Action 2. Identify additional sites and/or areas requiring the development of cultural resource management plans.	**Action 2.** Same as Alternative A.	**Action 2.** Same as Alternative A.	**Action 2.** Same as Alternative A.
Action 3. No similar action.	**Action 3.** Prepare cultural resource management plans for the Elk City and Marshall Mountain areas.	**Action 3.** Same as Alternative B.	**Action 3.** Same as Alternative B.
Action 4. No similar action.	**Action 4.** Coordinate with fire management activities through the use of resource advisors to avoid possible impact on cultural resources.	**Action 4.** Same as Alternative B.	**Action 4.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
CULTURAL RESOURCES **Goal 2: Reduce imminent threats and resolve potential conflicts from natural or human-caused deterioration, or potential conflict with other resources uses, by ensuring that all authorizations for land use and resource use will comply with National Historic Preservation Act, Section 106.**			
Objective 1. Determine potential effects from proposed land use authorizations.	**Objective 1. Same as Alternative A.**	**Objective 1. Same as Alternative A.**	**Objective 1. Same as Alternative A.**
Action 1. Identify and evaluate sites and/or traditional cultural properties to determine potential effects.	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.
Action 2. Implement existing protocol agreement with State Historic Preservation Office to streamline the consultation process.	**Action 2.** Develop new and/or implement existing protocol agreements with State Historic Preservation Office and/or Tribal Historic Preservation Office to streamline the consultation process.	**Action 2.** Same as Alternative B.	**Action 2.** Same as Alternative B.
Action 3. Complete government-to-government consultation with Native American tribes.	**Action 3.** Same as Alternative A.	**Action 3.** Same as Alternative A.	**Action 3.** Same as Alternative A.
Action 4. Minimize effects to site integrity by project redesign, cancellation, or mitigation when significant cultural resources are identified from inventories or consultation.	**Action 4.** Same as Alternative A.	**Action 4.** Same as Alternative A.	**Action 4.** Same as Alternative A.
Action 5. No similar action.	**Action 5.** Monitor a sample of previously completed land use authorizations on an annual basis to determine if site objectives were met.	**Action 5.** Same as Alternative B.	**Action 5.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
PALEONTOLOGICAL RESOURCES **Goal: Preserve and protect significant paleontological resources and ensure that they are available for appropriate uses.**			
Objective 1. Identify priority geographic areas for field inventory and protect recorded sites.	**Objective 1. Same as Alternative A.**	**Objective 1. Same as Alternative A.**	**Objective 1. Same as Alternative A.**
Action 1. No similar action.	**Action 1.** Identify and inventory areas that may contain significant paleontological resources.	**Action 1.** Same as Alternative B.	**Action 1.** Same as Alternative B.
Action 2. Inventory areas that may contain paleontological resources prior to land use authorizations.	**Action 2.** Same as Alternative A.	**Action 2.** Same as Alternative A.	**Action 2.** Same as Alternative A.
Action 3. No similar action.	**Action 3.** Develop appropriate measures to protect identified paleontological resources on a case-by-case basis.	**Action 3.** Same as Alternative B.	**Action 3.** Same as Alternative B.
VISUAL RESOURCES **Goal: Manage activities to maintain scenic quality.**			
Objective 1. Manage Visual Resources to protect scenic quality.	**Objective 1. Manage activities to protect scenic quality in accordance with VRM class guidelines.**	**Objective 1. Same as Alternative B.**	**Objective 1. Same as Alternative B.**
Action 1. Manage the following acreage of BLM land according to existing VRM class designations (WSAs will be managed as VRM Class I): • Class I – 12,704 acres • Class II – 41,195 acres • Class III – 62,289 acres • Class IV – 27,639 acres	**Action 1.** Manage the following acreage of BLM land according to VRM class designations (WSAs will be managed as VRM Class I): • Class I – 12,704 acres • Class II – 41,195 acres • Class III – 62,289 acres • Class IV – 27,639 acres	**Action 1.** Manage the following acreage of BLM land according to VRM class designations (WSAs will be managed as VRM Class I):~~:~~ • Class I – 26,945 acres • Class II – 46,753 acres • Class III – 42,489 acres • Class IV – 27,636 acres	**Action 1.** Manage the following acreage of BLM land according to VRM class designations (WSAs will be managed as VRM Class I): • Class I – 7,205 acres • Class II – 36,180 acres • Class III – 72,803 acres • Class IV – 27,635 acres

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)~~Alternative B (Preferred Alternative)~~	Alternative C	Alternative D
VRM guidelines are broad and will be revisited when project-level actions are implemented. VRM guidelines are general and are not intended to be site specific. During project planning, more precise mapping and evaluation of VRM class can be done. Mitigation measures would then be identified to reduce visual contrasts, and rehabilitation plans to address landscape modifications would be prepared on a case-by-case basis.	VRM guidelines are broad and will be revisited when project-level actions are implemented. VRM guidelines are general and are not intended to be site specific. During project planning, more precise mapping and evaluation of VRM class can be done. Mitigation measures would then be identified to reduce visual contrasts, and rehabilitation plans to address landscape modifications would be prepared on a case-by-case basis.	VRM guidelines are broad and will be revisited when project-level actions are implemented. VRM guidelines are general and are not intended to be site specific. During project planning, more precise mapping and evaluation of VRM class can be done. Mitigation measures would then be identified to reduce visual contrasts, and rehabilitation plans to address landscape modifications would be prepared on a case-by-case basis.	VRM guidelines are broad and will be revisited when project-level actions are implemented. VRM guidelines are general and are not intended to be site specific. During project planning, more precise mapping and evaluation of VRM class can be done. Mitigation measures would then be identified to reduce visual contrasts, and rehabilitation plans to address landscape modifications would be prepared on a case-by-case basis.
FOREST PRODUCTS **Goal: Provide forest products to help meet local and national demands.**			
Objective 1. The Idaho Forest Practices Act will be adopted as guidance for timber harvest activities.	**Objective 1. Same as Alternative A.**	**Objective 1. Same as Alternative A.**	**Objective 1. Same as Alternative A.**
Action 1. Direct control measures recommended by the Forest Service Insect and Disease Center will be applied on a case-by-case basis to forest management areas and areas of high visual or recreation value, as funding and staffing are available.	**Action 1.** Direct control measures recommended by the US Bureau of Entomology and Plant Quarantine, Forest Health Protection and based on current literature will be applied on a case-by-case basis to forest management areas and areas of high visual or recreation value, as funding and staffing are available.	**Action 1.** Same as Alternative B.	**Action 1.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
Objective 2. No similar objective.	**Objective 2. Maintain a forest management program that complements resource objectives for other programs.**	**Objective 2. Same as Alternative B.**	**Objective 2. Same as Alternative B.**
Action 1. No similar action.	**Action 1.** Develop silvicultural treatments that support DFC for those stands identified on **Figure 6** (see Volume IV of the Draft RMP/EIS).	**Action 1.** Same as Alternative B, except refer to **Figure 7** (see Volume IV of the Draft RMP/EIS).	**Action 1.** No similar action.
Action 2. Timber management activities would not occur where they could destroy or degrade wetland-riparian areas.	**Action 2.** As outlined in the Aquatic and Riparian Management Strategy (**Appendix F**, Aquatic and Riparian Management Strategy, Alternative B [see Volume II~~I~~]), vegetation management practices such as timber harvest, salvage logging, fuelwood cutting and fuels treatments may be used in RCAs. Vegetation treatments will be allowed only to restore or enhance physical and biological characteristics of the RCA. Implemented treatments will, at a minimum, maintain Riparian Management Objectives.	**Action 2.** Same as Alternative A, except refer to **Appendix F**, Aquatic and Riparian Management Strategy, Alternative C (see Volume II~~I~~).	**Action 2.** Same as Alternative A, except refer to **Appendix F**, Aquatic and Riparian Management Strategy, Alternative D (see Volume II~~I~~).
Action 3. Snag management will be followed for all timber sales, key items summarized below: • Snag management will be practiced on at least 60 percent of any timber harvest areas.	**Action 3.** Snag management will be followed for all timber sales per direction in **Appendix D**, Desired Future Conditions for Forest Vegetation/Wildlife Habitat (see Volume II~~I~~).	**Action 3.** Same as Alternative B.	**Action 3.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
• Maintain a minimum of two large diameter at breast height (14 inches or larger) snags per acre. • Where snags densities are below the desired level, nonmerchantable and/or diseased trees will be girdled to provide snags. • In firewood cutting areas, "leave" snags would be marked.			
Action 4. Cutting units where more than 60 percent of the cover is to be removed would be shaped so that adequate hiding cover is available within 330 feet from any point within the cutting unit. The area must be bordered by cover of not less than 1.5 times the sight distance. A sight distance is the distance at which a deer or elk is hidden from view.	**Action 4.** No similar action.	**Action 4.** No similar action.	**Action 4.** No similar action.
Objective 3. No similar objective.	**Objective 3. Prioritize vegetation treatment projects that would maximize forest commodity recovery.**	**Objective 3. Same as Alternative B.**	**Objective 3. Same as Alternative B.**
Action 1. No similar action.	**Action 1.** In forest stands that are susceptible to or have outbreaks of forest insect or disease, or have mortality related to wildland fire,	**Action 1.** Same as Alternative B.	**Action 1.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
	expedite salvage to capture economic return.		
Objective 4. Manage particular timber areas as needed according to differing resource conditions. **(ASQ from MFP = 6,600 MBF)**	**Objective 4. Over a 15-year period offer 3,129 MBF as a PSQ of sawtimber per year from the commercial forest land base of 40,598 acres (estimate treating 242 acres per year).**	**Objective 4. Over a 15-year period offer 3,101 MBF as a PSQ of sawtimber per year from the commercial forest land base of 34,611 acres (estimate treating 191 acres per year).**	**Objective 4. Over a 15-year period offer 4,823 MBF as a PSQ of sawtimber per year from the commercial forest land base of 45,190 acres (estimate treating 361 acres per year).**
Action 1. 24,257 acres are classified for intensive forest practices and will be managed to maximize timber production on a sustained yield basis. 11,500 acres are classified for extensive management and will be managed for timber production on a sustained yield basis; however, few intensive practices will be applied. (total commercial forest land base of 35,757 acres, treating 358 acres/year) 37,549 acres are classified for custodial forest management and will not be managed for timber production.	**Action 1.** The forested land base is apportioned into commercial forest management areas and custodial management areas (**Figure 8**; see Volume IV of the Draft RMP/EIS). Custodial management areas are not included in the calculation of the PSQ, however forest management operations can be implemented in these areas to accomplish resource objectives.	**Action 1.** Same as Alternative B.	**Action 1.** Same as Alternative B.
Action 2. Harvest methods in Intensive and Extensive management areas: • Any harvest method, including clearcutting, may be used on northeast, north, or northwest aspects. The average size for a	**Action 2.** All harvest systems and treatment methods and techniques may be used unless specifically prohibited or limited by site-specific prescription direction. Site-specific prescriptions would be refined using an interdisciplinary team approach to identify management needs for other	**Action 2.** Same as Alternative B.	**Action 2.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
clearcut based on a 5-year period would be 20 acres. The maximum size would be 60 acres for any one clearcut. • On all other aspects, only partial or selective cutting methods would be used. A seed tree and shelterwood would be the most common methods. Individual tree selection (all aged management) would be used as required on Timber Production Capability Classification restricted areas. Equipment Limitations in Intensive and Extensive management areas: • On non-problem and problem reforestation sites with slopes less than 35 percent, any yarding system, site preparation method, or slash disposal method may be used. • When slopes exceed 35 percent or as required on Timber Production Capability Classification fragile sites, no ground based (cat, rubber-tired skidder, etc.) yarding systems may be used, and slash must be disposed of by lopping and scattering, hand piling, burning, or yarding. Site preparation must be done by	resources.		

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
hand, fire, or chemical methods. Slash Disposal in Intensive and Extensive management areas: • Slash resulting from final harvest cutting would be reduced to a rating of 40 points or less based on the Idaho Forests Practices Act rating system. This would be done to reduce the fire hazard and prepare the area for reforestation. • Slash resulting from other intensive practices would be reduced mainly for fire protection to 80 points on the IPRA rating system. • At least 80 percent of the slash within 50 feet of roads and landings would be piled and burned. Site Preparation in Intensive and Extensive management areas: • Site preparation would be done after final harvest or on non-stocked areas to prepare for reforestation. Its primary objectives are to reduce competition between newly established trees and other vegetation and to expose mineral soil to encourage the			

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
establishment of natural regeneration.			
Action 3. See Action 4 below.	**Action 3.** All final harvest and reforestation projects in commercial forest management areas will be designed to achieve full stocking on 90% of the area within 5 years.	**Action 3.** Same as Alternative B.	**Action 3.** Same as Alternative B.
Action 4. Reforestation in Intensive management areas: • All final harvest and reforestation projects will be designed to establish full stocking on at least 90 percent of the treated area within 5 years. Species to be favored would be based on factors such as habitat type, elevation, industry preferences, and ability to obtain quality seedlings. Species diversity would be encouraged on all areas. • All clearcut areas would be planted with acceptable bare root or containerized stock. Partial or selectively cut areas would rely on natural regeneration when acceptable and desirable seed sources exist. Otherwise, they would be planted. Artificial shade would be provided as needed. • Planted areas would meet stocking	**Action 4.** All activities normally associated with reforestation may be used, including but not limited to, mechanical and chemical treatments, pest control, and prescribed burning.	**Action 4.** Same as Alternative B.	**Action 4.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
standards on first and third-year survival survey. Naturally regenerated areas would meet stocking standards on the third-year survival survey. If any areas fail to meet the stocking standards, they will be planted to bring them up to standards within 2 years. • In areas being reforested after harvest, livestock grazing will be discouraged until seedling reproduction is established acceptable to Idaho Forest Practices Act standards (seedlings either at least 3 feet tall or 5 years old). Particular attention should be paid to limiting grazing during spring and fall when damage to seedlings is most critical. Reforestation in Extensive management areas: • Natural regeneration methods would be relied upon for establishment of the next crop. All final harvest operations and reforestation projects would be designed to establish full stocking on 90 percent of the area within 10 years. • If an area fails to meet stocking			

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
requirements after 7 years, it would be planted with sufficient acceptable bare root and containerized stock to bring them up to stocking standards.			
Action 5. In areas being reforested after harvest, livestock grazing is discouraged until seedling reproduction is established ~~to~~ as acceptable to Idaho Forest Practices Act standards (seedlings at least three feet tall or five years old). Particular attention should be paid to spring and fall when damage to seedlings is most critical.	**Action 5.** Same as Alternative A.	**Action 5.** Same as Alternative A.	**Action 5.** Same as Alternative A.
Action 6. Precommercial Thinning in Intensive management areas: • Precommercial thinning would be done prior to crown closure and any expression of dominance or, in the case of Ponderosa pine, when the mean annual increment drops. This would usually be done between age 10 and 20 years. • Selection of leave trees would be based on the same criteria as reforestation plus individual tree vigor. Competing trees and vegetation would be eliminated mechanically, by hand, or by prescribed burning. Spacing	**Action 6.** Thinning can be used to achieve stocking rate, species composition and vigor goals and objectives identified in site-specific silvicultural prescriptions.	**Action 6.** Same as Alternative B.	**Action 6.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
would be based on habitat type, species, and tree size. A minimum of 200 and a maximum of 450 trees per acre would be left. • Sanitation thinning of stagnated stands over 20 years of age would follow the precommercial thinning guidelines but with emphasis on leaving dominant or co-dominant, vigorous, and healthy trees. Precommercial Thinning in Extensive management areas: • Would not normally occur. Commercial Thinning in Intensive management areas: • Stands of commercial size trees which exceed 80 percent stocking would be thinned before crown closure or, in the case of ponderosa pine, when the mean annual increment drops. This would usually occur at ages 50 and 70. • Selections of leave trees would be based on spacing, health, vigor, and degree of dominance. Spacing would be based on habitat type, species, and tree size. At age 50, 90 to 130 trees per acre will be left, and at age 70, 30 to 95 trees			

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
per acre would be left. • Where cable yarding systems are used, the carriage must be locked to the skyline during lateral yarding. Commercial Thinning in Extensive management areas: • Would not normally occur. Sanitation Thinning in Extensive management areas only: • Sanitation thinning would be used on those stands which exceed 120 percent of full stocking.			
Action 7. No similar action.	**Action 7.** Adopt the Road Construction Guidelines developed for the RMP and included in **Appendix B** (Best Management Practices) (see Volume II~~I~~), along with the road guidelines in the Aquatic and Riparian Management Strategy (**Appendix F**, Aquatic and Riparian Management Strategy, Alternative B [Volume II~~I~~]).	**Action 7.** Same as Alternative B, except refer to **Appendix F**, Aquatic and Riparian Management Strategy, Alternative C (see Volume II~~I~~).	**Action 7.** Same as Alternative B, except refer to **Appendix F**, Aquatic and Riparian Management Strategy, Alternative D (see Volume II~~I~~).
Action 8. No similar action.	**Action 8.** Implement the Aquatic and Riparian Management Strategy (**Appendix F**, Aquatic and Riparian Management Strategy, Alternative B [Volume II~~I~~]), Timber Management Guidelines.	**Action 8.** Same as Alternative B, except refer to **Appendix F**, Aquatic and Riparian Management Strategy, Alternative C (see Volume II~~I~~).	**Action 8.** Same as Alternative B, except refer to **Appendix F**, Aquatic and Riparian Management Strategy, Alternative D (see Volume II~~I~~).

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
Objective 5. No similar objective.	**Objective 5. Allow for the collection of forest and vegetal products based upon tribal and public demand.**	**Objective 5. Same as Alternative B.**	**Objective 5. Same as Alternative B.**
Action 1. Minor forest products, such as firewood, would be made available to the public in areas of completed timber harvests and areas where removal of timber would facilitate management activities.	**Action 1.** Collection of minor forest products (e.g. post/poles, fuelwood, Christmas trees) would be allowed where consistent with forest management and other resource goals and objectives.	**Action 1.** Same as Alternative B.	**Action 1.** Same as Alternative B.
LIVESTOCK GRAZING **Goal: Provide opportunities for grazing while meeting rangeland health standards.**			
Objective 1. Lands leased for livestock grazing will continue to be leased for that use.	**Objective 1. Identify lands available for livestock grazing.**	**Objective 1. Identify lands available for livestock grazing.**	**Objective 1. Identify lands available for livestock grazing.**
Action 1. Provide ~~7,204~~7,200 animal unit months (AUMs), 168 allotments, and 122,732 acres, as listed in **Appendix I**, Grazing AUMs by Allotment (Volume II~~I~~).	**Action 1.** Continue grazing on existing allotments as identified in the North Idaho Grazing EIS, except as mentioned in other actions below and listed in **Appendix I**, Grazing AUMs by Allotment (see Volume II~~I~~). Provide 6,2635~~4~~ AUMs, 166 allotments, and 105,619 acres.	**Action 1.** Continue grazing on existing allotments as identified in the North Idaho Grazing EIS, except as mentioned in other actions below and listed in **Appendix I**, Grazing AUMs by Allotment (see Volume II~~I~~). Provide 6,020 AUMs, 145 allotments, and 101,350 acres.	**Action 1.** Continue grazing on existing allotments as identified in the North Idaho Grazing EIS except as mentioned in other actions below and listed in **Appendix I**, Grazing AUMs by Allotment (see Volume II~~I~~). Provide 8,549~~540~~ AUMs, 170 allotments, and 135,850 acres.
Action 2. No similar action.	**Action 2.** Shuck Creek 36105 allotment – Extend the southern boundary to the fence line (Township 28 North, Range 1 East, Section 10, Idaho County, Boise Principal Meridian). No additional AUMs will be allocated.	**Action 2.** Same as Alternative B.	**Action 2.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
Action 3. No similar action.	**Action 3**. Lower Otto Creek Allotment (00398)-Create a new allotment line (Township 28 North, Range 1 East, Sections 9 &10, Idaho County, Boise Principal Meridian). The Lower Otto Creek Allotment (00398) would be 101 acres, 15 AUMs, Class of Livestock-cattle, and Season-of-Use April 15 to May 15. ~~Lower Otto Creek – Create a new allotment line (Township 28 North, Range 1 East, Section 10, Idaho County, Boise Principal Meridian) south of the fence. Determine the class of livestock, season of use, and AUMs for the new allotment. The allotment is allocated 15 AUMs of cattle use from April 15 to May 15.~~	**Action 3.** No similar action.	**Action 3.** Same as Alternative B.~~Lower Otto Creek – Create a new allotment line (Township 28 North, Range 1 East, Section 10, Idaho County, Boise Principal Meridian) south of the fence. The allotment is allocated 15 AUMs of cattle use from April 15 to May 15.Determine the class of livestock, season of use, and AUMs for the new allotment.~~
Action 4. No similar action.	**Action 4.** ~~Retire~~ Eliminate the Craig Mountain 36289 allotment.	**Action 4.** Same as Alternative B.	**Action 4.** Increase the Craig Mountain 36289 allotment to 5,241 acres by including acquired lands in Captain John Creek. Retain the class of livestock and season of use. Allocate the additional AUMs at the same acres/AUM rate as the existing allotment. Periodic grazing may be allowed in order to meet resource management goals.
Action 5. No similar action.	**Action 5.** Eliminate ~~Retire~~ the Wapshilla Ridge 36279 allotment.	**Action 5.** Same as Alternative B.	**Action 5.** Increase the Wapshilla Ridge 36279 allotment to 14,745 acres by

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
			including all the Nobel property. Retain the class of livestock and season of use. Allocate the additional AUMs at the same acres/AUM rate as the existing allotment. Periodic grazing may be allowed in order to meet resource management goals.
Action 6. No similar action.	**Action 6.** Eliminate ~~Retire~~ the Corral Creek 36160 allotment.	**Action 6.** Same as Alternative B.	**Action 6.** Increase the Corral Creek 36160 allotment to 8,217 acres by including all acquired lands in Corral Creek and Cave Gulch. Retain the class of livestock and season of use. Allocate the additional AUMs at the same acres/AUM rate as the existing allotment. Periodic grazing may be allowed in order to meet resource management goals.
Action 7. No similar action.	**Action 7.** Authorized grazing will avoid adverse impacts to known listed plant populations ~~(potential of constructing up to five acres of exclosures)~~. Site-specific Section 7 consultation would be needed to identify necessary actions to avoid possible adverse effects.	**Action 7.** Same as Alternative B.	**Action 7.** Same as Alternative B.
Action 8. No similar action.	**Action 8.** Eliminate spring grazing on the Lyons Bar 36293 allotment.	**Action 8.** Same as Alternative B.	**Action 8.** Same as Alternative B.
Action 9. No similar action.	**Action 9.** When lands are acquired into public ownership, they may be included in the grazing allotment base and	**Action 9.** Same as Alternative B.	**Action 9.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
	grazing may be authorized if it is compatible with other resources and uses.		
Action 10. No similar action.	**Action 10.** No similar action.	**Action 10.** ~~Retire~~ Eliminate allotments that have been vacant for more then five years; and where there is no public demand for livestock grazing.	**Action 10.** No similar action.
Action 11. No similar action.	**Action 11.** Prohibit the authorization of domestic sheep *(Ovis aries)* or goats *(Capra hircus)* on BLM allotments within Hells Canyon (Snake River drainage) and Salmon River drainage. Exceptions are the existing four sheep allotments in the Salmon River and Little Salmon River drainages (see Action 16 below).~~Class of livestock is limited to cattle and/or horses within Hells Canyon and the Lower Salmon River (downstream from and including Maloney Creek 36119 allotment).~~	**Action 11.** Same as Alternative B.	**Action 11.** Same as Alternative B.
Action 12. No similar action.	**Action 12.** No similar action.	**Action 12.** No similar action.	**Action 12.** Extend the American River 36173 allotment to the east to include the 160 acres in Township 29 North, Range 8 East, Section 10, Idaho County, Boise Principal Meridian. Allocate the additional AUMs at the same acres/AUM rate as the existing allotment.
Action 13. No similar action.	**Action 13.** No similar action.	**Action 13.** No similar action.	**Action 13.** Create a new allotment (Whiskey South) in Township 29

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
			North, Range 8 East, to include Sections 30-35, Idaho County, Boise Principal Meridian, encompassing 2,061 acres. Determine the class of livestock, season of use, and AUMs for the new allotment.
Action 14. No similar action.	**Action 14.** No similar action.	**Action 14.** No similar action.	**Action 14.** Modify the Schmidt Creek allotment along Lolo Creek by adding 1,686 acres down river of the allotment. Determine the class of livestock, season of use, and AUMs for the new allotment.
Action 15. Adjacent to the Salmon River, minimize multiple-use conflicts between recreational use and livestock grazing through avoidance of summer livestock grazing. Select allotments adjacent to the Salmon River that currently exclude summer use within 0.5-mile of the river corridor through season of use (generally June 15 or June 22 through October 31) or a term and condition in the lease will maintain this nonuse period unless determined unnecessary by an interdisciplianary team.	**Action 15.** Same as Alternative A.	**Action 15.** Same as Alternative A.	**Action 15.** Same as Alternative A.
Action 16. No similar action.	**Action 16.** The BLM, through consultation, cooperation, and coordination with the grazing lessees, Idaho Department of Fish and Game,	**Action 16.** Same as Alternative B.	**Action 16.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
	Nez Perce Tribe, Forest Service, and interested publics, will develop and implemenet strategies to resolve resource issues between domestic sheep and bighorn sheep on the Partridge Creek allotment (36240), Marshall Mountain allotment (36284), Hard Creek allotment (36242), and Big Creek (36358). Note: For additional information regarding the risk of disease transmission to bighorn sheep from domestic sheep/goat, refer to Chapter 2, Wildlife and Special Status Wildlife, Objective 13, Actions 1 through 7.		
Objective 2. Intensive management will be implemented in 13 allotments (totaling 49,865 acres) through allotment management plans that incorporate rest grazing treatments on 22,165 acres and deferred grazing treatments on 27,700 acres.	**Objective 2. No similar objective.**	**Objective 2. Same as Alternative B.**	**Objective 2. Same as Alternative B.**
Action 1. Additional improvements will be implemented on intensively managed allotments. They include 25.5 miles of fence, 30 spring developments, 7 catchments, 10 cattle guards, 2.7 miles of fence for stream protection, and 1,900 acres of noxious weed control.	**Action 1.** No similar action. This action was completed to the extent that was feasible. ~~This action was completed.~~	**Action 1.** Same as Alternative B.	**Action 1.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
Objective 3. Determine level of management for each allotment.	**Objective 3. Same as Alternative A.**	**Objective 3. Same as Alternative A.**	**Objective 3. Same as Alternative A.**
Action 1. Less-intensive management will be applied to the remaining 155 allotments. On these remaining 72,870 acres, grazing treatments, proper season of use, and the stocking rates will be established.	**Action 1.** Within 1 year of ROD, complete a review for each allotment and assign management level (high or low).	**Action 1.** Same as Alternative B.	**Action 1.** Same as Alternative B.
Action 2. Within 5 years after issuance of the MFP (BLM 1981a), livestock grazing will be adjusted from the current authorized forage use of 7,547 AUMs to 6,684 AUMs, a 12-percent reduction. Within 20 years, the use will increase from the initial 6,684 AUMs to 7,661 AUMs, a 13-percent increase.	**Action 2.** No similar action. This action was completed.	**Action 2.** Same as Alternative B.	**Action 2.** Same as Alternative B.
Action 3. Provide habitat to meet present and future wildlife demands through allocation and maintenance of 1,004 AUMs of big game forage, improvement or riparian areas, and implementation of improved grazing management.	**Action 3.** Maintain allocation of 1,004 AUMs of big game forage, improvement of riparian areas, and implementation of improved grazing management.	**Action 3.** Same as Alternative B.	**Action 3.** Same as Alternative B.
Action ~~3~~4. No similar action. ~~Provide habitat to meet present and future wildlife demands through allocation and maintenance of 1,004 AUMs of big game forage, improvement or riparian areas, and implementation of improved~~	**Action ~~3~~4.** Provide information to grazing lessees about ecosystem functions, rangeland health and guidelines for maintenance and/or restoration of rangeland health. Information will include indicators used to assess the eight standards of	**Action ~~3~~4.** Same as Alternative B.	**Action ~~3~~4.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
~~grazing management.~~	rangeland health during the Standards and Guides Assessment process. ~~Maintain allocation of 1,004 AUMs of big game forage, improvement of riparian areas, and implementation of improved grazing management.~~		
Objective 4. Provide for proper rangeland health by meeting all standards and guidelines identified in the Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management (Appendix A [see Volume II~~I~~]).	**Objective 4. On high-level management allotments, authorize livestock grazing while assuring Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management (Appendix A [see Volume II~~I~~]) and other resource objectives are being met.**	**Objective 4. Same as Alternative B.**	**Objective 4. Same as Alternative B.**
Action 1. Evaluate all 168 grazing allotments in the CFO for compliance with standards and guidelines.	**Action 1.** BLM will continue to complete Rangeland health assessments in accordance with the Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management (1997a).~~Conduct rangeland health assessments and issue a determination on each allotment when 10-year grazing leases comes up for review.~~	**Action 1.** Same as Alternative B.	**Action 1.** Same as Alternative B.
Action 2. No similar action.	**Action 2.** Continue current grazing authorizations if Idaho Standards for Rangeland Health (**Appendix A** [see Volume II~~I~~]) are being met.	**Action 2.** Same as Alternative B.	**Action 2.** Same as Alternative B.
Action 3. In accordance with 43 CFR 4180, if existing grazing management is	**Action 3.** If Idaho Standards for Rangeland Health (**Appendix A** [see	**Action 3.** Same as Alternative B.	**Action 3.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
a significant factor in the nonattainment of a standard identified in the Idaho Standards for Rangeland Health (**Appendix A** [see Volume II~~I~~]), appropriate actions will be implemented that will result in significant progress toward attainment of the standard(s) as soon as practical but no later than the start of the next grazing season.	Volume II~~I~~]) are not being met, modify current grazing authorizations to assure movement toward meeting standards. Actions that could be taken for making progress towards meeting Standards for Rangeland Health may include: change of season of use; change in number of AUMs; implementing grazing system/schedule; constructing or modifying range improvements, and/or land treatments.		
Objective 5. Manage leased allotments as a custodial type with no intensive management activities undertaken.	**Objective 5. On low-level management allotments, authorize livestock grazing in a custodial manner.**	**Objective 5. Same as Alternative B.**	**Objective 5. Same as Alternative B.**
Action 1. Conduct rangeland health assessments.	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.
Action 2. On allotments without allotment management plans, materials and labor for construction and maintenance of range improvements, designed primarily to benefit livestock, including cattle guards, will be furnished by the lessee.	**Action 2.** No similar action.	**Action 2.** Same as Alternative B.	**Action 2.** Same as Alternative B.
Action 3. Construction and maintenance of rangeland improvements, including cattle guards, not designed primarily to benefit livestock grazing will be assumed by the BLM or other non-livestock	**Action 3.** No similar action.	**Action 3.** Same as Alternative B.	**Action 3.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
cooperators.			
Action 4. All new improvements will be in compliance with BLM specifications.	**Action 4.** No similar action.	**Action 4.** Same as Alternative B.	**Action 4.** Same as Alternative B.
Action 5. Reconstruction costs will be borne by the lessee.	**Action 5.** No similar action.	**Action 5.** Same as Alternative B.	**Action 5.** Same as Alternative B.
Action 6. No similar action.	**Action 6.** Continue current grazing authorizations if Idaho Standards for Rangeland Health (**Appendix A** [Volume II~~I~~]) are being met.	**Action 6.** Same as Alternative B.	**Action 6.** Same as Alternative B.
Action 7. No similar action.	**Action 7.** If Idaho Standards for Rangeland Health (**Appendix A** [Volume II~~I~~]) are not being met, and management opportunities exist, modify current grazing authorizations to assure movement toward meeting standards. Actions that could be taken for making progress towards meeting Idaho Standards for Rangeland Health (**Appendix A** [Volume II~~I~~]) may include: change of season of use; change in number of AUMs; implementing grazing system/schedule; constructing or modifying range improvements, and/or land treatments.	**Action 7.** Same as Alternative B.	**Action 7.** Same as Alternative B.
Action 8. No similar action.	**Action 8.** If Idaho Standards for Rangeland Health (**Appendix A** [see Volume II~~I~~]) are not being met as the result of livestock grazing, and	**Action 8.** Same as Alternative B.	**Action 8.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
	management opportunities do not exist, consider one of the following options: 1) continue current grazing in a custodial manner; or 2) consider eliminating allotment and grazing authorization. ~~; or 3) consider lands for exchange or disposal.~~		
MINERALS **Goal: Make federal mineral resources available for exploration, acquisition, and production consistent with other resource goals. The federal mineral resource consists of 143,830 acres of public lands (federal surface and mineral) and approximately 84,000 acres of reserved minerals (nonfederal surface, federal mineral).**			
Objective 1. Fluid Minerals (oil, gas, and geothermal resources) – Identify the public lands open to fluid minerals leasing in accordance with existing laws, regulations (43 CFR 3100 and 3200), and formal orders.	**Objective 1. Same as Alternative A.**	**Objective 1. Same as Alternative A.**	**Objective 1. Same as Alternative A.**
Action 1. Designate 131,044 acres of the public lands open to leasing subject to the terms and conditions of the standard lease form.	**Action 1.** Same as Alternative A	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.
Action 2. Apply restrictions on a case-by-case review basis to protect resources. .	**Action 2.** 43,590 acres of the public lands open to leasing would be subject to No Surface Occupancy (NSO) stipulations to protect resources within ACECs, WSA, river corridors suitable for wild designation under the Wild and Scenic Rivers Act (WSR Act), the current Salmon River withdrawal area,	**Action 2.** 68,854 acres of the public lands open to leasing would be subject to NSO stipulations to protect resources within ACECs, WSA, river corridors suitable for wild designation under the WSR Act, the current Salmon River withdrawal area, special status species (plants and wildlife),	**Action 2.** 35,045 acres of the public lands open to leasing would be subject to NSO stipulations to protect resources within ACECs, WSA, river corridors suitable for wild designation under the WSR Act, the current Salmon River withdrawal area, special status species (plants and wildlife),

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
	special status species (plants and wildlife), raptor nests, cultural resources, the public from hazardous materials, developed recreation sites, and areas designated VRM Class I (**Appendix J**, Mineral Leasing Surface Use Stipulations [Volume II~~I~~]).	raptor nests, cultural resources, the public from hazardous materials, developed recreation sites, and areas designated VRM Class I (**Appendix J**, Mineral Leasing Surface Use Stipulations [see Volume II~~I~~]).	raptor nests, cultural resources, the public from hazardous materials, developed recreation sites, and areas designated VRM Class I (**Appendix J**, Mineral Leasing Surface Use Stipulations [see Volume II~~I~~]).
Action 3. Apply restrictions on a case-by-case review basis to protect resources.	**Action 3**. 42,403 acres of the public lands open to leasing would be subject to Controlled Surface Use (CSU) stipulations to protect areas designated VRM Class II SRMAs, and river corridors suitable for scenic and recreational designation under the WSR Act (**Appendix J**, Mineral Leasing Surface Use Stipulations [Volume II~~I~~]).	**Action 3**. 59,122 acres of the public lands open to leasing would be subject to CSU stipulations to protect areas designated VRM Class II, SRMAs, and river corridors suitable for scenic and recreational designation under the WSR Act (**Appendix J**, Mineral Leasing Surface Use Stipulations [see Volume II~~I~~]).	**Action 3**. 32,013 acres of the public lands open to leasing would be subject to CSU stipulations to protect areas designated VRM Class II, SRMAs, and river corridors suitable for scenic and recreational designation under the WSR Act (**Appendix J**, Mineral Leasing Surface Use Stipulations [see Volume II~~I~~]).
Action 4. Apply restrictions on a case-by-case review basis to protect resources.	**Action 4**. Fluid minerals activities on open lands would be subject to Timing Limitation (TL) stipulations (acreage undetermined) to protect wildlife (**Appendix J**, Mineral Leasing Surface Use Stipulations [see Volume II~~I~~]). Fluid minerals exploration drilling and field development would comply with the seasonal restrictions. Activities associated with production would not.	**Action 4**. Same as Alternative B.	**Action 4**. Same as Alternative B.
Action 5. No similar action.	**Action 5**. Surface use stipulations may be excepted, modified, or waived only as outlined by specific criteria in **Appendix J**, Mineral Leasing Surface	**Action 5**. Same as Alternative B.	**Action 5**. Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
	Use Stipulations (see Volume II~~I~~).		
Action 6. 12,786 acres of the public lands are closed to leasing. These are nondiscretionary closures of WSA, and power site reservations.	**Action 6**. Same as Alternative A.	**Action 6**. Same as Alternative A.	**Action 6**. Same as Alternative A.
Action 7. If necessary, appropriate site-specific mitigation measures and/or stipulations developed during BLM's review of an operations plan may be implemented as conditions of approval for activities related to fluid minerals.	**Action 7**. Same as Alternative A.	**Action 7**. Same as Alternative A.	**Action 7**. Same as Alternative A.
Action 8. Areas open for leasing are also available for consideration of geophysical exploration activities.	**Action 8**. Areas open for leasing are also available for consideration of geophysical exploration activities subject to surface use stipulations identified in **Appendix J**, Mineral Leasing Surface Use Stipulations (see Volume II~~I~~).	**Action 8**. Same as Alternative B.	**Action 8**. Same as Alternative B.
Action 9. No similar action.	**Action 9**. Fluid minerals activities adjacent to river segments identified as suitable for inclusion in the NWSRS would be subject to stipulations to protect the outstandingly remarkable values and tentative classification for each segment (**Appendix K**, ~~Draft~~ Final Wild and Scenic Rivers Eligibility and Suitability Study [see Volume II~~I~~]). Stipulations would include NSOs within 0.25-mile of the river. River	**Action 9.** Same as Alternative B.	**Action 9.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
	segments included in this measure are: • Lake Creek from Headwaters to National Forest boundary; • Hazard Creek from National Forest boundary to confluence with Little Salmon River; • Hard Creek from National Forest boundary to confluence with Hazard Creek; and • Lolo Creek from National Forest boundary in Section 24, T34N, R5E to confluence with Clearwater River.		
Action 10. Inventory geological, geochemical, and geothermal potential sufficiently to provide data for withdrawal assessment.	**Action 10.** No similar action.	**Action 10.** Same as Alternative B.	**Action 10.** Same as Alternative B.
Objective 2. Solid Leasable Minerals (energy and non-energy) – Identify the public lands open to solid minerals leasing in accordance with existing laws and regulations (43 CFR 3400 and 3500).	**Objective 2. Same as Alternative A.**	**Objective 2. Same as Alternative A.**	**Objective 2. Same as Alternative A.**
Action 1. Designate 131,044 acres of the public lands open to leasing subject to the terms and conditions of the standard lease form.	**Action 1**. Same as Alternative A	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.
Action 2. Apply restrictions on a case-by-case review basis to protect	**Action 2**. 43,590 acres of the public lands open to leasing would be subject	**Action 2.** 68,854 acres of the public lands open to leasing would be subject	**Action 2**. 35,045 acres of the public lands open to leasing would be subject

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
resources.	to NSO stipulations to protect resources within ACECs, WSAs, river corridors suitable for wild designation under the WSR Act, the current Salmon River withdrawal area, special status species (plants and wildlife), raptor nests, cultural resources, the public from hazardous materials, developed recreation sites, and areas designated VRM Class I (**Appendix J**, Mineral Leasing Surface Use Stipulations [see Volume II~~I~~]).	to NSO stipulations to protect resources within ACECs, WSAs, river corridors suitable for wild designation under the WSR Act, the current Salmon River withdrawal area, special status species (plants and wildlife), raptor nests, cultural resources, the public from hazardous materials, developed recreation sites, and areas designated VRM Class I (**Appendix J**, Mineral Leasing Surface Use Stipulations [see Volume II~~I~~]).	to NSO stipulations to protect resources within ACECs, WSAs, river corridors suitable for wild designation under the WSR Act, the current Salmon River withdrawal area, special status species (plants and wildlife), raptor nests, cultural resources, the public from hazardous materials, developed recreation sites, and areas designated VRM Class I (**Appendix J**, Mineral Leasing Surface Use Stipulations [see Volume II~~I~~]).
Action 3. Apply restrictions on a case-by-case review basis to protect resources.	**Action 3.** 42,403 acres of the public lands open to leasing would be subject to CSU stipulations to protect areas designated VRM Class II, SRMAs, and river corridors suitable for scenic and recreational designation under the WSR Act (**Appendix J**, Mineral Leasing Surface Use Stipulations [Volume II~~I~~]).	**Action 3.** 59,122 acres of the public lands open to leasing would be subject to CSU stipulations to protect visual and recreational resources (**Appendix J**, Mineral Leasing Surface Use Stipulations [see Volume II~~I~~]).	**Action 3.** 32,013 acres of the public lands open to leasing would be subject to CSU stipulations to protect visual and recreational resources (**Appendix J**, Mineral Leasing Surface Use Stipulations [see Volume II~~I~~]).
Action 4. Apply restrictions on a case-by-case review basis to protect resources.	**Action 4**. Solid minerals activities on open lands would be subject to TL stipulations (acreage undetermined) to protect wildlife (**Appendix J**, Mineral Leasing Surface Use Stipulations [see Volume II~~I~~]). Solid minerals exploration would comply with the seasonal restrictions. Activities associated with production would not.	**Action 4**. Same as Alternative B.	**Action 4**. Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
Action 5. No similar action.	**Action 5**. Surface use stipulations may be excepted, modified, or waived only as outlined by specific criteria in **Appendix J**, Mineral Leasing Surface Use Stipulations (Volume II~~I~~).	**Action 5.** Same as Alternative B.	**Action 5.** Same as Alternative B.
Action 6. 12,786 acres of the public lands are closed to leasing. These are nondiscretionary closures of designated Wilderness areas, WSAs~~, and power site reservations~~.	**Action 6**. Same as Alternative A	**Action 6.** Same as Alternative A.	**Action 6.** Same as Alternative A.
Action 7. If necessary, appropriate site-specific mitigation measures and/or stipulations developed during BLM's review of an operations plan may be implemented as conditions of approval for activities related to solid minerals.	**Action 7**. Same as Alternative A	**Action 7.** Same as Alternative A.	**Action 7.** Same as Alternative A.
Action 8. No similar action.	**Action 8.** Solid leasable mineral activities adjacent to river segments identified as suitable for inclusion in the NWSRS would be subject to stipulations to protect the Outstandingly Remarkable Values and tentative classification for each segment (**Appendix K**, ~~Draft~~ Final Wild and Scenic Rivers Eligibility and Suitability Study [see Volume II~~I~~]). Stipulations would include NSOs within 0.25-mile of the river segment. River segments included in this measure are: • Lake Creek from Headwaters	**Action 8.** Same as Alternative B.	**Action 8.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
	to National Forest boundary; • Hazard Creek from National Forest boundary to confluence with Little Salmon River; • Hard Creek from National Forest boundary to confluence with Hazard Creek; and • Lolo Creek from National Forest boundary in Section 24, T34N, R5E to confluence with Clearwater River.		
Objective 3. Mineral Materials (salables) – Identify the public lands open to minerals materials disposal in accordance with existing laws and regulations (43 CFR 3600).	**Objective 3. Same as Alternative A.**	**Objective 3. Same as Alternative A.**	**Objective 3. Same as Alternative A.**
Action 1. Designate 131,044 acres of the public lands open to disposal subject to the terms and conditions of the standard permit form.	**Action 1**. Same as Alternative A	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.
Action 2. 12,034 acres of the public lands are subject to discretionary closures of WSAs.	**Action 2**. Same as Alternative A	**Action 2.** Same as Alternative A.	**Action 2.** Same as Alternative A.
Action 3. 750 acres of the public lands are subject to a nondiscretionary closure of Wilderness areas and power site reservations.	**Action 3**. Same as Alternative A	**Action 3**. Same as Alternative A.	**Action 3**. Same as Alternative A.
Action 4. No similar action.	**Action 4**. Mineral materials activities on open lands may be subject to	**Action 4.** Same as Alternative B.	**Action 4.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
	surface use stipulations presented in **Appendix J**, Mineral Leasing Surface Use Stipulations (see Volume II~~I~~).		
Action 5. If necessary, appropriate site-specific mitigation measures and/or stipulations developed during BLM's review of an operations plan may be implemented as conditions of approval for activities related to mineral materials.	**Action 5**. Same as Alternative A.	**Action 5**. Same as Alternative A.	**Action 5**. Same as Alternative A.
Action 6. No similar action.	**Action 6**. Mineral materials (salable) activities adjacent to river segments identified as suitable for inclusion in the NWSRS would be subject to stipulations to protect the Outstandingly Remarkable Values and tentative classification for each segment (**Appendix K**, ~~Draft~~ Final Wild and Scenic Rivers Eligibility and Suitability Study [see Volume II~~I~~]). Stipulations would include NSOs within 0.25-mile of the river segment. River segments included in this measure are: • Lake Creek from Headwaters to National Forest boundary; • Hazard Creek from National Forest boundary to confluence with Little Salmon River; • Hard Creek from National Forest boundary to confluence	**Action 6**. Same as Alternative B.	**Action 6**. Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
	with Hazard Creek; • Lolo Creek from National Forest boundary in Section 24, T34N, R5E to confluence with Clearwater River.		
Action 7. Establish a community pit in Elk City ~~(M 3.1)~~.	**Action 7.** No similar action.	**Action 7.** Same as Alternative B.	**Action 7.** Same as Alternative B.
Objective 4. Locatable Minerals – Identify the public lands open to locatable mineral entry in accordance with existing laws and regulations (43 CFR 3700 and 3800).	**Objective 4. Same as Alternative A.**	**Objective 4. Same as Alternative A.**	**Objective 4. Same as Alternative A.**
Action 1. Designate 121,961 acres of public lands open to location.	**Action 1**. Same as Alternative A.	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.
Action 2. 21,869 acres of public lands are subject to nondiscretionary closures of designated Wilderness areas, Lower Salmon River stretches suitable for designation under the WSR Act, material rights-of-way issued under the Federal Highway Act, and Federal Energy Regulatory Commission licenses/permits.	**Action 2**. Same as Alternative A.	**Action 2.** Same as Alternative A.	**Action 2.** Same as Alternative A.
Action 3. If necessary, appropriate site-specific mitigation measures and/or stipulations developed during BLM's review of an operations plan may be implemented as conditions of approval.	**Action 3**. Same as Alternative A.	**Action 3**. Same as Alternative A.	**Action 3**. Same as Alternative A.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative/Proposed RMP)	Alternative C	Alternative D
Action 4. Inventory unpatented mining claims to determine status, ownership, and minerals potential ~~(M1.2)~~.	**Action 4.** No similar action.	**Action 4.** Same as Alternative B.	**Action 4.** Same as Alternative B.
Action 5. Monitor activity on claims ~~(M 1.2)~~.	**Action 5**. Activities on mining claims will be monitored per applicable regulations.	**Action 5**. Same as Alternative B	**Action 5**. Same as Alternative B.
Objective 5. Reserved Minerals (split estate is private surface ownership with federal mineral ownership [currently estimated at 84,000 acres]) – Specify how the reserved federal mineral estate (leasables, salables, and locatables) will be managed in accordance with existing laws, regulations (43 CFR 3000s) and formal orders.	**Objective 5. Same as Alternative A.**	**Objective 5. Same as Alternative A.**	**Objective 5. Same as Alternative A.**
Action 1. No similar action.	**Action 1**. Identify and record ~~(via mapping)~~ where reserved federal minerals exist within the CFO. Creating and maintaining a GIS layer (or future equivalent) would be the preferred method.	**Action 1**. Same as Alternative B.	**Action 1**. Same as Alternative B.
Action 2. If reserved federal minerals occur within designated Wilderness areas, WSAs, or river segments suitable for inclusion in the NWSRS, the same closure effects will be applied as stated under the Actions for Objectives 1 through 4 of this section.	**Action 2**. Same as Alternative A.	**Action 2**. Same as Alternative A.	**Action 2**. Same as Alternative A.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
RECREATION **Goal: Manage public lands and waters to provide a broad spectrum of recreation experiences and benefits. Emphasize resource-based river recreation. Ensure that developed facilities and sites are appropriate for the resource setting, well maintained, safe, secure, and accessible. Provide high value recreation opportunities and receive a fair return for commercial and specialized recreation use.**			
Objective 1. Manage lands for nonmotorized, mechanized, and motorized recreation activities in a variety of settings.	**Objective 1. Same as Alternative A.**	**Objective 1. Same as Alternative A.**	**Objective 1. Same as Alternative A.**
Action 1. Use ROS criteria, in accordance with BLM regulations, in managing recreation activities: • Primitive (P) = 14,381 acres • Semi-primitive Nonmotorized (SPNM) = 18,816 acres • Semi-primitive Motorized (SPM) = 26,206 acres • Roaded-Natural (RN) = 55,988 acres • Semi-Urban (SU) = 27,349 acres • Urban (U) = 40 acres • Undesignated = 1,046 acres NOTE: ROS designations apply only to BLM surface ownership.	**Action 1.** Use ROS designations, as shown in **Figure 25** (see Volume IV of the Draft RMP/EIS), to maintain physical, social, and administrative settings for recreation opportunities and experiences. • Primitive (P) = 6,200 acres • Semi-primitive Nonmotorized (SPNM) = 36,495 acres • Semi-primitive Motorized (SPM) = 23,593 acres • Roaded-Natural (RN) = 54,867 acres • Rural(R) = 22,478 acres • Urban (U) = 40 acres NOTE: ROS designations apply only to BLM surface ownership.	**Action 1.** Same as Alternative B.	**Action 1.** Same as Alternative B.
Objective 2. Provide intensive recreation management in SRMAs.	**Objective 2. Same as Alternative A.**	**Objective 2. Same as Alternative A.**	**Objective 2. Same as Alternative A.**

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
Action 1. Designate and manage Salmon River Scenic (16,245 acres), Salmon River Recreational (6,899 acres), and Clearwater River (3,583 acres) SRMAs for intensive recreation management.	**Action 1.** Designate and manage Salmon River Scenic SRMA (16,245 acres) as a destination recreation-tourism market. **Recreation Niche:** Manage this area with an emphasis on overnight, nonmotorized river floating (summer) and motorized/nonmotorized anadromous fishing (spring/fall) experiences in a largely undeveloped, rugged, remote river canyon setting.	**Action 1.** Same as Alternative B.	**Action 1.** Same as Alternative B.
Action 1.1. Coordinate issuance of commercial permits with the Idaho Outfitters and Guides Licensing Board. Issue up to 44 commercial water-based outfitter permits on the Salmon River	**Action 1.1.** Coordinate issuance of commercial permits with the Idaho Outfitters and Guides Licensing Board. Issue no more than the number of commercial water-based outfitter permits issued in 2005 (11 power, 32 float).	**Action 1.1.** Same as Alternative B	**Action 1.1.** Coordinate issuance of commercial permits with the Idaho Outfitters and Guides Licensing Board. Issue commercial water-based outfitter permits up to the number of outfitters authorized by the State of Idaho in 2004 (15 power, 35 float).
Action 1.2. No similar action.	**Action 1.2.** Allow no more than 10 active permits for commercial activities that~~which~~ are not regulated by the Idaho Outfitters and Guides Licensing Board (Nonprofits, Boy Scouts, University outdoor programs, etc.). Issue no permits for vending.	**Action 1.2.** Same as Alternative B.	**Action 1.2.** Allow no more than 15 active permits for commercial activities ~~which~~ that are not regulated by the Idaho Outfitters and Guides Licensing Board (Nonprofits, Boy Scouts, University outdoor programs, etc.). Issue no permits for vending.
Action 1.3. No similar action.	**Action 1.3.** As new opportunities or activities occur, follow prescribed public process to determine amount and level of commercial use.	**Action 1.3.** Same as Alternative B.	**Action 1.3.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
Action 1.4. Consider Organized Group recreation permits on a case-by-case basis.	**Action 1.4.** Establish parameters for Organized Group recreation permits in SRMA activity plan.	**Action 1.4.** Same as Alternative B.	**Action 1.4.** Same as Alternative B.
Action 1.5. Consider competitive use permits on a case-by-case basis.	**Action 1.5.** Issue no competitive use permits in the Salmon River Scenic SRMA.	**Action 1.5.** Same as Alternative B.	**Action 1.5.** Same as Alternative B.
Action 1.6. Continue to implement the Salmon River—Scenic SRMA Activity Plan.	**Action 1.6.** Continue to implement the Salmon River—Scenic SRMA Activity Plan. Review and revise plans as prescribed.	**Action 1.6.** Same as Alternative B.	**Action 1.6.** Same as Alternative B.
Action 2. No similar action.	**Action 2.** Designate and manage Salmon River Recreational SRMA (6,899 acres) as a community recreation-tourism market. **Recreation Niche:** Manage this area for general water-based river recreation, including swimming, fishing, whitewater float boating, (summer) and motorized/ nonmotorized anadromous fishing (spring/fall) experiences in a scenic, accessible, and developed river canyon.	**Action 2.** Same as Alternative B.	**Action 2.** Same as Alternative B.
Action 2.1. Coordinate issuance of commercial permits with the Idaho Outfitters and Guides Licensing Board. Issue up to 44 commercial water-based outfitter permits on the Salmon River.	**Action 2.1.** Coordinate issuance of commercial permits with the Idaho Outfitters and Guides Licensing Board. Issue commercial water-based outfitter permits up to the number specified in the 1999 Salmon River Recreation Activity Plan.	**Action 2.1.** Same as Alternative B.	**Action 2.1.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
Action 2.2. No similar action.	**Action 2.2.** Allow no more than 10 active commercial permits for activities which are not regulated by the Idaho Outfitters and Guides Licensing Board (Vending, Nonprofits, Boy Scouts, University outdoor programs, etc.).	**Action 2.2.** Same as Alternative B.	**Action 2.2.** Allow no more than 15 active commercial permits for activities which are not regulated by the Idaho Outfitters and Guides Licensing Board (Vending, Nonprofits, Boy Scouts, University outdoor programs, etc.).
Action 2.3. No similar action.	**Action 2.3.** Issue vending permits for photography/filming, or concessions associated with a permitted event. Issue no vending permits for activities not directly related to enhancing a recreation activity or event.	**Action 2.3.** Same as Alternative B.	**Action 2.3.** Same as Alternative B.
Action 2.4. Consider Organized Group recreation permits on a case-by-case basis.	**Action 2.4.** Establish parameters for Organized Group recreation permits in SRMA activity plan.	**Action 2.4.** Same as Alternative B.	**Action 2.4.** Same as Alternative B.
Action 2.5. Consider competitive use permits on a case-by-case basis.	**Action 2.5.** Consider competitive use permits on a case-by-case basis. Establish parameters for competitive use in SRMA activity plan.	**Action 2.5.** Same as Alternative B.	**Action 2.5.** Same as Alternative B.
Action 2.6. Continue to implement the Salmon River—Recreation SRMA Activity Plan.	**Action 2.6.** Continue to implement the Salmon River—Recreation SRMA Activity Plan. Review and revise plan as prescribed.	**Action 2.6.** Same as Alternative B.	**Action 2.6.** Same as Alternative B.
Action 3. No similar action.	**Action 3.** Designate and manage Clearwater River SRMA (3,583 acres) as a community recreation-tourism market. **Recreation Niche:** Manage this area for developed water-based recreation,	**Action 3.** Same as Alternative B.	**Action 3.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
	including swimming, fishing, camping, in a highly developed, scenic river canyon.		
Action 3.1. No similar action.	**Action 3.1.** Coordinate issuance of commercial permits with the Idaho Outfitters and Guides Licensing Board. Maintain level of commercial use at level set by the Licensing Board.	**Action 3.1.** Same as Alternative B.	**Action 3.1.** Same as Alternative B.
Action 3.2. No similar action.	**Action 3.2.** Authorize commercial activities not regulated by the Outfitters and Guides Licensing Board, Organized Group Activities, and Competitive Events on a case-by-case basis. Establish parameters for those activities in the SRMA Activity Plan.	**Action 3.2.** Same as Alternative B.	**Action 3.2.** Same as Alternative B.
Action 3.3. Continue to implement the Clearwater River Activity Plan.	**Action 3.3.** Continue to implement the Clearwater River Activity Plan. Review and revise plan as prescribed.	**Action 3.3.** Same as Alternative B.	**Action 3.3.** Same as Alternative B.
Action 3.4. Continue to implement cooperative management of the Clearwater River with the Clearwater Management Council ~~and~~, the Nez Perce Tribe, and the Idaho Department of Fish and Game.	**Action 3.4.** Same as Alternative A.	**Action 3.4.** Same as Alternative A.	**Action 3.4.** Same as Alternative A.
Action 4. No similar action.	**Action 4.** Designate Lolo Creek as an SRMA (3,635 acres) and develop an activity plan for this area by 2012. Manage Lolo Creek SRMA as an undeveloped recreation-tourism market	**Action 4.** Same as Alternative B.	**Action 4.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
	for residents and visitors. **Recreation Niche:** Manage this area to provide backcountry, dispersed, nonmotorized recreation opportunities in an undeveloped setting with an emphasis on whitewater boating and fishing.		
Action 4.1. Issue no commercial water-based recreation permits for Lolo Creek SRMA, which is an Extensive Recreation Management Area until an activity plan is written.	**Action 4.1.** Designate Lolo Creek as zoned for no commercial water-based recreation activities within the SRMA.	**Action 4.1.** Same as Alternative B.	**Action 4.1.** Issue commercial water-based recreation permits for Lolo Creek SRMA at a level to be determined in the Lolo Creek SRMA Activity Plan.
Action 4.1. No similar action.	**Action 4.2.** Designate Lolo Creek as zoned for no competitive use within the SRMA.	**Action 4.2.** Same as Alternative B.	**Action 4.2.** Same as Alternative B.
Action 4.3. No similar action.	**Action 4.3.** Establish parameters for organized group use in the SRMA Activity Plan.	**Action 4.3.** Same as Alternative B.	**Action 4.3.** Same as Alternative B.
Action 5. No similar action.	**Action 5.** Designate part of the Craig Mountain WMA as an SRMA (24,884 acres) and develop an activity plan by 2012. **Recreation Niche:** Manage the Craig Mountain SRMA as an undeveloped recreation-tourism market to provide opportunities for local residents and visitors to pursue land based activities in a natural setting with an emphasis on big game hunting, hiking, horseback	**Action 6.** Designate part of the Craig Mountain WMA as an SRMA (24,884 acres) and develop an activity plan by 2012. **Recreation Niche:** Manage the Craig Mountain SRMA as an undeveloped recreation-tourism market to provide opportunities for local residents and visitors to pursue land based activities in a natural setting with an emphasis on quality big game and upland bird	**Action 6.** Designate part of the Craig Mountain WMA as an SRMA (24,884 acres) and develop an activity plan by 2012. **Recreation Niche:** Manage the Craig Mountain SRMA as an undeveloped recreation-tourism market to provide opportunities for local residents and visitors to pursue land based activities in a natural setting with an emphasis on big game hunting, and fishing

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
	riding, and mountain biking. Maintain existing access routes at a level that promotes remote, backcountry recreation experience.	hunting experience. Maintain existing access routes at a level that promotes remote, backcountry recreation experience.	experience. Improve existing access routes to a level that promotes rural, developed recreation experience
Action 5.1. Issue commercial recreation permits for the Craig Mountain SRMA (an Extensive Recreation Management Area until an activity plan is written) only with the concurrence of the Idaho Department of Fish and Game.	**Action 5.1.** Issue commercial recreation permits for the Craig Mountain SRMA only with the concurrence of the Idaho Department of Fish and Game;	**Action 5.1.** Same as Alternative B.	**Action 5.1.** Same as Alternative B.
Action 5.2. Consider competitive use permits on a case-by-case basis.	**Action 5.2.** Consider competitive and Organized Group use permits on a case-by case basis until parameters can be established in the prescribed activity plan.	**Action 5.2.** Same as Alternative B.	**Action 5.2.** Same as Alternative B.
Objective 3. Manage lands not designated as SRMAs for extensive, dispersed recreation use.	**Objective 3. Manage lands not designated as SRMAs for extensive, dispersed recreation use.** **Recreation Niche:** Manage Extensive Recreation Management Areas for an undeveloped recreation-tourism market to provide opportunities for local residents and visitors to pursue land based activities in an unconfined, natural setting, with an emphasis on hunting, backcountry recreation, ATV trail riding, and oversnow recreation.	**Objective 3. Same as Alternative B.**	**Objective 3. Same as Alternative B.**

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
Action 1. Utilize the Special Recreation Permit process to accommodate commercial or competitive recreation activities. Issue commercial recreation permits to support local business and economic development.	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.
Action 2. No similar action.	**Action 2.** In Extensive Recreation Management Areas, require Organized Group permits only if special actions are required for public health and safety or to protect resources.	**Action 2.** Same as Alternative B.	**Action 2.** Same as Alternative B.
Action 3. No similar action.	**Action 3.** Provide developed recreation facilities only when necessary to protect resources, or to accommodate site specific or activity specific use through partnerships with other agencies or groups.	**Action 3.** Same as Alternative B.	**Action 3.** Same as Alternative B.
Objective 4. No similar objective.	**Objective 4. Manage existing and develop new recreation facilities to attain recreation and other resource goals.**	**Objective 4. Same as Alternative B.**	**Objective 4. Same as Alternative B.**
Action 1. No similar action.	**Action 1.** Ensure that all recreation site and access development conforms with and does not change the ROS designation.	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.
~~**Action 2.** No similar action.~~	~~**Action 2.** Coordinate with Idaho Statewide Comprehensive Outdoor Recreation Plan for developing new~~	~~**Action 2.** Same as Alternative B.~~	~~**Action 2.** Same as Alternative B.~~

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
	~~trails and facilities.~~		
Action ~~3~~2. No similar action.	**Action 2.~~Action 3.~~** Maintain all recreation facilities and recreation use areas for public safety and aesthetics.	**Action 2.~~Action 3.~~** Same as Alternative B.	**Action 2.~~Action 3.~~** Same as Alternative B.
Action ~~4~~ 3. No similar action.	**Action 43.** Continue to upgrade accessibility at developed sites. Utilize Universal Design Standards to the extent practicable while maintaining the character of the sites.	**Action 43.** Same as Alternative B.	**Action 34.** Same as Alternative B.
Objective 5. Protect existing recreation values and enhance recreation access.	**Objective 5. Same as Alternative A.**	**Objective 5. Same as Alternative A.**	**Objective 5. Same as Alternative A.**
Action 1. Continue acquisition of access areas, recreation lands, and conservation easements within the Salmon River and Lolo Creek SRMAs.	**Action 1.** Pursue acquisition of access areas, recreation lands, and conservation easements within the Salmon River, Craig Mountain, and Lolo Creek SRMAs.	**Action 1.** Same as Alternative B.	**Action 1.** Same as Alternative B.
Action 2. Continue to acquire access areas within the Clearwater River SRMA.	**Action 2.** Same as Alternative A.	**Action 2.** Same as Alternative A.	**Action 2.** Same as Alternative A.
Objective 6. No similar objective.	**Objective 6. Work with local communities to promote resource-based recreation and tourism in an environmentally sound and sustainable manner.**	**Objective 6. Same as Alternative B.**	**Objective 6. Same as Alternative B.**
Action 1. No similar action.	**Action 1.** Work with local Resource Advisory Councils and economic development groups to develop	**Action 1.** Same as Alternative B.	**Action 1.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
	business plans for recreation sites and SRMAs. • Identify types of commercial activity that are compatible with the goals and objectives of each SRMA and recreation site. • Identify new recreation site development and new opportunities for recreation-based economic activity.		
RENEWABLE ENERGY **Goal: Provide opportunities for the development of renewable energy resources while minimizing adverse impacts to other resource values.**			
Objective 1. Conduct high-priority mineral inventories.	**Objective 1. No similar objective.**	**Objective 1. Same as Alternative B.**	**Objective 1. Same as Alternative B.**
Action 1. Inventory geological, geochemical, and geothermal potential sufficiently to provide data for withdrawal assessment.	**Action 1.** No similar action.	**Action 1.** Same as Alternative B.	**Action 1.** Same as Alternative B.
Objective 2. No similar objective.	**Objective 2. Although no areas would be specifically designated for renewable energy development, opportunities for such development would be considered on a case-by-case basis.**	**Objective 2. Same as Alternative B.**	**Objective 2. Same as Alternative B.**

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
Action 1. No similar action.	**Action 1.** Analyze proposals for renewable energy development and authorize those that are consistent with resource management goals.	**Action 1.** Same as Alternative B.	**Action 1.** Same as Alternative B.
Objective 3. No similar objective.	**Objective 3. Support development of electrical generating capabilities for biomass.**	**Objective 3. Same as Alternative B.**	**Objective 3. Same as Alternative B.**
Action 1. No similar action.	**Action 1.** Provide appropriate authorizations for suitable sites when it is consistent with other resource goals and objectives.	**Action 1.** Same as Alternative B.	**Action 1.** Same as Alternative B.
Action 2. No similar action.	**Action 2.** Make vegetative treatment byproducts available for use in generating plants where removing the material from the site will not impede site productivity or prevent attainment of project objectives.	**Action 2.** Same as Alternative B.	**Action 2.** Same as Alternative B.
Action 3. No similar action.	**Action 3.** Actively pursue partnering opportunities with entities developing biomass generating capabilities.	**Action 3.** Same as Alternative B.	**Action 3.** Same as Alternative B.
Objective 4. No similar objective.	**Objective 4. Adopt programmatic policies and BMPs in the Wind Energy Development Program (BLM 2005d) (Appendix L [see Volume III]).**	**Objective 4. Same as Alternative B.**	**Objective 4. Same as Alternative B.**
Action 1. No similar action.	**Action 1.** The BLM will not issue rights-of-way authorizations for wind energy development on lands on which wind energy development is	**Action 1.** Same as Alternative B.	**Action 1.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
	incompatible with specific resource values. Lands that will be excluded from wind energy site monitoring and testing and development include designated areas that are part of the National Landscape Conservation System (e.g., Wilderness Areas, WSAs, National Monuments, National Conservation Areas, Wild and Scenic Rivers, and National Historic and Scenic Trails, and ACECs). Additional areas of land may be excluded from wind energy development on the basis of findings of resource impacts that cannot be mitigated and/or conflict with existing and planned multiple-use activities or land use plans.		
Action 2. No similar action.	**Action 2.** Restrict wind energy from wildlife habitat where adverse effects could not be mitigated.	**Action 1.** Same as Alternative B.	**Action 1.** Same as Alternative B.
TRANSPORTATION AND TRAVEL MANAGEMENT **Goal: Manage travel, roads, and trails to provide access and recreational opportunities, while minimizing resource impacts and user conflicts.**			
Objective 1. Manage areas of BLM-administered lands as Open, Closed, or Limited for OHV use.	**Objective 1. Delineate travel management areas on BLM-administered lands, and designate areas as Closed or Limited for motorized travel to minimize resource impacts and user conflicts, consistent with ROS designations.**	**Objective 1. Same as Alternative B.**	**Objective 1. Delineate travel management areas on BLM-administered lands, and designate areas as Open, Closed, or Limited for motorized travel to minimize resource impacts and user conflicts, consistent with ROS designations.**

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
Action 1. Allow all types of nonmotorized travel yearlong on all BLM-administered lands in Field Office (143,830 acres), except designated Wilderness areas (750 acres), where no mechanized use is allowed. Nonmotorized modes include travel by foot, equestrian, and bicycle yearlong.	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.
Action 2. Open Area Designation – Manage 85,308 acres as Open to cross-country motorized travel yearlong. In Open areas, all types of vehicle use are permitted at all times, anywhere in the area, subject to the operating regulations and vehicle standards set forth in 43 CFR 8341 and 8342.	**Action 2.** Open Area Designation – Manage no (0) acres as Open to cross-country motorized travel yearlong. No motorized cross-country travel would be allowed, except for BLM-authorized activities for administrative purposes. Motorized travel (cross-country or on closed routes) would be allowed for any military, fire, emergency, or law enforcement vehicle, while being used for emergency purposes.	**Action 2.** Same as Alternative B.	**Action 2.** Open Area Designation – Manage 23,189 acres as Open to cross-country motorized travel yearlong.
Action 3. Limited to Existing Routes Area Designation – Manage 40,437 acres as motorized travel Limited to existing routes yearlong. There are 340.63 miles of existing routes on BLM-managed lands in the Field Office. No motorized cross-country travel would be allowed, except for BLM-authorized activities for administrative purposes. Motorized travel (cross-country or on closed	**Action 3.** No similar action.	**Action 3.** Same as Alternative B.	**Action 3.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
routes) would be allowed for any military, fire, emergency, or law enforcement vehicle, while being used for emergency purposes.			
Action 4. No similar action.	**Action 4.** Limited to Designated Routes Area Designation – Manage 125,729 acres as motorized travel Limited to designated routes yearlong. Designated routes are shown on **Figures 31, 32, and 33** (Volume IV of the Draft RMP/EIS). No motorized cross-country travel would be allowed, except for BLM-authorized activities for administrative purposes. Motorized travel (cross-country or on closed routes) would be allowed for any military, fire, emergency, or law enforcement vehicle, while being used for emergency purposes.	**Action 4.** Same as Alternative B.	**Action 4.** Limited to Designated Routes Area Designation – Manage 102,542 acres as motorized travel Limited to designated routes yearlong. Designated routes are shown on **Figures 34, 35, and 36** (see Volume IV of the Draft RMP/EIS).
Action 5. Closed Area Designation – Manage 18,054 acres as Closed to motorized travel yearlong. In Closed areas, use of all types of motorized vehicles (including off-road vehicles) is prohibited in all locations at all times yearlong, except for previously established motorized access on existing roads to private inholdings or mining claims, where those routes are	**Action 5.** Closed Area Designation – Manage 18,069 acres as Closed to motorized travel yearlong. In Closed areas, use of all types of motorized vehicles (including off-road vehicles) is prohibited in all locations at all times yearlong, except for previously established motorized access on existing roads to private inholdings or mining claims, where those routes are	**Action 5.** Same as Alternative B.	**Action 5.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
identified in **Figures 28, 29, and 30** (see Volume IV of the Draft RMP/EIS). No motorized travel would be allowed, except when authorized by the BLM. Motorized travel (cross-country or on closed routes) would be allowed for any military, fire, emergency, or law enforcement vehicle, while being used for emergency purposes, except in designated Wilderness.	identified in the BLM designated routes system (**Figures 31, 32, and 33**; see Volume IV of the Draft RMP/EIS). No motorized travel would be allowed, except when authorized by the BLM. Motorized travel (cross-country or on closed routes) would be allowed for any military, fire, emergency, or law enforcement vehicle, while being used for emergency purposes, except in designated Wilderness.		
Action 6. Open to Over-snow Motorized Travel Area Designation – Manage 100,861 acres as Open to over-snow motorized travel. This includes all Open and Limited area designations. The only exception is BLM lands within the Craig Mountain WMA. Within the Craig Mountain WMA, only 125 acres are open to over-snow motorized travel and are managed cooperatively with Idaho Department of Fish and Game.	**Action 6.** Same as Alternative A.	**Action 6.** Same as Alternative A.	**Action 6.** Same as Alternative A.
Action 7. Over-snow Motorized Travel Limited to Designated Routes Area Designation – Manage the 24,884-acre Craig Mountain WMA as follows for over-snow motorized travel: • The Upper Mountain Area (105 acres) is open to over-snow travel	**Action 7.** Same as Alternative A.	**Action 7.** Same as Alternative A.	**Action 7.** Same as Alternative A.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
from November 26 through March 15. Use during this period is dependent on snow cover (e.g., 18 inches). All other areas are closed (24,779 acres). This designated use is managed in cooperation between The Nature Conservancy, Idaho Department of Fish and Game, Idaho Department of Lands and the BLM (**Figures 28, 29, and 30**; see Volume IV of the Draft RMP/EIS). • Idaho Department of Fish and Game will designate trails that may be groomed in the Upper Mountain Area. • BLM Eagle Creek Road is open to motorized vehicle use yearlong (includes over-snow travel). • BLM Madden Corrals Road (County Road to parking area) is open to motorized vehicle use yearlong (includes over-snow travel). In the 24,884-acre Craig Mountain WMA, over-snow travel would only be permitted in designated areas as shown on **Figures 28, 29, and 30** (see Volume IV of the Draft RMP/EIS).			

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
Objective 2. ~~Within the Limited to Existing Routes area designation, i~~Identify routes where motorized vehicle use restrictions are necessary to minimize user conflicts and minimize resource damage.	**Objective 2.** Same as Alternative A.~~**Within the Limited to Designated Routes area designation, identify routes where motorized vehicle use restrictions are necessary to minimize user conflicts and minimize resource damage.**~~	**Objective 2. Same as Alternative** A. ~~**B.**~~	**Objective 2. Same as Alternative** A. ~~**B.**~~
Action 1. Within Limited to Existing Routes Area Designation – On BLM-administered lands in Limited areas, allow motorized travel on 49.39 miles of existing routes yearlong. On BLM-administered lands in Limited areas, implement motorized use restrictions on 30.82 miles of routes, as shown on **Figures 28, 29, and 30** (see Volume IV of the Draft RMP/EIS): • Yearlong route closure for all motorized travel: 30.82 miles	**Action 1.** Within Limited to Designated Routes Area Designation – On BLM-administered lands in Limited areas, allow motorized travel on 149.56 miles of designated routes yearlong, as shown on **Figures 31, 32, and 33** (see Volume IV of the Draft RMP/EIS). On BLM-administered lands in Limited areas, implement motorized travel restrictions on 108.76 miles of routes, as shown on **Figures 31, 32, and 33** (see Volume IV of the Draft RMP/EIS): • Routes closed to all motorized travel yearlong: 100.67 miles • Routes open to all-terrain vehicle (less than 50 inches in width) use seasonally: 1.24 mile • Routes closed to all motorized travel seasonally: 0.39 mile • Routes open to two-wheel vehicle use yearlong: 0.54 mile • Routes open to all-terrain vehicle	**Action 1.** Same as Alternative B.	**Action 1.** Within Limited to Designated Routes Area Designation – On BLM-administered lands in Limited areas, allow motorized travel on 146.43 miles of designated routes yearlong, as shown on **Figures 34, 35, and 36** (see Volume IV of the Draft RMP/EIS). On BLM-administered lands in Limited areas, implement motorized travel restrictions on 108.74 miles of routes, as shown on **Figures 34, 35, and 36** (see Volume IV of the Draft RMP/EIS) (same as Alternative B): • Routes closed to all motorized travel yearlong: 100.65 miles • Routes open to all-terrain vehicle (less than 50 inches in width) use seasonally: 1.24 mile • Routes closed to all motorized travel seasonally: 0.39 mile • Routes open to two-wheel vehicle use yearlong: 0.54 mile • Routes open to all-terrain vehicle

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
	(less than 50 inches in width) use only yearlong: 5.92 miles Some roads crossing BLM-administered lands are considered to be part of the primary transportation system of the planning area and would **not** be addressed in the route designation process. These include federal, state, and county paved and graveled maintained roads. These roads are shown on the route designation map (**Figures 31, 32, and 33**; see Volume IV of the Draft RMP/EIS~~)~~) to give an overall view of the transportation network. In Limited areas, route designations apply only to: 1) routes and portions thereof on BLM-administered lands; and 2) BLM-administered routes and portions thereof that are located on private lands but are public access routes. The designation of specific routes as open, limited, or closed is not applicable on private, non-BLM-administered routes, or on primary transportation system routes (regardless of their location on BLM-administered lands or on private lands). Access for the use and enjoyment of private lands would be addressed on a case-by-case basis where private landowners may be		(less than 50 inches in width) use only yearlong: 5.92 miles Some roads crossing BLM-administered lands are considered to be part of the primary transportation system of the planning area and would **not** be addressed in the route designation process. These include federal, state, and county paved and graveled maintained roads. These roads are shown on the route designation map (**Figures 34, 35, and 36**; see Volume IV of the Draft RMP/EIS~~)~~) to give an overall view of the transportation network. In Limited areas, route designations apply only to: 1) routes and portions thereof on BLM-administered lands; and 2) BLM-administered routes and portions thereof that are located on private lands but are public access routes. The designation of specific routes as open, limited, or closed is not applicable on private, non-BLM-administered routes, or on primary transportation system routes (regardless of their location on BLM-administered lands or on private lands). Access for the use and enjoyment of private lands would be addressed on a case-by-case basis where private landowners may be

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
	adversely affected by route designation decisions, as needed. Game retrieval using motorized vehicles would be prohibited off designated routes yearlong. Limited route designations do not apply to: • Any federal, state, or local official or member of an organized rescue or fire-fighting force while performing official duties on a fire, emergency, law enforcement actions, or other duty. • Any BLM employee, agent, contractor, or cooperator while performing an official duty. • Any person who is authorized to operate a motorized vehicle in the restricted area.		adversely affected by route designation decisions, as needed. Game retrieval using motorized vehicles would be prohibited off designated routes yearlong. Limited route designations do not apply to: • Any federal, state, or local official or member of an organized rescue or fire-fighting force while performing official duties on a fire, emergency, law enforcement actions, or other duty. • Any BLM employee, agent, contractor, or cooperator while performing an official duty. • Any person who is authorized to operate a motorized vehicle in the restricted area.
Action 2. No regulations currently exist to either assert or recognize RS 2477 rights-of-way. It is beyond the scope of this document to recognize or reject RS 2477 assertions, and this issue is not addressed further. At such time as a decision is made on RS 2477 assertions, the BLM would adjust its travel routes accordingly, if necessary.	**Action 2.** Same as Alternative A.	**Action 2.** Same as Alternative A.	**Action 2.** Same as Alternative A.
Objective 3. No similar objective.	**Objective 3. Make future route modifications (amending, revising,**	**Objective 3. Same as Alternative B.**	**Objective 3. Same as Alternative B.**

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
	or revoking route designations) ~~in Limited areas~~ as needed based on access needs, recreational opportunities, results of environmental monitoring, and natural and cultural resource constraints.		
Action 1. No similar action.	**Action 1.** Update and maintain the road and trail database annually to correct mapping errors and to assist in route designation modifications.	**Action 1.** Same as Alternative B.	**Action 1.** Same as Alternative B.
Action 2. No similar action.	**Action 2.** Route designation modifications would consider the following: 1. Designating new routes for motorized travel; 2. Closing routes seasonally; 3. Closing routes yearlong; 4. Designating mode and types of authorized motorized use; 5. Establishing maximum road and trail density levels for Semi-primitive Nonmotorized and Semi-primitive Motorized ROS classes; 6. Establishing exemptions for administrative and permitted activities; and 7. Establishing areas for trail construction and/or improvement.	**Action 2.** Same as Alternative B.	**Action 2.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
Action 3. No similar action.	**Action 3.** Route designation modifications would adhere to the following principles: • Public involvement and coordination with tribes, agencies, and local governments would be encouraged; • Changes to route designations would be subject to public and BLM interdisciplinary review and documentation; and Changes to route designations may be subject to re-initiation of consultation with USFWS and National Marine Fisheries Service.	**Action 3** Same as Alternative B.	**Action 3.** Same as Alternative B.
Action 4. Vehicle use restrictions will be established where there are known high resource values that would otherwise be damaged or destroyed. Criteria are defined in 43 CFR 8342.1: • [Designated] areas and [designated] trails shall be located in a manner to minimize impacts to physical resources (soils, watershed, vegetation, air, and other resources) and to prevent impairment of wilderness suitability;	**Action 4.** Criteria that would be considered in future route designation modifications include the criteria defined in 43 CFR 8342.1: • [Designated] trails shall be located in a manner to minimize impacts to physical resources (soils, watershed, vegetation, air, and other resources) and to prevent impairment of wilderness suitability; • [Designated] trails shall be located to minimize harassment of wildlife	**Action 4.** Same as Alternative B.	**Action 4.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
• [Designated] areas and [designated] trails shall be located to minimize harassment of wildlife or significant disruption of wildlife habitats. Special attention will be given to protect endangered or threatened species and their habitats; • [Designated] areas and [designated] trails shall be located to minimize conflicts between off-road vehicle use and other existing or proposed recreation uses; and • [Designated] areas and [designated] trails shall not be located in officially designation wilderness areas or primitive areas, and shall be located in natural areas only if the authorized officer determines that off-road vehicle use in such locations will not adversely affect their natural, esthetic, scenic, or other values for which established. Road Planning – In the planning stage, temporary or permanent closure will be considered for all dead-end roads or roads with an expected duration of use of five years or less.	or significant disruption of wildlife habitats. Special attention will be given to protect endangered or threatened species and their habitats; and • [Designated] trails shall be located to minimize conflicts between off-road vehicle use and other existing or proposed recreation uses. Additional criteria that would be considered in future route designation modifications include: 1. Environmental conditions, such as: a. soil stability; b. crucial wildlife habitat; c. special status species habitat; d. proximity to riparian areas and/or 303(d) streams; and e. visual resources. 2. User conflicts, such as: a. motorized versus nonmotorized; and b. motorized/mechanized versus nonmechanized. 3. Administrative purposes, such as: a. wildland fire suppression activities;		

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
	b. safety; and c. resource management and permitted activities. 4. Public purposes, such as: a. accessing public or private land; b. destinations for specific activities; and c. types of desired use (motorized, mechanized, nonmotorized/ nonmechanized). 5. Route, vehicle type and size limitations, such as: a. > 50" wheel base (full size vehicles); b. < 50" wheel base (all-terrain vehicles); and c. Single track vehicles (motorcycles/mountain bikes).		
Objective 4. No similar objective.	**Objective 4. Implement the RMP travel management decisions~~plan~~, including ~~(route and~~ area-wide designations, specific route designations, and motorized vehicle limitations~~)~~ through ~~using~~ public outreach and education, ~~information and facilities,~~ compliance and environmental**	**Objective 4. Same as Alternative B.**	**Objective 4. Same as Alternative B.**

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
	monitoring, ~~environmental monitoring,~~ and facility maintenance.		
Action 1. No similar action.	**Action 1.** Implementation of the travel ~~plan~~ management decisions relative to public information and facilities will include, but is not limited to: 1. Developing outreach materials depicting the basic recreational access network, including maps for public distribution that show area designations and road, trail, and seasonal restrictions. 2. Posting ~~of~~ Legal Closures: As required by regulations, provide the proper notification and post legal closures for areas and roads/trails. 3. Signing: Use signing to identify areas with use limitations and explain reasons for limitations. In general, post main access points to limited use areas with designation signs and information or interpretive signs. When specific roads are closed for protection of wildlife, watershed, or fisheries, or other resources,	**Action 1.** Same as Alternative B.	**Action 1.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
	post them with signs indicating the specific closure rationale. 4. Kiosks: Establish kiosks as needed at primary trailheads, recreation sites, or heavy use areas to inform the public about travel management information, area map(s), resource management information, access opportunities and limitations, endangered and threatened species, and visitor safety. 5. Barriers: Physical barriers such as concrete barricades, steel gates, or placement of boulders may be installed as needed to prevent vehicular access. These may be used in conjunction with signs. 6. Public Information/Press Releases: Inform the public of travel management ~~plan~~ designations as needed by the use of press releases. If future resource issues or problems occur with travel management decision ~~plan~~ implementation, use periodic press releases to inform the public of the need for vehicle management		

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
	restrictions in areas or on roads/trails. 7. Facilities Inventory and Inspections: Maintain a complete inventory log of all facilities (e.g., gates, signs, kiosks, etc.). Include an inspection schedule for such facilities in the inventory list. Document the condition of facilities and record any vandalism, maintenance needs, and additional management needs for the area or road/trail on an inspection form.		
Action 2. No similar action.	**Action 2.** Implementation of the travel management decisions ~~plan~~ related to use supervision and compliance monitoring would include, but is not limited to: 1. Use supervision would be accomplished by BLM personnel. 2. A schedule of regular patrols would be developed annually and would identify personnel responsible for completing patrols. Use supervision and compliance would be documented on a form.	**Action 2.** Same as Alternative B.	**Action 2.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
	Identification of noncompliance would be reported to law enforcement personnel. 3. In addition to regular patrols, field personnel would be given a copy of travel management plan area and road/trail designations. While they are working in an area, they would also document compliance and condition of facilities (e.g., gates, signs, etc.). 4. Issuance of special recreation and right-of-way permits would include specific use supervision and compliance monitoring. 5. As needed, road counters and/or motion sensitive cameras would be used to document public use in areas (not for law enforcement purposes).		
Action 3. No similar action.	**Action 3.** Implementation of the travel management decisions ~~plan~~ related to environmental and resource monitoring would include, but is not limited to: 1. Annually, resource staff would identify specific areas, roads, or trails that would have	**Action 3.** Same as Alternative B.	**Action 3.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
	environmental or resource monitoring conducted. The purpose of this monitoring is to document resource impacts which may occur from implementation of the travel management decisions ~~plan~~ or noncompliance resulting in resource impacts. This information may be used as support and rationale for future modifications to the travel management decisions ~~plan~~ or to identify additional measures needed to protect resources (e.g., additional use supervision, signing, gates, barriers, new road/trail/area restrictions, etc.). 2. The annual environmental/resource monitoring plan would identify monitoring schedules, responsible personnel, key roads/trails/areas to be monitored, and monitoring protocols to be used. Resource monitoring in key or problem areas may include the following: a. Soil erosion, sediment,		

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
	and water quality b. Vegetation impacts or noxious weed infestations c. Recreation use conflicts d. Cultural resource impacts e. Riparian and wetland impacts f. Recreation use conflicts g. Vandalism h. Restoration/rehabilitation project effects i. Emergency closures or special use permits 3. A standard monitoring form would be developed and used for general environmental and resource effects that are observed in the field by BLM personnel. Specific documentation will focus on key resource monitoring needs identified in item number 2 above.		
Action 4. No similar action.	**Action 4.** Every effort would be made to ensure compliance with the restrictions in the travel management decisions ~~plan~~ through information,	**Action 4.** Same as Alternative B.	**Action 4.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
	education, and visitor contacts. However, law enforcement (BLM ranger, Forest Service ranger, Idaho Department of Fish and Game conservation officer, and County enforcement officers) patrols would be scheduled as needed to protect the resource values and resolve user conflicts. Specific actions in regards to enforcement would include the following: 1. Develop in cooperation with staff a list of roads/trails/area that would receive priority for periodic patrols by enforcement personnel. 2. As needed, develop cooperative agreements between authorized law enforcement entities. 3. As needed, develop cooperative agreements with user groups. The CFO would maintain a record of enforcement efforts and findings.		
Action 5. No similar action.	**Action 5.** Implementation of the travel management decisions ~~plan~~ related to maintenance of facilities would include, but is not limited to: 1. The CFO would maintain a	**Action 5.** Same as Alternative B.	**Action 5.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
	record of existing facilities by location. This document will identify scheduled inspections and/or maintenance. 2. Installation of signs, gates, and barricades would be the joint responsibility of benefiting resource programs. Maintenance of facilities would be the responsibility of the BLM operations staff or designated resource programs. Where appropriate, develop cooperative agreements with user groups for maintenance of facilities for specific trails/roads/areas.		
Action 6. Identify specific road management planning, design, specifications, and maintenance criteria to avoid adverse effects to water quality and fish habitat.	**Action 6.** Implement Road Management Guidelines for road planning, design, and maintenance (**Appendix B**, Best Management Practices [see Volume II~~I~~]).	**Action 6.** Same as Alternative B.	**Action 6.** Same as Alternative B.
LANDS AND REALTY **Goal 1: Meet the needs of government agencies and the public for various realty authorizations, access, and land ownership adjustments.**			
Objective 1. Improve management efficiency and gain greater control over various resources associated with scattered land parcels.	**Objective 1. Use land ownership adjustments to improve resource management efficiency and provide public benefits.**	**Objective 1. Same as Alternative B.**	**Objective 1. Same as Alternative B.**
Action 1. Identify natural and manmade hazards on public lands that may be correctable.	**Action 1.** No similar action.	**Action 1.** Same as Alternative B.	**Action 1.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
Action 2. Identify unauthorized dump sites to be rehabilitated and prevent further problems.	**Action 2.** No similar action.	**Action 2.** Same as Alternative B.	**Action 2.** Same as Alternative B.
Action 3. Identify existing uses of public lands authorized under pre-FLPMA authority and update: (1). Roads constructed under authority of RS 2477 by July 30, 1983; (2). Other existing uses as identified.	**Action 3.** No similar action.	**Action 3.** Same as Alternative B.	**Action 3.** Same as Alternative B.
Action 4. All public lands within Management Areas (96,465 acres) will be retained in public ownership. The Adjustment Area is defined as any area not within a Management Area.	**Action 4.** Generally retain public ownership of blocks of public land that have public access, high value resources, and are of sufficient size to provide management opportunities and public benefits (**Appendix M**, Land Tenure Adjustments [see Volume III]). There are approximately 113,728 acres of public land in identified management blocks.	**Action 4.** Same as Alternative B.	**Action 4.** Same as Alternative B.
Action 5. No similar action.	**Action 5.** Consider opportunities for land ownership adjustments in management blocks (other than on the Salmon River) on a case-by-case basis. Limited ownership adjustments may occur within those blocks if they provide sufficient public benefits and do not substantially reduce the overall amount of public lands within the blocks.	**Action 5.** Same as Alternative B.	**Action 5.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
Action 6. No similar action.	**Action 6.** Retain public ownership of all public lands within management blocks along the Salmon River as required by the WSR Act.	**Action 6.** Same as Alternative B.	**Action 6.** Same as Alternative B.
Action 7. The long-term objective is to exchange public land in the Adjustment Area (35,361 acres) for non-public lands in Management Areas. Twelve Management Areas are specified within the CFO.	**Action 7.** Consider disposal of public lands outside of management blocks on a case-by-case basis. (**Appendix M**, Land Tenure Adjustments [see Volume III]). There are approximately 30,098 acres of public land outside of management blocks.	**Action 7.** Same as Alternative B.	**Action 7.** Same as Alternative B.
Action 8. No similar action.	**Action 8.** Retain public access across public lands that are transferred from public ownership, as needed.	**Action 8.** Same as Alternative B.	**Action 8.** Same as Alternative B.
Action 9. Nonfederal lands considered for acquisition shall meet one or more of the following management objectives: • Important and/or unique resource values offering public benefits • Eliminate surface and subsurface in-holdings within special designation or Management Areas • Provide access to federal land • Consolidate surface and subsurface ownership in areas identified for retention	**Action 9.** Utilize land exchange or disposal to reduce the number of scattered parcels of public land that lack access and are difficult to manage. Such lands may be transferred from public ownership through proper authority if they meet one or more of the following criteria: 1. Generally fragmented and/or isolated; 2. Difficult and uneconomical to manage; 3. Relatively inaccessible to the public; 4. Does not contain unique or high value resources;	**Action 9.** Same as Alternative B.	**Action 9.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
	5. Disposal provides a public benefit.		
Action 10. No similar action.	**Action 10.** Utilize land exchange, purchase, and donation to acquire land, or interest in land, with high public resource values and to consolidate public land ownership.	**Action 10.** Same as Alternative B.	**Action 10.** Same as Alternative B.
Action 11. No similar action.	**Action 11.** Manage acquired lands or interests in lands in a manner consistent with adjacent or nearby public lands, or manage them for the purposes for which they were acquired.	**Action 11.** Same as Alternative B.	**Action 11.** Same as Alternative B.
Objective 2. No similar objective.	**Objective 2. Consider all requests for Rights-of-Way, Land Use Permits, and Leases.**	**Objective 2. Same as Alternative B.**	**Objective 2. Same as Alternative B.**
Action 1. No similar action.	**Action 1.** Give priority to processing energy-related authorizations.	**Action 1.** Same as Alternative B.	**Action 1.** Same as Alternative B.
Action 2. Exclusion areas where no realty authorizations will be allowed include 20,315 acres of ACECs and ACEC/RNAs and 750 acres of Wilderness Areas.	**Action 2.** Exclusion areas where no realty authorizations will be allowed are Wilderness Areas (750 acres).	**Action 2.** Same as Alternative B.	**Action 2.** Same as Alternative B.
Action 3. No similar action.	**Action 3.** Areas where realty authorizations should be avoided, or where specific requirements and special mitigation measures must be met, include ACECS, RNAs, wild and scenic rivers (either designated or proposed), SRMAs, administrative	**Action 3.** Same as Alternative B.	**Action 3.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
	sites, and areas with special or sensitive resource values.		
Objective 3. No similar objective.	**Objective 3. Minimize environmental impacts from the proliferation of separate rights-of-way.**	**Objective 3. Same as Alternative B.**	**Objective 3. Same as Alternative B.**
Action 1. No similar action.	**Action 1.** No Right-of-Way Corridors are designated due to the scattered (noncontiguous) pattern of the public lands within the planning area.	**Action 1.** Same as Alternative B.	**Action 1.** Same as Alternative B.
Action 2. No similar action.	**Action 2.** Consolidate linear rights-of-way and communication sites by encouraging applicants to co-locate their rights-of-way with other existing rights-of-way.	**Action 2.** Same as Alternative B.	**Action 2.** Same as Alternative B.
Action 3. No similar action.	**Action 3**. Designate right-of-way corridors in the future as necessary and feasible.	**Action 3.** Same as Alternative B.	**Action 3.** Same as Alternative B.
Objective 4. No similar objective.	**Objective 4. Meet public and administrative access needs across nonfederal lands.**	**Objective 4. Same as Alternative B.**	**Objective 4. Same as Alternative B.**
Action 1. Road easement acquisition will be initiated only after development of activity plans including road use plans with a route analysis with early and frequent involvement of affected parties. Nine specific roads are identified for access acquisition.	**Action 1.** Where appropriate and feasible, maintain existing, and acquire new, access easements.	**Action 1.** Same as Alternative B.	**Action 1.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
Action 2. No similar action.	**Action 2.** Utilize activity plans and route analyses to determine access needs and priorities.	**Action 2.** Same as Alternative B.	**Action 2.** Same as Alternative B.
LANDS AND REALTY **Goal 2: Meet the needs of government agencies and the public for resource protection through public land and mineral withdrawals, acquisition of conservation easements, and resolution of unauthorized use.**			
Objective 1. No similar objective.	**Objective 1. Protect high value resources through withdrawal of public lands.**	**Objective 1. Same as Alternative B.**	**Objective 1. Same as Alternative B.**
Action 1. No similar action.	**Action 1.** (Existing Withdrawals) Review withdrawals, as needed, and recommend their renewal, continuation, revocation, or termination.	**Action 1.** Same as Alternative B.	**Action 1.** Same as Alternative B.
Action 2. No similar action.	**Action 2.** (Existing Withdrawals) Upon termination of withdrawals, manage opened lands in a consistent manner with adjacent and nearby public lands and in accordance with resource objectives.	**Action 2.** Same as Alternative B.	**Action 2.** Same as Alternative B.
Action 3. The public lands within 0.25-mile of the Salmon and Snake Rivers will remain withdrawn from mineral entry; these lands total 18,532 acres.	**Action 3.** (Existing Withdrawals) Process the renewal of the existing withdrawals on the Lower Salmon River.	**Action 3.** Same as Alternative B.	**Action 3.** Same as Alternative B.
Action 4. No similar action.	**Action 4.** (New Withdrawal Proposals) Consider all management alternatives to ensure there is sufficient need for withdrawal.	**Action 4.** Same as Alternative B.	**Action 4.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
Action 5. No similar action.	**Action 5.** (New Withdrawal Proposals) Process the withdrawal of public lands and minerals located on the Lower Salmon River that are not included in the existing withdrawals.	**Action 5.** Same as Alternative B.	**Action 5.** Same as Alternative B.
Objective 2. No similar objective.	**Objective 2. Protect resources by acquiring Conservation Easements on nonfederal lands.**	**Objective 2. Same as Alternative B.**	**Objective 2. Same as Alternative B.**
Action 1. No similar action.	**Action 1.** Determine the suitability of Conservation Easements to protect specific resources on a case-by-case basis, taking into consideration other options.	**Action 1.** Same as Alternative B.	**Action 1.** Same as Alternative B.
Action 2. No similar action.	**Action 2.** Utilize donations, purchases, or exchanges to acquire Conservation Easements.	**Action 2.** Same as Alternative B.	**Action 2.** Same as Alternative B.
Action 3. No similar action.	**Action 3.** Seek funding for identified Conservation Easement needs from available sources including federal, state, nonprofit organizations and partnerships.	**Action 3.** Same as Alternative B.	**Action 3.** Same as Alternative B.
Objective 3. No similar objective.	**Objective 3. Minimize the adverse impacts of unauthorized use of the public lands.**	**Objective 3. Same as Alternative B.**	**Objective 3. Same as Alternative B.**
Action 1. No similar action.	**Action 1.** Give priority to the investigation and termination of newly discovered cases of unauthorized use.	**Action 1.** Same as Alternative B.	**Action 1.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
Action 2. No similar action.	**Action 2.** Strive to resolve existing cases of unauthorized use.	**Action 2.** Same as Alternative B.	**Action 2.** Same as Alternative B.
Action 3. Mitigate and rehabilitate damage to resources and public lands from unauthorized activities.	**Action 3. Same as Alternative A.**	**Action 3.** Same as Alternative A.	**Action 3.** Same as Alternative A.
AREAS OF CRITICAL ENVIRONMENTAL CONCERN AND RESEARCH NATURAL AREAS **Goal: Maintain or enhance relevant resource values of more than local importance, or protect life and promote safety where natural hazards exist.** (See **Appendix N** for Relevance and Importance Evaluations of Areas of Critical Environmental Concern Nominations [see Volume III].)			
Objective 1. Protect the canyon grassland ecosystem of Wapshilla Ridge as an ACEC/RNA (401 acres).	**Objective 1. Same as Alternative A.**	**Objective 1. Same as Alternative A.**	**Objective 1. Same as Alternative A.**
Action 1. Authorize no timber harvest.	**Action 1**. Timber harvest will only be authorized to support maintenance of timber stand health and achievement of management objectives and goals for the existing ACEC/RNA.	**Action 1.** Same as Alternative B.	**Action 1.** Same as Alternative B.
Action 2. Allow no water development or salt placement on the area. Livestock grazing use will be maintained at current levels.	**Action 2**. Eliminate the allotment (excluding livestock grazing) because it has been vacant for a number of years.	**Action 2.** Same as Alternative B.	**Action 2**. Livestock grazing may be used to support achievement of goals and objectives identified for ACEC/RNA.
Action 3. Conduct an intensive habitat type/plant association inventory and map plant communities.	**Action 3**. No similar action. This action has been completed.	**Action 3.** Same as Alternative B.	**Action 3.** Same as Alternative B.
Action 4. Initiate baseline vegetation trend monitoring studies.	**Action 4**. At a minimum of every 10 years, conduct vegetation trend monitoring studies.	**Action 4.** Same as Alternative B.	**Action 4.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
Action 5. Permit no new rights-of-way in area and allow no new road construction.	**Action 5**. No similar action. Evaluate applications for new rights-of way on a case-by-case basis.	**Action 5.** Same as Alternative B.	**Action 5.** Same as Alternative B.
Action 6. Maintain existing ecological condition by prohibiting prescribed burns, seeding, and shrub planting.	**Action 6**. Vegetation treatments such as prescribed burning and/or wildland fire use may be used for long-term maintenance or improvement of good ecological condition grasslands and natural processes within forest vegetation communities.	**Action 6.** Same as Alternative B.	**Action 6.** Same as Alternative B.
Action 7. No similar management.	**Action 7**. Assign high priority for control of undesirable nonnative vegetation utilizing integrated pest management.	**Action 7.** Same as Alternative B.	**Action 7.** Same as Alternative B.
Objective 2. Protect the riparian and Palouse prairie remnant ecosystems of the Lower and Middle Cottonwoods Islands as an ACEC/RNA (43 acres).	**Objective 2. Same as Alternative A.**	**Objective 2. Same as Alternative A.**	**Objective 2. Same as Alternative A.**
Action 1. Continue implementation of the Clearwater River Islands Goose Nesting HMP (No. ID-6WHA-T6) and Cooperative Sikes Act Agreement. This involves monitoring the use of goose nesting structures.	**Action 1**. Review and update as necessary the existing Clearwater River Islands Goose Nesting HMP and Cooperative Sikes Act Agreement. Continue monitoring of goose and duck nesting on the island.	**Action 1.** Same as Alternative B.	**Action 1.** Same as Alternative B.
Action 2. Prohibit any vegetative manipulation and amend HMP to so state.	**Action 2**. No similar action. This action has been completed.	**Action 2.** Same as Alternative B.	**Action 2.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
Action 3. No similar management.	**Action 3**. Prohibit any soil or vegetation disturbance that does not support improvement of ecological condition in the long term.	**Action 3.** Same as Alternative B.	**Action 3.** Same as Alternative B.
Action 4. Conduct an intensive habitat type/plant association inventory and map plant communities.	**Action 4**. No similar action. This action has been completed.	**Action 4**. Same as Alternative B.	**Action 4**. Same as Alternative B.
Action 5. Initiate baseline vegetative trend monitoring studies.	**Action 5**. At a minimum of every 10 years, conduct vegetation trend monitoring studies.	**Action 5.** Same as Alternative B.	**Action 5.** Same as Alternative B.
Action 6. No similar management.	**Action 6**. Assign high priority for control of undesirable nonnative vegetation utilizing integrated pest management.	**Action 6.** Same as Alternative B.	**Action 6.** Same as Alternative B.
Objective 3. Protect the canyon grassland, riparian, and Douglas fir ecosystems of Captain John Creek as an ACEC/RNA (1,321 acres)	**Objective 3. Same as Alternative A.**	**Objective 3. Same as Alternative A.**	**Objective 3. Same as Alternative A.**
Action 1. Continue implementation of the Craig Mountain WMA HMP (No. ID-6WHA—T9) and cooperative Sikes Act Agreement.	**Action 1**. Review and update as necessary the existing Craig Mountain WMA HMP and cooperative Sikes Act Agreement.	**Action 1.** Same as Alternative B.	**Action 1.** Same as Alternative B.
Action 2. Authorize no livestock grazing in the area.	**Action 2**. Same as Alternative A.	**Action 2.** Same as Alternative A.	**Action 2.** Same as Alternative A.
Action 3. Authorize no timber harvest on the area, unless for disease or insect control.	**Action 3**. Authorize no timber harvest in the area, unless for disease or insect control and achievement of DFC	**Action 3.** Same as Alternative B.	**Action 3.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
	(**Appendix D**, Desired Future Conditions for Forest Vegetation/Wildlife Habitat [see Volume II~~I~~]) with emphasis on large tree and old forest/old growth components.		
Action 4. Conduct an intensive vegetation/botanical survey of the area. Map specific habitat types/plant associations.	**Action 4**. No similar action. This action has been completed.	**Action 4.** Same as Alternative B.	**Action 4.** Same as Alternative B.
Action 5. No similar action.	**Action 5**. Allow limited vegetation treatments and understory burning that support natural processes and achievement of DFC and are compatible with RNA goals and objectives.	**Action 5.** Same as Alternative B.	**Action 5.** Same as Alternative B.
Action 6. Initiate baseline vegetation trend studies.	**Action 6**. At a minimum of every 10 years, conduct vegetation trend monitoring studies and map timbered and shrub stands and characterize habitats (i.e., structure, canopy cover).	**Action 6.** Same as Alternative B.	**Action 6.** Same as Alternative B.
Action 7. No similar action.	**Action 7**. Assign high priority for control of undesirable nonnative vegetation utilizing integrated pest management.	**Action 7.** Same as Alternative B.	**Action 7.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
Objective 4. Protect habitat for federally listed MacFarlane's four-o'clock of Long Gulch as an ACEC/RNA (47 acres).	**Objective 4. Same as Alternative A.**	**Objective 4. Same as Alternative A.**	**Objective 4. Same as Alternative A.**
Action 1. Manage the area in accordance with the updated MacFarlane's four-o'clock Recovery Plan and in cooperation with USFWS.	**Action 1**. Same as Alternative A.	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.
Action 2. Continue implementation of the MacFarlane's four-o'clock Long Gulch HMP (No. ID-6WHA-T8), which calls for continued protection of this plant and the establishment of a study and education area.	**Action 2**. Review and update as necessary the existing Long Gulch HMP to provide for long-term protection of listed plant population and suitable habitats.	**Action 2.** Same as Alternative B.	**Action 2.** Same as Alternative B.
Action 3. No similar action.	**Action 3**. Allow no vegetation or ground disturbing actions that would result in long-term adverse impacts to MacFarlane's four-o'clock and suitable habitats.	**Action 3.** Same as Alternative B.	**Action 3.** Same as Alternative B.
Action 4. Allow no ground-disturbing activities in this area.	**Action 4**. No similar action.	**Action 4.** Same as Alternative B.	**Action 4.** Same as Alternative B.
Action 5. Authorize no livestock grazing in the area. Maintain fenced exclosure.	**Action 5**. Same as Alternative A.	**Action 5.** Same as Alternative A.	**Action 5.** Same as Alternative A.
Action 6. Prohibit the use of herbicide spraying within this area and on immediately adjacent federal lands.	**Action 6**. Assign high priority for control of undesirable nonnative vegetation utilizing integrated pest management. Vegetation treatments	**Action 6.** Same as Alternative B.	**Action 6.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
	will support long-term improvement of ecological condition and avoid adverse impacts to listed plants and suitable habitat.		
Action 7. No similar action.	**Action 7**. Monitor trend of MacFarlane's four-o'clock. At a minimum, every five years, conduct vegetation trend monitoring studies. Weed-control activities would have implementation and effectiveness monitoring conducted to determine if objectives are being achieved.	**Action 7**. Same as Alternative B.	**Action 7**. Same as Alternative B.
~~**Action 8**. No similar action.~~	~~**Action 8**. At a minimum every five years, conduct vegetation trend monitoring studies. Weed-control activities would have implementation and effectiveness monitoring conducted to determine if objectives are being achieved.~~	~~**Action 8**. Same as Alternative B.~~	~~**Action 8**. Same as Alternative B.~~
Objective 5. Protect habitat for federally listed MacFarlane's four-o-clock, Idaho BLM sensitive plants, wildlife, and snails, and protect the limestone cave and spring of Lucile Caves as an ACEC/RNA (404 acres).	**Objective 5. Reduce the existing Lucile Caves ACEC/RNA to 136 acres.**	**Objective 5. Same as Alternative B.**	**Objective 5. Same as Alternative B.**
Action 1. Continue implementation of the Lucile Caves HMP (No. ID-6WHA-T25) and Cooperative Sikes	**Action 1.** Review and update as necessary the existing Lucile Caves HMP to provide for long-term	**Action 1.** Same as Alternative B.	**Action 1.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
Act Agreement, which calls for the protection and study of vegetation in this area.	protection of listed plant population, BLM sensitive species, and geologic resources found within the ACEC/RNA.		
Action 2. Initiate an intensive allotment management plan for the area to improve overall ecological condition of the area.	**Action 2.** No similar action.	**Action 2.** Same as Alternative B.	**Action 2.** Same as Alternative B.
Action 3. File for nonconsumptive water rights; such flows will be for annual natural flows. Natural flows will be reserved from the spring to the old highway.	**Action 3.** Same as Alternative A.	**Action 3.** Same as Alternative A.	**Action 3.** Same as Alternative A.
Action 4. Permit no new rights-of-way in area and allow no new road construction.	**Action 4.** No similar action. Evaluate applications for new rights-of way on a case-by-case basis.	**Action 4.** Same as Alternative B.	**Action 4.** Same as Alternative B.
Action 5. Prohibit the use of herbicides spraying within this area and on immediately adjacent federal lands, with the exception of control treatments being used on an experimental basis	**Action 5.** Assign high priority for control of undesirable nonnative vegetation utilizing integrated pest management. Vegetation treatments will support long-term improvement of ecological condition and avoids adverse impacts to listed plants and other resource values identified for ACEC/RNA designation.	**Action 5.** Same as Alternative B.	**Action 5.** Same as Alternative B.
Action 6. Authorize no livestock grazing within fenced exclosure (136 acres).	**Action 6.** Same as Alternative A.	**Action 6.** Same as Alternative A.	**Action 6.** Same as Alternative A.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
Action 7. No similar action.	**Action 7.** As needed, evaluate trail to cave and ecological values associated with cave. If human uses causing degradation to vegetation, soils, and cave resources, take appropriate actions to avoid or minimize impacts.	**Action 7.** Same as Alternative B.	**Action 7.** Same as Alternative B.
Objective 6. Protect habitat for federally listed MacFarlane's four-o'clock near Skookumchuck as an ACEC/RNA (18 acres).	**Objective 6. Same as Alternative A.**	**Objective 6. Same as Alternative A.**	**Objective 6. Same as Alternative A.**
Action 1. Manage the area in accordance with the updated MacFarlane's four-o'clock Recovery Plan and in cooperation with USFWS.	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.
Action 2. Continue implementation of the MacFarlane's four-o'clock Skookumchuck HMP (No. ID-6WHA-T18), which call for protection and study of this endangered (currently threatened) plant.	**Action 2.** Review and update as necessary the existing Skookumchuck HMP to provide for long-term protection of listed plant population and suitable habitats.	**Action 2.** Same as Alternative B.	**Action 2.** Same as Alternative B.
Action 3. No similar action.	**Action 3.** At a minimum every five years, conduct vegetation trend monitoring studies. Weed-control activities would have implementation and effectiveness monitoring conducted to determine if objectives are being achieved.	**Action 3.** Same as Alternative B.	**Action 3.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
Action 4. Do not authorize livestock grazing in this unit.	**Action 4.** Same as Alternative A.	**Action 4.** Same as Alternative A.	**Action 4.** Same as Alternative A.
Action 5. Prohibit herbicide spraying within this area with the exception of control treatments being used on an experimental basis.	**Action 5.** Assign high priority for control of undesirable nonnative vegetation utilizing integrated pest management. Vegetation treatments will support long-term improvement of ecological condition and avoids adverse impacts to listed plants and other resource values identified for ACEC/RNA designation.	**Action 5.** Same as Alternative B.	**Action 5.** Same as Alternative B.
Action 6. Continue coordination with the Department of Highways to limit herbicide use along the highway right-of-way.	**Action 6.** Continue coordination with Idaho Transportation Department to limit herbicide use along the highway right-of-way and for control of undesirable vegetation.	**Action 6.** Same as Alternative B.	**Action 6.** Same as Alternative B.
Objective 7. Protect scenic and cultural values and listed and sensitive plant and animal species of the Craig Mountain Cooperative Management Area as an ACEC (3,956 acres), in cooperation with Idaho Department of Fish and Game, Idaho Department of Lands, and The Nature Conservancy.	**Objective 7. No similar objective.**	**Objective 7. Increase the existing Craig Mountain ACEC to 23,342 acres.**	**Objective 7. No similar objective.**
Action 1. Continue implementation of the Craig Mountain WMA HMP (No. ID-6WHA-T9) and Cooperative Sikes Act Agreement.	**Action 1.** No similar action.	**Action 1.** Review and update as necessary the existing Craig Mountain WMA HMP and Cooperative Sikes Act Agreement. Updates will include BLM	**Action 1.** No similar action.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
		lands within Craig Mountain WMA and appropriate coordination/ partnerships with Idaho Department of Fish and Game, The Nature Conservancy, and Idaho Department of Lands.	
Action 2. Develop a cooperative HMP with The Nature Conservancy for the China Garden Creek area.	**Action 2.** No similar action. This action has been completed.	**Action 2.** Same as Alternative B.	**Action 2.** Same as Alternative B.
Action 3. Lands within the area will be classified for custodial timber management and would not be managed for timber production. Timber would be removed only when necessary to protect or enhance adjacent forest lands or other resource values. Any timber removal would be done to afford maximum protection to the site or to accomplish other resource values.	**Action 3.** No similar action.	**Action 3.** Lands within the area will be classified for custodial timber management. Manage forest stands for the desired size classes displayed in **Appendix D**, Desired Future Conditions for Forest Vegetation/Wildlife Habitat , Alternative C (see Volume II~~I~~), Craig Mountain ACEC. Timber would be removed only when necessary to protect or enhance wildlife, fisheries, riparian, watershed, and ecological resource values. Any timber removal or vegetation treatments would be done in such a way as to afford maximum protection to the site or to accomplish other resource values.	**Action 3.** No similar action.
Action 4. Permit no new rights-of-way in area and allow no new road construction.	**Action 4.** No similar action.	**Action 4.** New road construction for timber harvest will be temporary, must be decommissioned (i.e., partial – full obliteration) within three years of construction, and seeded/planted with	**Action 4.** No similar action.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
		native species.	
Action 5. Allotments in this area are available for grazing but currently vacant.	**Action 5.** Eliminate the allotment (excluding livestock grazing) because it has been vacant for a number of years.	**Action 5.** Same as Alternative B.	**Action 5.** Allotments in this area are available for grazing and may be expanded to include additional BLM lands.
Action 6. No similar action.	**Action 6.** No similar action.	**Action 6.** Assign high priority for control of undesirable nonnative vegetation utilizing integrated pest management. Vegetation treatments will support long-term improvement of ecological condition and avoid adverse impacts to listed plants (Spalding's catchfly~~silene~~), and wildlife habitats.	**Action 6.** No similar action.
Action 7. No similar action.	**Action 7.** No similar action.	**Action 7.** In cooperation with partners, develop a long-term survey, data recording ~~mapping~~, and monitoring strategy for aquatic/terrestrial habitats, wildlife/fish populations, and for threatened/endangered and special status wildlife, fish, and plants.	**Action 7.** No similar action.
Objective 8. Protect the public from hazards of Elk City Dump/American Hill Lake as an ACEC (30 acres)	**Objective 8. No similar objective.**	**Objective 8. No similar objective.**	**Objective 8. No similar objective.**
Action 1. Initiate intensive water quality monitoring to evaluate the significance of the problem. Evaluate impacts to surface/subsurface waters	**Action 1.** No similar action.	**Action 1.** No similar action.	**Action 1.** No similar action.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
and American River. Evaluate possible human safety problems.			
Action 2. Develop a feasibility study and rehabilitation plant to restore or realign natural drainage, contour/vegetate dump site and correct, as needed, water quality problems.	**Action 2.** No similar action.	**Action 2.** No similar action.	**Action 2.** No similar action.
Action 3. Coordinate as needed with private landowner for rehabilitation efforts initiated for American Hill Lake.	**Action 3.** No similar action.	**Action 3.** No similar action.	**Action 3.** No similar action.
Action 4. Designate the area as closed to OHV use.	**Action 4.** No similar action.	**Action 4.** No similar action.	**Action 4.** No similar action.
Action 5. Allow no further ground disturbing actions (other than approved rehabilitation activities) or surfaces uses such as land fill dumping.	**Action 5.** No similar action.	**Action 5.** No similar action.	**Action 5.** No similar action.
Action 6. If initial evaluations identify any threats to human safety, warning signs will be erected.	**Action 6.** No similar action.	**Action 6.** No similar action.	**Action 6.** No similar action.
Objective 9. Protect scenic and cultural values and listed and sensitive plant and animal species of Lower Lolo Creek as an ACEC (3,678 acres)	**Objective 9. Same as Alternative A.**	**Objective 9. Same as Alternative A.**	**Objective 9. No similar objective.**

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
Action 1. Work to acquire those lands with identified high resource values near the mouth of Lolo Creek.	**Action 1.** No similar action.	**Action 1.** Same as Alternative B.	**Action 1.** No similar action.
Action 2. Identify and investigate opportunities to acquire additional lands adjacent to Lolo Creek from the mouth upstream to the upstream Forest Service boundary (stream mile 24.9).	**Action 2.** Identify and promote opportunities to acquire additional lands adjacent to Lolo Creek.	**Action 2.** Same as Alternative B.	**Action 2.** No similar action.
Action 3. No similar action.	**Action 3.** Allow no construction of hydroelectric facilities. ~~based on finding that Lolo Creek is eligible and suitable for inclusion in the NWSRS.~~	**Action 3.** Same as Alternative B.	**Action 3.** ~~No similar action~~Same as Alternative B.
Action 4. Protect existing fisheries, wildlife, and watershed values by maintaining this area in its essentially roadless conditions. Permit no new rights-of-way and allow no new road construction within 300 feet of Lolo Creek or on slopes exceeding 50%. Prohibit construction of hydroelectric facilities within this area.	**Action 4.** Same as Alternative A.~~Support should be given to legislative initiatives to include Lolo Creek as a scenic component of the NWSRS.~~	**Action 4.** Support should be given to legislative initiatives to include Lolo Creek as a scenic component of the NWSRS.~~Same as Alternative B.~~	**Action 4.** No similar action.
Action 5. Timber harvest activities on slopes over ~~50~~35% will utilize yarding methods (such as aerial or high lead systems) that minimize ground disturbance.	**Action 5.** Same as Alternative A.	**Action 5.** Same as Alternative A.	**Action 5.** No similar action.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
Action 6. No similar action.	**Action 6.** Roads not needed for long-term management will be decommissioned (partial obliteration, full obliteration).	**Action 6.** Same as Alternative B.	**Action 6.** No similar action.
Action 7. No similar action.	**Action 7.** Assign high priority for control of undesirable nonnative vegetation utilizing integrated pest management.	**Action 7.** Same as Alternative B.	**Action 7.** No similar action.
Action 8. No similar action.	**Action 8.** Support permanent retention of existing easement of lands at the mouth of Lolo Creek.	**Action 8.** Same as Alternative B.	**Action 8.** No similar action.
Action 9. No similar action.	**Action 9**. Allow no new road construction within 300 feet of Lolo Creek or on slopes exceeding 50%.	**Action 9.** Same as Alternative B.	**Action 9.** No similar action.
Action 10. No similar action.	**Action 10.** Lands will be classified for custodial timber management. Refer to **Appendix D**, Desired Future Conditions for Forest Vegetation/Wildlife Habitat, Alternative B (see Volume II~~I~~), Lower Lolo Creek ACEC for desired size classes for forested areas. Vegetation treatments will be done in such a way as to afford maximum protection to the site or to enhance resource values.	**Action 10.** Same as Alternative B.	**Action 10.** No similar action.
Objective 10. No similar objective.	**Objective 10. Protect scenic and cultural values and listed and sensitive plant and animal species**	**Objective 10. Same as Alternative B.~~Protect scenic and cultural values and listed and sensitive plant and~~**	**Objective 10. No similar objective.**

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
	of Upper Lolo Creek as an ACEC (1,625 acres). ~~**No similar objective.**~~	~~**animal species of Upper Lolo Creek as an ACEC (1,625 acres).**~~	
Action 1. No similar action.	**Action 1.** Identify and promote opportunities to acquire lands adjacent to Lolo Creek.~~No similar action.~~	**Action 1.** Same as Alternative B.~~Identify and promote opportunities to acquire additional lands adjacent to Lolo Creek.~~	**Action 1.** No similar action.
Action 2. No similar action.	**Action 2.** Allow no construction of hydroelectric facilities.~~No similar action.~~	**Action 2.** Same as Alternative B.~~Allow no construction of hydroelectric facilities.~~	**Action 2.** No similar action.
Action 3. No similar action.	**Action 3.** Protect and enhance segments of the Nez Perce (Nee-Me-Poo) National Historic Trail and the Lewis and Clark National Historic Trail. Cooperate with partners in the management of these trails.~~No similar action.~~	**Action 3.** Same as Alternative B.~~Protect and enhance segments of the Nez Perce (Nee-Me-Poo) National Historic Trail and the Lewis and Clark National Historic Trail. Cooperate with partners in the management of these trails.~~	**Action 3.** No similar action.
Action 4. No similar action.	**Action 4.** No similar action.	**Action 4.** Support should be given to legislative initiatives to include Lolo Creek as a scenic component of the NWSRS.	**Action 4.** No similar action.
Action 5. No similar action.	**Action 5.** Timber harvest activities on slopes over 35% will utilize yarding methods (such as aerial or high lead systems) that minimize ground disturbance.~~No similar action.~~	**Action 5.** Same as Alternative B.~~Timber harvest activities on slopes over 5035% will utilize yarding methods (such as aerial or high lead systems) that minimize ground disturbance.~~	**Action 5.** No similar action.
Action 6. No similar action.	**Action 6.** Roads not needed for long-term management will be	**Action 6.** Same as Alternative B.~~Roads not needed for long-term management~~	**Action 6.** No similar action.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
	decommissioned (partial obliteration, full obliteration).~~No similar action.~~	~~will be decommissioned (partial obliteration, full obliteration).~~	
Action 7. No similar action.	**Action 7.** Assign high priority for control of undesirable nonnative vegetation utilizing integrated pest management.~~No similar action.~~	**Action 7.** Same as Alternative B.~~Assign high priority for control of undesirable nonnative vegetation utilizing integrated pest management.~~	**Action 7.** No similar action.
Action 8. No similar action.	**Action 8.** Develop and implement a management strategy that would support restoration of riparian area/flood-prone area in Cottonwood Flats. Emphasis on establishment of mature cottonwood stands.~~No similar action.~~	**Action 8.** Same as Alternative B.~~Develop and implement a management strategy that would support restoration of riparian area/flood-prone area in Cottonwood Flats. Emphasis on establishment of mature cottonwood stands.~~	**Action 8.** No similar action.
Action 9. No similar action.	**Action 9.** DFC for forest vegetation identified in the following **Appendix D**, Desired Future Conditions for Forest Vegetation/Wildlife Habitat, Alternative C, Upper Lolo Creek ACEC (see Volume II).~~No similar action.~~	**Action 9.** Same as Alternative B.~~DFC for forest vegetation identified in the following **Appendix D**, Desired Future Conditions for Forest Vegetation/Wildlife Habitat, Alternative C, Upper Lolo Creek ACEC (see Volume III).~~	**Action 9.** No similar action.
Objective 11. Protect scenic and cultural values and listed and sensitive plant and animal species of the Lower Salmon River as an ACEC (15,702 acres).	**Objective 11. Increase existing Lower Salmon River ACEC to 16,199 acres.**	**Objective 11. Same as Alternative B.**	**Objective 11. Same as Alternative B.**
Action 1. Implementation of the following existing plans will continue: (1) Lower Salmon River Recreation	**Action 1.** Review, update, and implement existing activity plans as needed.	**Action 1.** Same as Alternative B.	**Action 1.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
Area Plan – 1983; (2) Lower Salmon River Cultural Resource Management Plan – 1983; (3) Lower Salmon River Aquatic Zone I HMP – 1985; (4) Rattlesnake Ridge HMP – 1986; and (5) Allotment Management Plans.			
Action 2. A high priority should be placed on acquiring private lands adjacent to the Salmon River to provide long-term protection of important resource values and enhance public access and use of the area.	**Action 2.** A high priority should be placed on acquiring non federal lands or interests in lands adjacent to the Salmon River to provide long-term protection of important resource values and enhance public access and use of the area.	**Action 2.** Same as Alternative B.	**Action 2.** Same as Alternative B.
Action 3. Support legislative initiatives to include the Lower Salmon River as a scenic river component of the NWSRS.	**Action 3.** Same as Alternative A.	**Action 3.** Same as Alternative A.	**Action 3.** Same as Alternative A.
Action 5. Permit no new rights-of-way and allow no new road construction.	**Action 5.** No similar action. Evaluate applications for new rights-of way on a case-by-case basis.	**Action 5.** Same as Alternative B.	**Action 5.** Same as Alternative B.
Action 6. No similar action.	**Action 6.** Assign high priority for control of undesirable nonnative vegetation utilizing integrated pest management. Vegetation treatments will support long-term improvement of ecological condition and minimize or avoid adverse impacts to aquatic and wildlife habitats.	**Action 6.** Same as Alternative B.	**Action 6.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
Action 7. No similar action.	**Action 7.** At a minimum every five years, conduct vegetation trend monitoring studies for listed plants. Weed-control activities would have implementation and effectiveness monitoring conducted. Minimize or avoid land uses that cause adverse impact to listed plant populations.	**Action 7.** Same as Alternative B.	**Action 7.** Same as Alternative B.
Action 8. No similar action.	**Action 8.** A high priority is assigned for continued systematic botanical inventory of suitable habitat for listed and Idaho BLM sensitive plants.	**Action 8.** Same as Alternative B.	**Action 8.** Same as Alternative B.
Objective 12. No similar objective.	**Objective 12. Protect scenic and cultural values, and listed and sensitive plant and animal species through the designation of the Salmon River as an ACEC (White Bird Creek to French Creek) (5,759 acres – modify boundary east of Riggins approximately 0.25-mile from river).**	**Objective 12. Same as Alternative B.**	**Objective 12. Same as Alternative B.**
Action 1. No similar action.	**Action 1.** Support legislative initiatives to include the Lower Salmon River as a recreational component of the NWSRS.	**Action 1.** Same as Alternative B.	**Action 1.** Same as Alternative B.
Action 2. No similar action.	**Action 2.** Assign high priority for control of undesirable nonnative vegetation utilizing integrated pest management. Vegetation treatments	**Action 2.** Same as Alternative B.	**Action 2.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
	will support long-term improvement of ecological condition.		
Action 3. No similar action.	**Action 3.** Every 10 years, conduct trend monitoring for listed plant populations. Minimize or avoid land uses that cause adverse impacts to listed plant populations.	**Action 3.** Same as Alternative B.	**Action 3.** Same as Alternative B.
Action 4. No similar action.	**Action 4.** Give a high priority for continued systematic botanical inventory of suitable habitat for listed and Idaho BLM sensitive plants.	**Action 4.** Same as Alternative B.	**Action 4.** Same as Alternative B.
Action 5. No similar action.	**Action 5.** Review, update, and implement existing activity plans as needed.	**Action 5.** Same as Alternative B.	**Action 5.** Same as Alternative B.
Action 6. No similar action.	**Action 6.** Acquisitions of nonfederal land will be considered on a case-by-case basis to provide long-term protection of important resource values and enhance public access and use of the area. Where appropriate, conservation easements should be used to protect important resource values.	**Action 6.** Same as Alternative B.	**Action 6.** Same as Alternative B.
Objective 13. No similar objective.	**Objective 13. Protect listed and sensitive plants, and wildlife and riparian, wetland and Engelmann spruce ecosystems through the designation of the East Fork American River as an ACEC (570**	**Objective 13. Same as Alternative B.**	**Objective 13. No similar objective.**

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
	acres).		
Action 1. No similar action.	**Action 1.** Vegetation treatments will be done in such a way as to afford maximum protection to the site or to enhance resource values.	**Action 1.** Same as Alternative B.	**Action 1.** No similar action.
Action 2. No similar action.	**Action 2.** Minimize ground disturbance on slopes greater than 40%.	**Action 2.** No similar action.	**Action 2.** No similar action.
Action 3. No similar action.	**Action 3.** Ridge top/upper slope temporary roads may be used for timber harvest. Such roads must be decommissioned (i.e., partial – full obliteration) within three years after construction and seeded/planted with native species.	**Action 3.** No similar action.	**Action 3.** No similar action.
Action 4. No similar action.	**Action 4.** No similar action.	**Action 4.** Evaluate and identify East Fork American River RCA for long-term management as an RNA. Long-term management will emphasize natural processes within riparian habitats; however, vegetation treatments may be used to promote achievement of high quality riparian and aquatic habitats.	**Action 4.** No similar action.
Action 5. No similar action.	**Action 5.** No road construction will be authorized within RCAs.	**Action 5.** No road construction will be authorized.	**Action 5.** No similar action.
Action 6. No similar action.	**Action 6.** No similar action.	**Action 6.** Survey and record~~map~~ all stands, and identify stand structure,	**Action 6.** No similar action.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
		habitat types, and associated plant communities. Update map every 10 to 15 years.	
Action 7. No similar action.	**Action 7.** No similar action.	**Action 7.** Every 10 years, conduct vegetation and aquatic condition/trend monitoring.	**Action 7.** No similar action.
Objective 14. No similar objective.	**Objective 14. Protect cultural resources, specifically historical mining sites through the designation of the American River Historic Sites District ACEC (6,330~~56~~ acres).**	**Objective 14. Same as Alternative B.**	**Objective 14. No similar objective.**
Action 1. No similar action.	**Action 1.** Require mining Plans of Operations as a means to manage long-term mineral exploration/development in areas of high cultural site density.	**Action 1.** Same as Alternative B.	**Action 1.** No similar action.
Objective 15. No similar objective.	**Objective 15. No similar objective.**	**Objective 15. Protect the natural processes, old-growth ponderosa pine and Idaho BLM sensitive species through the designation of Partridge/Elkhorn as an ACEC (576 acres).**	**Objective 15. No similar objective.**
Action 1. No similar action.	**Action 1.** No similar action.	**Action 1.** Implement management actions that emphasize achievement of DFCs for large tree and old forest components. Prioritized large tree retention species are ponderosa pine, western larch, and Douglas-fir.	**Action 1.** No similar action.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
		Appendix D, Desired Future Conditions for Forest Vegetation/Wildlife Habitat, Alternative C, Partridge/Elkhorn ACEC provides the desired size classes (see Volume III~~I~~).	
Action 2. No similar action.	**Action 2.** No similar action.	**Action 2.** Minimize new road construction. Only temporary roads will be authorized for timber harvest and they must be decommissioned (i.e., partial – full obliteration) within three years of construction and seeded/planted with native species.	**Action 2.** No similar action.
Action 3. No similar action.	**Action 3.** No similar action.	**Action 3.** Assign high priority for control of undesirable nonnative vegetation utilizing integrated pest management.	**Action 3.** No similar action.
Action 4. No similar action.	**Action 4.** No similar action.	**Action 4.** Evaluate and identify high resource value stand(s) for RNA designation. Long-term management will emphasize natural processes.	**Action 4.** No similar action.
Action 5. No similar action.	**Action 5.** No similar action.	**Action 5.** Prescribed burning and silvicultural treatments will be applied to achieve.	**Action 5.** No similar action.
Action 6. No similar action.	**Action 6.** No similar action.	**Action 6.** Survey and record ~~map~~ all stands, identify stand structure, habitat types, and associated plant communities and update the map every	**Action 6.** No similar action.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
		10 to 15 years.	
Action 7. No similar action.	**Action 7.** No similar action.	**Action 7.** Every 10 years, conduct vegetative trend monitoring studies.	**Action 7.** No similar action.
Action 8. No similar action.	**Action 8.** No similar action.	**Action 8.** Establish long-term wildlife monitoring plots/transects for mature/old forest dependent representative wildlife species.	**Action 8.** No similar action.
Objective 16. No similar objective.	**Objective 16. No similar objective.**	**Objective 16. Protect natural processes, old-growth ponderosa pine and Idaho BLM sensitive species through the designation of the Little Salmon River as an ACEC (590 acres).**	**Objective 16. No similar objective.**
Action 1. No similar action.	**Action 1.** No similar action.	**Action 1.** Implement management actions that emphasize achievement of DFCs for large tree and old forest components. Prioritized large tree retention species are ponderosa pine, western larch, and Douglas-fir. **Appendix D**, Desired Future Conditions for Forest Vegetation/Wildlife Habitat, Alternative C, Little Salmon ACEC provides the desired size classes (see Volume II~~I~~).	**Action 1.** No similar action.
Action 2. No similar action.	**Action 2.** No similar action.	**Action 2.** Minimize new road construction. Only temporary roads will be authorized for timber harvest	**Action 2.** No similar action.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
		and they must be decommissioned (i.e., partial – full obliteration) within three years of construction and seeded/planted with native species.	
Action 3. No similar action.	**Action 3.** No similar action.	**Action 3.** Assign high priority for control of undesirable nonnative vegetation utilizing integrated pest management.	**Action 3.** No similar action.
Action 4. No similar action.	**Action 4.** No similar action.	**Action 4.** Evaluate and identify high resource value stand(s) for RNA designation. Long-term management will emphasize natural processes.	**Action 4.** No similar action.
Action 5. No similar action.	**Action 5.** No similar action.	**Action 5.** Prescribed burning and silvicultural treatments will be applied to achieve DFC.	**Action 5.** No similar action.
Action 6. No similar action.	**Action 6.** No similar action.	**Action 6.** Survey and record ~~map~~ all stands, identify stand structure, habitat types, and associated plant communities and update the map every 10 to 15 years.	**Action 6.** No similar action.
Action 7. No similar action.	**Action 7.** No similar action.	**Action 7.** Every 10 years, conduct vegetative trend monitoring studies.	**Action 7.** No similar action.
Action 8. No similar action.	**Action 8.** No similar action.	**Action 8.** Establish long-term wildlife monitoring plots/transects for mature/old forest dependent representative wildlife species.	**Action 8.** No similar action.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
NATIONAL TRAILS **Goal: Manage National Trails to protect the values for which they were designated.**			
Objective 1. Protect and enhance National Trail values based on trail characteristics.	**Objective 1. Same as Alternative A.**	**Objective 1. Same as Alternative A.**	**Objective 1. Same as Alternative A.**
Action 1. Develop appropriate measures to protect National Trail (21 miles) resources on a case-by-case basis.	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.
Action 2. No similar action.	**Action 2.** Inventory and record sections of the Lewis and Clark and the Nez Perce (Nee-Me-Poo) National Historic Trails (21 miles).	**Action 2.** Same as Alternative B.	**Action 2.** Same as Alternative B.
Action 3. No similar action.	**Action 3.** Develop information and interpretive materials for public distribution.	**Action 3.** Same as Alternative B.	**Action 3.** Same as Alternative B.
WILD AND SCENIC RIVERS **Goal: Fulfill the BLM's obligations under Section 5(d)(1) of the WSR Act for the life of this RMP.**			
Objective 1. Manage the Salmon River from Long Tom Bar to the Snake River (112 miles) to protect its identified outstandingly remarkable values and free-flowing condition until redirected by Congress.	**Objective 1. Same as Alternative A.**	**Objective 1. Same as Alternative A.**	**Objective 1. Same as Alternative A.**
Action 1. Continue to implement the Lower Salmon River Scenic and Lower Salmon River Recreational activity	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
plans to protect the outstandingly remarkable values.			
Action 2. No similar action.	**Action 2.** Continue land acquisition and conservation easement acquisition along the Lower Salmon River.	**Action 2.** Same as Alternative B.	**Action 2.** Same as Alternative B.
Action 3. The public lands within 0.25-mile of the Salmon and Snake Rivers will remain withdrawn from mineral entry. [The CFO submitted a withdrawal petition/application to the BLM Washington Office in May 2004.]	**Action 3.** Support renewal of existing minerals withdrawal along the Lower Salmon River (also see Minerals).	**Action 3.** Same as Alternative B.	**Action 3.** Same as Alternative B.
Objective 2. To fulfill the BLM's obligations under Section 5(d)(1) of the WSR Act, the BLM has completed eligibility and suitability determinations of planning area river segments (Appendix K, Final ~~Draft~~ Wild and Scenic Rivers Eligibility and Suitability Study [see Volume II~~I~~]). Do not recommend suitable segments for inclusion in the NWSRS.	**Objective 2. To fulfill the BLM's obligations under Section 5(d)(1) of the WSR Act, the BLM has completed eligibility and suitability determinations of planning area river segments (Appendix K, Final Wild and Scenic Rivers Eligibility and Suitability Study [see Volume II]). Coordinate the BLM decision to recommend or not recommend suitable segments for inclusion in the NWSRS in conjunction with the Idaho Water Resource Board as described in the Memorandum of Understanding with BLM, Forest Service and State of Idaho (State of Idaho 1991).~~To fulfill the BLM's obligations under Section 5(d)(1) of~~**	**Objective 2. To fulfill the BLM's obligations under Section 5(d)(1) of the WSR Act, the BLM has completed eligibility and suitability determinations of planning area river segments (Appendix K, Final Wild and Scenic Rivers Eligibility and Suitability Study [see Volume II]). Recommend suitable segments for inclusion in the NWSRS.~~Same as Alternative B.~~**	**Objective 2. Same as Alternative ~~B~~C.**

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
	~~**the WSR Act, the BLM has completed eligibility and suitability determinations of planning area river segments (Appendix K, Draft Final Wild and Scenic Rivers Eligibility and Suitability Study [see Volume III]). Recommend suitable segments for inclusion in the NWSRS.**~~		
Action 1. For the four segments determined preliminarily suitable on Lolo, Lake, Hard, and Hazard Creeks, for congressional designation into the NWSRS (**Appendix K**, ~~Draft~~ Final Wild and Scenic Rivers Eligibility and Suitability Study [see Volume II~~I~~]), until a final congressional decision on designation or nondesignation is made, the BLM would, to the extent of BLM's authority (which is limited to BLM lands within the corridor), maintain the free-flowing character, preserve or enhance the outstandingly remarkable values, and allow no activities within the river corridor that would alter the tentative classification.	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.
Action 2. While some river segments were found eligible and suitable for inclusion in the NWSRS (**Appendix K**, ~~Draft~~ Final Wild and Scenic Rivers	**Action 2.** Do not recommend the preliminarily suitable 24-mile Lolo Creek segment for congressional designation in the NWSRS. Coordinate	**Action 2.** Recommend the preliminarily suitable 24-mile Lolo Creek segment from the Clearwater National Forest Boundary to the	**Action 2.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
Eligibility and Suitability Study [see Volume II~~I~~]), do not recommend river segments for congressional designation in the NWSRS.	management and designation with the Idaho Dept. of Water Resources and Forest Service when the Comprensive State Water Plan in developed for this River Basin. Continue to coordinate with the Idaho Water Resources Board and Forest Service in accordance with the Memorandum of Understanding with the BLM, Forest Service and State of Idaho (State of Idaho 1991). In the interim, BLM will coordinate management of the segment with the Idaho Department of Water Resources and protective management will be provided on BLM administered lands in accordance with the following guidelines: • Approve no actions altering the free-flowing nature of the suitable segment through impoundments, diversions, channeling or riprapping. • Approve no actions that will measurable diminish the stream segment's identified outstandingly remarkable value(s). • Approve no actions that will modify the setting or level of development of the suitable	mouth for congressional designation in the NWSRS under the Scenic classification.~~Same as Alternative B~~.	

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
	river segment to a degree that will change its identified Scenic classification. ~~Recommend the preliminarily suitable 24-mile Lolo Creek segment from the Clearwater National Forest Boundary to the mouth for congressional designation in the NWSRS under the Scenic classification.~~		
Action 3. No similar action.	Action 3. Do not recommend the preliminarily suitable 2.18-mile Lake Creek segment for congressional designation in the NWSRS until the Forest Service (Payette National Forest) completes evaluation of suitability affecting the National Forest Lands along the river downstream of the BLM segment. This effort would occur in conjunction with the Idaho Water Resources Board in accordance with the Memorandum of Understanding with the BLM, Forest Service and State of Idaho (State of Idaho 1991). In the interim, BLM will coordinate management of the segment with the Idaho Department of Water Resources and protective management will be provided on BLM administered lands in accordance with the following guidelines:	**Action 3.** Recommend the preliminarily suitable 2.18-mile Lake Creek segment for congressional designation in the NWSRS under the Recreational classification in conjunction with the Payette National Forest recommendation for the remainder of the creek.~~Same as Alternative B.~~	**Action 3.** ~~No similar action~~Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
	• Approve no actions altering the free-flowing nature of the suitable segment through impoundments, diversions, channeling or riprapping. • Approve no actions that will measurable diminish the stream segment's identified outstandingly remarkable value(s). • Approve no actions that will modify the setting or level of development of the suitable river segment to a degree that will change its identified Recreational classification. Reevaluate the decision of whether or not to recommend the Lake Creek segment following completion of the Forest Service suitability evaluation and the Idaho Department of Water Resources Comprehensive Water Plan including Lake Creek.~~Recommend the preliminarily suitable 2.18-mile Lake Creek segment for congressional designation in the NWSRS under the Recreational classification in conjunction with the Payette National Forest recommendation for the remainder of the creek.~~		

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
Action 4. No similar action.	Action 4. Do not recommend the preliminarily suitable 1.52-mile Hazard Creek segment for congressional designation in the NWSRS. Idaho Department of Water Resources completed the Comprehensive Water Plan – Part B on the Little Salmon River Basin in October 2001. The comprehensive state water plan designated Hazard Creek as a Recreational River. BLM will coordinate management on this river segment with Idaho Dept. of Water Resources and Forest Service in accordance with the Memorandum of Understand with Forest Service and State of Idaho (1991), and Comprehensive Water Plan. BLM will coordinate management of the segment with the Idaho Department of Water Resources and protective management will be provided on the BLM administered lands in accordance with the following guidelines: • Approve no actions altering the free-flowing nature of the suitable segment through impoundments, diversions, channeling or riprapping.	**Action 4.** Recommend the preliminarily suitable 1.52-mile Hazard Creek segment for congressional designation in the NWSRS under the Recreational classification, provided that the Payette National Forest also finds the upstream Hazard Creek segment on Forest Service-administered lands suitable~~Same as Alternative B~~.	**Action 4.** ~~No similar action.~~Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
	• Approve no actions that will measurable diminish the stream segment's identified outstandingly remarkable value(s). • Approve no actions that will modify the setting or level of development of the suitable river segment to a degree that will change its identified Recreational classification. ~~Recommend the preliminarily suitable 1.52-mile Hazard Creek segment for congressional designation in the NWSRS under the Recreational classification, provided that the Payette National Forest also finds the upstream Hazard Creek segment on Forest Service-administered lands suitable.~~		
Action 5. No similar action.	Action 5. Do not recommend the preliminarily suitable 1.64-mile Hard Creek segment for congressional designation in the NWSRS. Idaho Department of Water Resouces completed the Comprehensive Water Plan – Part B on the Little Salmon River Basin in October 2001. The comprehensive state water plan designated Hard Creek as a Recreational River. BLM will	**Action 5.** Recommend the preliminarily suitable 1.64-mile Hard Creek segment for congressional designation in the NWSRS under the Recreational classification, provided that the Payette National Forest also finds the upstream Hard Creek segment on Forest Service-administered lands suitable.~~Same as Alternative B~~.	**Action 5.** ~~No similar action~~Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
	coordinate management on this river segment with Idaho Dept. of Water Resources and Forest Service in accordance with the Memorandum of Understanding with Forest Service and State of Idaho (1991), and Comprehensive Plan. BLM will coordinate management of the segment with the Idaho Department of Water Resources and protective management will be provided on BLM administered lands in accordance with the following guidelines: • Approve no actions altering the free-flowing nature of the suitable segment through impoundments, diversions, channeling or riprapping. • Approve no actions that will measurable diminish the stream segment's identified outstandingly remarkable value(s). • Approve no actions that will modify the setting or level of development of the suitable river segment to a degree that will change its identified Recreational classification.		

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
	~~Recommend the preliminarily suitable 1.64-mile Hard Creek segment for congressional designation in the NWSRS under the Recreational classification, provided that the Payette National Forest also finds the upstream Hazard Creek segment on Forest Service-administered lands suitable.~~		
Objective 3. No similar objective.	**Objective 3. Coordinate with Payette National Forest and Idaho Department of Water Resources for suitability determinations of streams common to BLM and Forest Service in accordance with the Memorandum of Understand with Forest Service and State of Idaho (1991).**	**Objective 3. Same as Alternative B.**	**Objective 3. No similar objective.**
Action 1. No similar action.	**Action 1.** Within one year of signing ROD, coordinate with Payette National Forest and Idaho Department of Water Resources regarding suitability determinations of Hazard Creek and Hard Creek.	**Action 1.** Same as Alternative B.	**Action 1.** No similar action.
WILDERNESS AND WILDERNESS STUDY AREAS **Goal: Manage wilderness areas and WSAs to maintain wilderness characteristics.**			
Objective 1. Manage wilderness areas to maintain wilderness characteristics.	**Objective 1. Same as Alternative A.**	**Objective 1. Same as Alternative A.**	**Objective 1. Same as Alternative A.**

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
Action 1. Manage 750 acres of the Frank Church/River of No Return Wilderness per the Wilderness Act.	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.
Objective 2. Manage WSAs to maintain wilderness characteristics.	**Objective 2. Same as Alternative A.**	**Objective 2. Same as Alternative A.**	**Objective 2. Same as Alternative A.**
Action 1. Manage 5,571 acres of the Marshall Mountain WSA and the 6,463 acres of Snowhole Rapids WSA under the BLM's Interim Management Policy for Lands Under Wilderness Review.	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.
Action 2. No similar action.	**Action 2.** Should WSAs be released from wilderness consideration by Congress, manage BLM lands within the Snowhole Rapids WSA in conformance with the Lower Salmon River Scenic SRMA, under VRM Class I and semiprimitive nonmotorized ROS, as closed to mineral location, and as closed to mineral leasing under the Lower Salmon River Withdrawal and VRM 1. Manage BLM lands within the Marshall Mountain WSA to conform with VRM Class II and semiprimitive motorized ROS, as open to mineral location, as open to mineral leasing with NSO restrictions (on all acres), and as open to mineral leasing with CSU restrictions (only on 74 acres).	**Action 2.** Same as Alternative B.	**Action 2.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
WATCHABLE WILDLIFE VIEWING SITES **Goal: Maintain or enhance wildlife habitats and opportunities for wildlife viewing areas.**			
Objective 1. Manage wildlife viewing areas in a manner that will maintain or improve habitat conditions while providing the public with increased recreational opportunities for viewing wildlife.	**Objective 1. Same as Alternative A.**	**Objective 1. Same as Alternative A.**	**Objective 1. Same as Alternative A.**
Action 1. Implement actions on BLM lands to maintain or improve wildlife habitat resources and provide wildlife viewing opportunities for the existing areas: Lower Salmon River Canyon (87 miles); Middle Salmon River Canyon (80 miles); Snake River in Hells Canyon (68 miles); and Craig Mountain WMA (24,884 acres). Support opportunities to coordinate with other federal, state, and private parties in the above areas.	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.
Action 2. No similar action.	**Action 2.** Support management efforts that designate new high value wildlife viewing areas for the public.	**Action 2.** Same as Alternative B.	**Action 2.** Same as Alternative B.
Action 3. No similar action.	**Action 3.** Support efforts that provide information and educational material that enhance wildlife viewing opportunities and enjoyment.	**Action 3.** Same as Alternative B.	**Action 3.** Same as Alternative B.
Action 4. No similar action.	**Action 4.** Promote opportunities to cooperatively manage high value areas	**Action 4.** Same as Alternative B.	**Action 4.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
	for viewing wildlife with partners, such as the Idaho Department of Fish and Game (Red River WMA) and the Nez Perce National Forest in the upper South Fork of the Clearwater River.		
NATIVE AMERICAN TRIBAL USES – SOCIAL AND ECONOMIC **Goal: Manage natural and cultural resources consistent with treaty and trust responsibilities to Native American tribes.**			
Objective 1. Maintain and, where possible, improve natural and cultural resource conditions to enhance opportunities to exercise Native American traditional uses.	**Objective 1. Same as Alternative A.**	**Objective 1. Same as Alternative A.**	**Objective 1. Same as Alternative A.**
Action 1. Consult with Native American tribes to identify culturally significant plants, animals, fish, and important habitats.	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.
Action 2. Consult with Native American tribes and allow collection of vegetal resources consistent with other resource goals/objectives.	**Action 2.** Same as Alternative A.	**Action 2.** Same as Alternative A.	**Action 2.** Same as Alternative A.
Action 3. No similar action.	**Action 3.** Incorporate important habitat information into monitoring protocols to assess habitat conditions.	**Action 3.** Same as Alternative B.	**Action 3.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
PUBLIC SAFETY – ABANDONED MINES AND HAZARDOUS MATERIALS **Goal: Protect the public and the environment from exposure to hazards associated with hazardous materials and abandoned mine lands (AML).**			
Objective 1. Reduce risks from potential hazard sites.	**Objective 1. Same as Alternative A.**	**Objective 1. Same as Alternative A.**	**Objective 1. Same as Alternative A.**
Action 1. Identify hazardous materials, solid waste, and other hazard sites.	**Action 1.** Identify AMLs, hazardous materials, solid waste, and other hazard sites.	**Action 1.** Same as Alternative B.	**Action 1.** Same as Alternative B.
Action 2. Assess level of risk at hazard sites and prioritize high-risk sites.	**Action 2.** Same as Alternative A.	**Action 2.** Same as Alternative A.	**Action 2.** Same as Alternative A.
Action 3. No similar action.	**Action 3.** Rank physical hazard sites for corrective actions.	**Action 3.** Same as Alternative B.	**Action 3.** Same as Alternative B.
Action 4. No similar action.	**Action 4.** Regularly assess recreation facilities and use areas for safety hazards and, when deemed necessary, develop and take actions to correct these hazards.	**Action 4.** Same as Alternative B.	**Action 4.** Same as Alternative B.
Action 5. No similar action.	**Action 5.** Maintain an inventory of AMLs and hazardous material sites with site files and databases.	**Action 5.** Same as Alternative B.	**Action 5.** Same as Alternative B.
Action 6. No similar action.	**Action 6.** Correct physical safety hazards and cleanup hazardous materials sites.	**Action 6.** Same as Alternative B.	**Action 6.** Same as Alternative B.
Objective 2. Whenever practicable or possible, mitigate newly discovered or reported physical and chemical hazards in a timely manner to ensure visitor or public	**Objective 2. Same as Alternative A.**	**Objective 2. Same as Alternative A.**	**Objective 2. Same as Alternative A.**

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
safety.			
Action 1. Newly discovered or reported hazards are to be investigated and corrected or mitigated within 120 days using standard procedures.	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.
Action 2. All incidents of hazardous materials on public land are handled as outlined in the District's contingency plan.	**Action 2.** Same as Alternative A.	**Action 2.** Same as Alternative A.	**Action 2.** Same as Alternative A.
Objective 3. Pursue the reduction of hazards, particularly at abandoned mines and facilities on public lands, to ensure they are safe for employees and the public.	**Objective 3. Same as Alternative A.**	**Objective 3. Same as Alternative A.**	**Objective 3. Same as Alternative A.**
Action 1. Correct physical safety hazards, and cleanup hazardous materials sites on public lands.	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.	**Action 1.** Same as Alternative A.
Action 2. No similar action.	**Action 2.** Conduct cleanup and reclamation of sites in accordance with the National Oil and Hazardous Substances Pollution Contingency Plan and the Comprehensive Environmental Response, Compensation, and Liability Act.	**Action 2.** Same as Alternative B.	**Action 2.** Same as Alternative B.
Action 3. No similar action.	**Action 3.** Ensure that BLM employees who work with and around the contaminated and hazard areas are properly trained and equipped.	**Action 3.** Same as Alternative B.	**Action 3.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
Objective 4. Ensure that the remedy at closed/remediated sites remains protective of human health, welfare, and/or environment where hazardous substances remain.	**Objective 4. Same as Alternative A.**	**Objective 4. Same as Alternative A.**	**Objective 4. Same as Alternative A.**
Action 1. Use ACEC designation at Elk City Landfill to protect significant or at-risk closed sites where potentially hazardous substances remain at the site.	**Action 1.** Note the location of closed landfills in the public land records.	**Action 1.** Same as Alternative B.	**Action 1.** Same as Alternative B.
Action 2. Use NWSRS withdrawals at BlackHawk Bar and Riggins Landfills to protect significant or at-risk closed sites where potentially hazardous substances remain at the site.	**Action 2.** Maintain and preserve all available files and information about closed landfills and closed/remediated sites.	**Action 2.** Same as Alternative B.	**Action 2.** Same as Alternative B.
Action 3. No similar action.	**Action 3.** Monitor sites where hazardous substances remain following written monitoring plans to ensure corrective actions are protective.	**Action 3.** Same as Alternative B.	**Action 3.** Same as Alternative B.
Action 4. No similar action.	**Action 4.** At a minimum of every five years, review the performance of corrective actions to ensure the corrective actions remain effective.	**Action 4.** Same as Alternative B.	**Action 4.** Same as Alternative B.
Action 5. No similar action.	**Action 5.** All actions authorizing the use of or potential disturbance of closed and remediated sites where potentially hazardous substances remain at the site will comply with	**Action 5.** Same as Alternative B.	**Action 5.** Same as Alternative B.

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
	Federal and State regulations, and where appropriate, special stipulations will be developed as part of the permit, lease, plan, or other action to assure human and natural resource safety.		
Action 6. No similar action.	**Action 6.** Closed and remediated sites with hazardous substances remaining at the site will be restricted: • Restricted -with NSOs (**Appendix J**, Mineral Leasing Surface Use Stipulations [see Volume II~~I~~]); • Closed to motorized vehicles where appropriate at significant sites; and • ~~with special conditions requiring no disturbance of the hazardous materials or stipulations to e~~Ensure actions ~~that they~~ are ~~properly~~ appropriately handled and bonded. Present significant sites are Riggins Landfill, Blackhawk Bar Landfill, Elk City Landfill, Elk City Heap, and Buffalo Gulch Heap.	**Action 6.** Closed and remediated sites with hazardous substances remaining at the site will be closed under the mineral laws or restricted with NSOs with special conditions requiring no disturbance of the hazardous materials or ensuring that they are properly handled and bonded.	**Action 6.** Same as Alternative B.
Objective 5. Safeguard human health, prevent environmental damage, and limit BLM liability from hazards.	**Objective 5. Same as Alternative A.**	**Objective 5. Same as Alternative A.**	**Objective 5. Same as Alternative A.**

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
Action 1. All actions authorizing the use of or potential for, hazardous materials on public lands will comply with federal and state regulations.	**Action 1.** All actions authorizing the use of or potential use of hazardous materials on public lands will comply with federal and state regulations, and where appropriate, special stipulations will be developed as part of the permit, lease, plan, or other action to assure human and natural resource safety.	**Action 1.** All actions authorizing the use of or potential use of hazardous materials on public lands or uses at an identified potential hazard site will comply with federal and state regulations, and where appropriate, special stipulations will be developed as part of the permit, lease, plan, or other action to assure human and natural resource safety.	**Action 1.** Same as Alternative B.
Action 2. Authorized actions related to land or minerals with hazardous materials are to be reviewed periodically for compliance with federal and state regulations.	**Action 2.** Authorized actions related to land or minerals with identified hazards or hazardous materials are to be reviewed periodically for compliance with federal and state regulations and with special stipulations developed as part of the permit, lease, plan, or other action.	**Action 2.** Same as Alternative B.	**Action 2.** Same as Alternative B.
Action 3. No similar action.	**Action 3.** Exchange or disposal of lands with hazardous materials can be done only with Potentially Responsible Parties.	**Action 3.** Same as Alternative B.	**Action 3.** Same as Alternative B.
Action 4. No similar action.	**Action 4.** Do not permit unauthorized treatment, storage, or disposal of hazardous materials on public lands and take corrective actions on all unauthorized sites found.	**Action 4.** Same as Alternative B.	**Action 4.** Same as Alternative B.
Action 5. No similar action.	**Action 5.** Sites with significant known hazardous conditions will be restricted:	**Action 5.** Sites with significant identified hazardous materials or	**Action 5.** Sites with hazardous materials will be restricted with NSOs

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
	• Restricted with NSOs (**Appendix J**, Mineral Leasing Surface Use Stipulations [see Volume II~~I~~]); • Closed to motorized vehicles where appropriate; and • Ensure actions are appropriately handled and bonded. Present significant known sites are Riggins Landfill, Blackhawk Bar Landfill, Elk City Landfill, Elk City Heap, and Buffalo Gulch Heap.	significant corrective actions ~~will~~ may be closed under the mineral laws and hazard sites will be restricted with NSOs (**Appendix J,** Mineral Leasing Surface Use Stipulations [see Volume II~~I~~]) with special conditions requiring no disturbance of the hazardous materials or ensuring that they are properly handled and bonded.	(**Appendix J**, Mineral Leasing Surface Use Stipulations [see Volume II~~I~~]) with special conditions requiring no disturbance of the hazardous materials or insuring that they are properly handled and bonded.
SOCIAL AND ECONOMIC CONDITIONS **Goal: Provide varied social and economic opportunities through multiple use management.**			
Objective 1. No similar objective.	**Objective 1. Develop sustainable land uses and management strategies that contribute to the social and economic well being of both local communities and the nation.**	**Objective 1. Same as Alternative B.**	**Objective 1. Same as Alternative B.**
Action 1. No similar action.	**Action 1.** Provide a predictable supply of goods and services within sustainable limits of the ecosystem that help meet public demand.	**Action 1.** Same as Alternative B.	**Action 1.** Same as Alternative B.
Action 2. No similar action.	**Action 2.** Provide a variety of recreational and leisure opportunities for the public's enjoyment.	**Action 2.** Same as Alternative B.	**Action 2.** Same as Alternative B.
Objective 2. No similar objective.	**Objective 2. Work cooperatively with business leaders, community**	**Objective 2. Same as Alternative B.**	**Objective 2. Same as Alternative B.**

Table 2-1
Description of Alternatives A, B, C, and D *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
	groups and the Nez Perce Tribe to make economic opportunities available on public lands.		
Action 1. No similar action.	**Action 1.** Make contracts for services and sale of products available as need and conditions permit.	**Action 1.** Same as Alternative B.	**Action 1.** Same as Alternative B.
Action 2. No similar action.	**Action 2.** Create public and private partnerships to achieve shared economic objectives of providing employment and income to local communities while benefiting ecosystem health.	**Action 2.** Same as Alternative B.	**Action 2.** Same as Alternative B.

2.7 SUMMARY COMPARISON OF IMPACTS

Table 2-2 (Summary of Effects by Alternative) provides a summary of the impacts on the human and natural environment in terms of environmental, social, and economic consequences that are projected to occur from implementing the proposed alternatives presented in **Table 2-1**. These environmental consequences are described in detail in Chapter 4.

Table 2-2
Summary of Effects by Alternative

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
SUMMARY OF EFFECTS ON AIR QUALITY			
Air quality would be protected, although short-term impacts could occur from fire activities, fuel reduction activities, or dust generated by motorized use or mining. Smoke from regional and local wildland fires could affect Class I visibility areas within the CFO boundary. Alternative A would have the least potential acres managed by prescribed fire.	Similar to Alternative A, except: More potential acres than Alternative A would be managed by prescribed fire.	Similar to Alternative A, except: Most potential acres would be managed by prescribed fire.	Same as Alternative B.
SUMMARY OF EFFECTS ON GEOLOGY			
Management of resources is not expected to affect geology.	Same as Alternative A.	Same as Alternative A.	Same as Alternative A.
SUMMARY OF EFFECTS ON SOILS			
Greatest risk for soil compaction and erosion from cross-country travel. Impacts from timber harvest activities would potentially affect 358 acres per year. Soil-protection measures would be provided by PACFISH (BLM and Forest Service 1995) direction, best management practices (BMPs), and	No allowed cross-country travel would reduce risk of soil compaction and erosion. Impacts from timber harvest activities would potentially affect 242 acres per year. Soil protection measures would be provided by Aquatic and Riparian Management Strategy (**Appendix F**	Similar to Alternative B, except: Impacts from timber harvest activities would potentially affect 191 acres per year.	Similar to Alternative A, except: Less cross-country travel would be allowed than under Alternative A. Impacts from timber harvest activities would potentially affect 361 acres per year. Soil protection measures would be provided by Aquatic and Riparian

Table 2-2
Summary of Effects by Alternative *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
prescription watersheds direction.	[see Volume II~~I~~]), BMPs, and restoration/conservation watersheds direction (**Appendix C** [see Volume II~~I~~]).		Management Strategy (**Appendix F** [see Volume II~~I~~]), BMPs, and restoration/conservation watersheds direction (**Appendix C** [see Volume II~~I~~]).
SUMMARY OF EFFECTS ON WATER RESOURCES			
Off-road motorized travel would cause soil erosion and sediment delivery to streams. More riparian area protection would occur through RHCA management than Alternatives B and D. Provides least emphasis on increasing PFC acres/miles.	Off-road motorized travel would be eliminated, reducing the potential for erosion and sediment delivery. More riparian area protection would occur through RCA management than Alternative D. Provides more emphasis on increasing PFC acres/miles than Alternative A.	Similar to Alternative B, except: Provides the most riparian area protection through RCA management. Provides most emphasis on increasing PFC acres/miles.	Similar to Alternative A, except: Provides the least riparian area protection through RCA management. Provides more emphasis on increasing PFC acres/miles than Alternative A.
SUMMARY OF EFFECTS ON VEGETATION—FORESTS			
Focus is on the production of commercial timber. ~~Highest level of treatments to maintain and improve forest vigorforest health.~~ Least emphasis on management to maintain or enhance old growth forest.	Higher level of treatments than Alternative C to maintain and improve ~~forest vigor~~ forest health. Greater emphasis on management to maintain or enhance old growth forest than Alternatives A and D.	Lowest level of treatments to maintain and improve ~~forest vigor~~forest health. Greatest emphasis on management to maintain or enhance old growth forest.	Higher level of treatments to maintain and improve ~~forest vigor~~ forest health than Alternatives B and C, lower than Alternative A. Greater emphasis to maintain or enhance old growth forest than Alternative A.

Table 2-2
Summary of Effects by Alternative *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
SUMMARY OF EFFECTS ON VEGETATION—WEEDS			
Continued cooperation through Weed Management Areas would allow for a regional approach to addressing noxious weeds. Potential for slow but steady increase in weeds under current management.	Similar to Alternative A., except: Additional protective measures and BMPs for management activities should decrease current weed populations and help avoid their further spread more than Alternative A.	Similar to Alternative B, except: Least potential for spread of weeds due to least amount of soil-disturbing activities and greatest amount of acreage managed under ACEC designation.	Similar to Alternative B, except: Greatest potential for spread of weeds due to greatest amount of soil-disturbing activities and least amount of acreage managed under ACEC designation.
SUMMARY OF EFFECTS ON VEGETATION—RANGELANDS			
Meeting Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management requires that existing native plant communities be maintained. 11,171 acres of rangeland would be open to cross-country motorized travel, creating greatest potential for disturbance of soils and vegetation, as well as increased weed spread.	Similar to Alternative A, except: May increase amount of native vegetation through emphasis management. No rangeland would be open to cross-country motorized travel, resulting in reduced soil and vegetation disturbance and weed spread from Alternative A.	Similar to Alternative B; except: Native species (seed mixes, seedlings, etc) would be used to restore ~~seedlings would be used to restore~~ and enhance composition and structure. Greater potential than Alternative B for weed occurrences to decrease.	Similar to Alternative B, except: Greater potential than Alternatives B and C for weed occurrences to increase, with 3,159 acres of rangeland open to cross-country motorized travel.

Table 2-2
Summary of Effects by Alternative *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
SUMMARY OF EFFECTS ON VEGETATION—RIPARIAN AND WETLANDS			
24,290 acres of riparian habitat would be protected as Riparian Habitat Conservation Areas. 69 miles of streams and associated riparian zones would be in prescription watersheds with stream restoration emphasis.	22,847 acres of riparian habitat would be protected as Riparian Conservation Areas. 80 miles of streams and associated riparian zones would be in restoration and conservation emphasis watersheds.	27,264 acres of riparian habitat would be protected as Riparian Conservation Areas, offering the most protection of riparian areas. 81 miles of streams and associated riparian zones would be in restoration and conservation emphasis watersheds.	20,710 acres of riparian habitat would be protected as Riparian Conservation Areas, offering the least protection of riparian areas. 65 miles of streams and associated riparian zones would be in restoration and conservation emphasis watersheds.
SUMMARY OF EFFECTS ON WILDLIFE AND SPECIAL STATUS WILDLIFE			
Least protection of special habitats through designations of ACECs, candidate wild and scenic river segments, WSAs, and existing wilderness. Highest level of potential disturbance through timber harvest. Does not provide specific management for all special status species or emphasis for conservation or restoration.	More protection of special habitats through designations of ACECs, candidate wild and scenic river segments, WSAs, and existing wilderness than Alternative A. Lower level of potential disturbance through timber harvest than Alternatives A and D. Moderate potential for improvement in population parameters of several species based on moderate levels of ground-disturbing activities and restrictions on these activities.	Greatest protection of special habitats through designations of ACECs, candidate wild and scenic river segments, WSAs, and existing wilderness. Lowest level of potential disturbance through timber harvest. Greatest potential for improvement in population parameters of several species based on lowest levels of ground-disturbing activities and highest levels of restrictions on these activities.	Less protection of special habitats through designations of ACECs, candidate wild and scenic river segments, WSAs, and existing wilderness than Alternative B. Level of potential disturbance through timber harvest slightly less than Alternative A. Least potential for improvement in population parameters of several species based on highest levels of ground-disturbing activities and the least restrictions on these activities.

Table 2-2
Summary of Effects by Alternative *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
SUMMARY OF EFFECTS ON AQUATIC RESOURCES, FISH, AND SPECIAL STATUS FISH			
Fish habitat quality would be improved for 66,077 acres in 39 prescription watersheds.	Similar to Alternative A, except: Fish habitat quality would be improved for 64,481 acres in ~~32~~ 28 restoration watersheds and 3~~1~~ conservation watersheds.	Similar to Alternative A, except: Fish habitat quality would be improved for 68,359 acres in ~~40~~ 37 restoration watersheds and 3 conservation watersheds.	Similar to Alternative A, except: Fish habitat quality would be improved for 52,118 acres in ~~27~~ 24 restoration watersheds and ~~1~~3 conservation watersheds.
SUMMARY OF EFFECTS ON SPECIAL STATUS PLANTS			
Least potential for improvements ~~increases~~ in plant population conditions and trends due to protective and recovery measures.	More potential for improvements ~~increases~~ in plant population conditions and trends than Alternative A.	Greatest potential for improvements ~~increases~~ in plant population conditions and trends due to protective and recovery measures.	Less potential for improvements ~~increases~~ in plant population conditions and trends than Alternative B.
SUMMARY OF EFFECTS ON WILDLAND FIRE MANAGEMENT			
Appropriate management response would guide suppression efforts.	Same as Alternative A.	Same as Alternative A.	Same as Alternative A.
Wildland fire use would be implemented in all Fire Management ~~Units~~ Areas as NEPA and Wildland Fire Implementation Plans are completed. Currently, one Fire Management ~~Unit~~ Area (Craig Mountain) has NEPA completed.	Wildland fire use would be limited compared to Alternative A. It would be restricted to portions of two Fire Management ~~Units~~Areas. This EIS would be the implementing NEPA document for wildland fire use.	Wildland fire use would be implemented in all Fire Management ~~Units~~ Areas as NEPA and Wildland Fire Implementation Plans are completed. This EIS would be the implementing NEPA document for wildland fire use.	Wildland fire use would be limited compared to Alternative A. It would be allowed in all Fire Management ~~Units~~Areas, however it would be restricted to areas without commercial forestry or grazing. This EIS would be the implementing NEPA document for wildland fire use.

Table 2-2
Summary of Effects by Alternative *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
Prioritizing areas for fuel treatment according to WUI and FRCC status would reduce risk in the WUI and potentially reduce FRCC where treatments occur. This prioritization would result in treating the most affected vegetation types and promote restoration in these areas.	Prioritizing areas for treatment according to hazard in WUI would result in reduced risk in priority areas. This alternative would likely result in substantially less WUI fuels reduction than Alternative A (see below).	Prioritizing areas for treatment according to hazard in WUI would result in reduced risk in priority areas. This alternative would likely result in substantially less WUI fuels reduction than Alternative A (see below).	Prioritizing areas for treatment according to hazard in WUI would result in reduced risk in priority areas. This alternative would likely result in slightly more WUI fuels reduction than Alternative A (see below).
	Prioritizing treating FRCC 2 and 3 outside WUI would result in treating the most affected vegetation types and promote restoration in these areas.	Prioritizing treating FRCC 2 and 3 outside WUI would result in treating the most affected vegetation types and promote restoration in these areas.	Prioritizing treating FRCC 2 and 3 outside WUI would result in treating the most affected vegetation types and promote restoration in these areas.
Forest management activities generally contribute to accomplishing fuel reduction goals. Alternative A established a decadal area treatment (3,576 acres) higher than all alternatives except Alternative D (3,610 acres). The difference between these alternatives is less than one percent. Fuel management treatments will also occur beyond the commercial forest base. ~~Forest management activities on a commercial forest base of 35,757 acres would result in the largest amount of fuels reduction and biomass utilization due to higher allowable sale quantity (6,600 thousand board feet [MBF] annually).~~	Forest management activities generally contribute to accomplishing fuel reduction goals. Alternative B established a commercial forest base of 40,598 acres, but a decadal area treatment of 2,420 acres, which is 32 percent less than Alternative A Fuel management treatments will also occur beyond the commercial forest base.~~Forest management activities on a commercial forest base of 40,598 acres would result in 53% less fuels reduction and biomass utilization than Alternative A (PSQ of 3,129 MBF annually).~~	Forest management activities generally contribute to accomplishing fuel reduction goals. Alternative C established a commercial forest base of 34,611 acres, but a decadal area treatment of 1,910 acres, which is 47 percent less than Alternative A. Fuel management treatments will also occur beyond the commercial forest base.~~Forest management activities on a commercial forest base of 34,611 acres would result in 53% less fuels reduction and biomass utilization than Alternative A (PSQ of 3,101 MBF annually).~~	Forest management activities generally contribute to accomplishing fuel reduction goals. Alternative D established a commercial forest base of 45,190 acres, but a decadal area treatment of 3,610 acres, which is less than one percent higher than Alternative A. Fuel management treatments will also occur beyond the commercial forest base.~~Forest management activities on a commercial forest base of 45,190 acres would result in 27% less fuels reduction and biomass utilization than Alternative A (PSQ of 4,823 MBF annually).~~

Table 2-2
Summary of Effects by Alternative *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
The potential WUI 5-year treatment of FRCC 2 and FRCC 3 lands is 54,048 acres and could result in the following changes to FRCC: Current FRCC FRCC 1: 10% FRCC 2: 33% FRCC 3: 57% Plan Life FRCC Potential Change FRCC 1: ~~11~~20% - ~~14~~40% FRCC 2: ~~32~~12% - ~~40~~33% FRCC 3: ~~51~~29% - 5~~5~~0%	The potential WUI 5-year treatment of FRCC 2 and FRCC 3 lands would be 33,766 acres, 32% less than Alternative A, and could result in the following changes to FRCC: Plan Life FRCC Potential Change FRCC 1: 17% - 38~~22~~% FRCC 2: 12% - 33%~~37%~~ FRCC 3: 29% - 50%~~41%~~	The potential WUI 5-year treatment of FRCC 2 and FRCC 3 would be 16,883 acres, 66% less than Alternative A, and could result in the following changes to FRCC: Plan Life FRCC Potential Change FRCC 1: 15% FRCC 2: 35% FRCC 3: 50%	The potential WUI 5-year treatment of FRCC 2 and FRCC 3 lands would be 50,650 acres, 2% more than Alternative A, and could result in the following changes to FRCC: Plan Life FRCC Potential Change FRCC 1: 28% FRCC 2: 39% FRCC 3: 33%
SUMMARY OF EFFECTS ON CULTURAL RESOURCES			
Potential impacts to cultural resources from ground-disturbing activities and cross-country motorized travel would be greatest under this alternative.	Eliminates cross-country motorized travel resulting in less potential for effects on cultural resources. Moderate level of ground-disturbing activities.	Eliminates cross-country motorized travel resulting in less potential for effects on cultural resources. Lowest level of ground-disturbing activities.	Less area than Alternative A would be open to cross-country motorized travel. Similar levels of ground-disturbing activities to Alternative A.
SUMMARY OF EFFECTS ON PALEONTOLOGICAL RESOURCES			
Risk of impacts to paleontological resources would be very low due to low potential for occurrence of these resources.	Same as Alternative A.	Same as Alternative A.	Same as Alternative A.

Table 2-2
Summary of Effects by Alternative *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
SUMMARY OF EFFECTS ON VISUAL RESOURCES			
Manages scenic quality somewhat less than Alternative C.	Manages scenic quality slightly less or similarly to Alternative A.	Scenic quality is most intensely managed.	Least-intensive management of scenic quality.
SUMMARY OF EFFECTS ON FOREST PRODUCTS			
Production of forest products would continue at current levels with an ASQ of 6,600 MBF.	PSQ of 3,129 MBF annually (a 42% decrease from current management) would provide less opportunity to obtain forest products from BLM-administered lands than Alternatives A or D, but slightly more opportunities than Alternative C.	PSQ of 3,101 MBF annually (a 47% decrease from current management) would provide the least opportunity to obtain forest products from BLM-administered lands of all the alternatives.	PSQ of 4,823 MBF annually (a 32% decrease from current management) would provide less opportunity than Alternative A to obtain forest products from BLM-administered lands, but more opportunities than Alternatives B or C.
SUMMARY OF EFFECTS ON LIVESTOCK GRAZING			
Approximately ~~7,204~~7,200 AUMs on 122,732 acres are currently allocated for livestock grazing. Continued implementation of BLM Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management would prevent or minimize environmental degradation and ensure good long-term site productivity, properly functioning conditions for riparian and wetland areas, ecologically healthier vegetation communities, improved water quality, and desirable native and nonnative plant and animal species and habitats.	Similar to Alternative A, except: Approximately 6,263~~54~~ AUMs on 105,619 acres would be allocated for livestock grazing, a 13% decrease in AUMs from current management.	Similar to Alternative A, except: Approximately 6,020 AUMs on 101,350 acres would be allocated for livestock grazing, a 16% decrease in AUMs from current management. Alternative C would provide the least opportunities for grazing.	Similar to Alternative A, except: Approximately 8,549~~09~~ AUMs on 135,850 acres would be allocated for livestock grazing, a 19% increase in AUMs from current management. Alternative D would the most provide opportunities for grazing.

Table 2-2
Summary of Effects by Alternative *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
SUMMARY OF EFFECTS ON MINERALS			
16% of BLM lands currently withdrawn from mining. 10% closed to mineral leasing. Wilderness area and WSAs closed to mineral material sale. NSO and CSU restrictions are applied on a case-by-case basis, resulting in the least restrictions (the most areas open to unrestricted mineral exploration and development).	Similar to Alternative A, except: More NSO and CSU restrictions than Alternatives A and D, but less than Alternative C. NSO lease stipulations would occur on 30% of BLM public lands and CSU on 29%.	Similar to Alternative A, except: Most NSO and CSU restrictions (the least areas open to unrestricted mineral exploration and development). NSO lease stipulations would occur on 48% of BLM public lands and CSU on 40%.	Similar to Alternative A, except: More NSO and CSU restrictions than Alternative A, but less than Alternatives B and C. NSO lease stipulations would occur on 24% of BLM public lands and CSU on 22%.
SUMMARY OF EFFECTS ON RECREATION			
Recreation would be intensely managed in three SRMAs. Most emphasis on motorized recreation opportunities and includes the most acreage for OHV cross-country travel (see Transportation and Travel Management, below). Minor displacement of recreational activities due to surface-disturbing activities such as vegetation treatments and mineral development.	Recreation would be more intensely managed and the current setting protected through designation of an additional two SRMAs. Best meets the goal of providing a broad spectrum of recreation settings and opportunities. Greater potential for displacement of recreational activities due to surface-disturbing activities than Alternative C, but less than Alternatives A or D.	Similar to Alternative B, except: Emphasizes less motorized recreation in more primitive settings. Least displacement of recreational activities due to less surface-disturbing activities.	Similar to Alternative B, except: More emphasis on motorized recreation opportunities than Alternatives B and C. Greatest displacement of recreational activities due to surface-disturbing activities, which could further reduce the quality of recreational experiences.

Table 2-2
Summary of Effects by Alternative *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
SUMMARY OF EFFECTS ON RENEWABLE ENERGY			
Least restrictions on renewable energy development. No net change in availability of biomass fuel from fuel treatments and timber harvesting activities.	More restrictions on renewable energy development than Alternatives A and D, and less than Alternative C. Greater opportunities for biomass (due to forest vegetation acres treated) than Alternative C, and less than Alternatives A and D.	Most restrictions on renewable energy development. Fewest opportunities for biomass (due to least forest vegetation acres treated).	More restrictions on renewable energy development than Alternative A, and less than Alternatives B and C. Greater opportunity for biomass (due to more forest vegetation acres treated) than Alternatives B and C, and less than Alternative A.
SUMMARY OF EFFECTS ON TRANSPORTATION AND TRAVEL MANAGEMENT			
Travel management would be the least restrictive. 85,308 acres would be Open to cross-country motorized travel. Within Limited areas, least density of designated routes. Alternative A would have the most potential for resource impacts and user conflicts.	Travel management would be the most restrictive. No areas would be Open to cross-country motorized travel (except snowmobiles). Within Limited areas, greater density of designated routes than Alternative A, but less density than Alternative D. Alternative B would best manage travel, roads, and trails to provide access and recreational opportunities, while minimizing resource impacts and user conflicts.	Similar to Alternative B, except: Alternative C would have more potential for resource impacts and user conflicts than Alternative B, and less than Alternatives A and D.	Travel management would be more restrictive than Alternative A but less restrictive than Alternatives B and C. 23,189 acres would be Open to cross-country motorized travel, a 74% decrease from current management. Within Limited areas, greatest density of designated routes. Alternative D would have more potential for resource impacts and user conflicts than Alternatives B and C, and less than Alternative A.

Table 2-2
Summary of Effects by Alternative *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
SUMMARY OF EFFECTS ON LANDS AND REALTY			
21,213 acres where realty authorizations prohibited. Alternative A is the only alternative that would specifically prohibit realty authorizations in ACECs. Retention of 96,465 acres of land and 35,361 acres available for disposal (12,000 acres of Land and Water Conservation Fund lands not available for disposal)	750 acres where realty authorizations prohibited. More land retention (113,728 acres) and less area available for disposal (30,098 acres) than Alternative A.	Same as Alternative B.	Same as Alternative B.
SUMMARY OF EFFECTS ON AREAS OF CRITICAL ENVIRONMENTAL CONCERN AND RESEARCH NATURAL AREAS			
Special management provisions would be applied to 18% of the BLM-administered lands (25,600 acres covered by 10 ACECs), leading to more ACECs than Alternative D, and fewer than Alternatives B and C.	Special management provisions would be applied to ~~24~~25% of the BLM-administered lands (~~34,528~~36,153 acres covered by 12~~11~~ ACECs), leading to more ACECs than Alternatives A and D, and fewer than Alternative C.	Special management provisions would be applied to 42% of the BLM-administered lands (60,661 acres covered by 15 ACECs), leading to the most ACECs.	Special management provisions would be applied to 17% of the BLM-administered lands (23,924 acres covered by 8 ACECs), leading to the fewest ACECs.
SUMMARY OF EFFECTS ON NATIONAL TRAILS			
No anticipated impacts to 21 miles of National Trails, with no change in protection and enhancement of National Trails.	Similar to Alternative A, except increased protection and enhancement of National Trails through designation of Upper Lolo Creek ACEC.~~Same as Alternative A.~~	Same as Alternative B.~~Similar to Alternative A, except increased protection and enhancement of National Trails through designation of Upper Lolo Creek ACEC.~~	Same as Alternative A.

Table 2-2
Summary of Effects by Alternative *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
SUMMARY OF EFFECTS ON WILD AND SCENIC RIVERS			
Protective management of 112 miles of the Lower Salmon River and 29 additional miles of suitable river segments along Lolo, Lake, Hazard and Hard Creeks to protect free-flowing and outstandingly remarkable values. Tentative designations could limit or preclude certain activities, uses, or authorizations on public lands.~~Continuing interim management of 112 miles of eligible river segments to protect free-flowing and outstandingly remarkable values. No miles of suitable rivers or river segments recommended for inclusion in the NWSRS.~~	Same as Alternative A except management of 29 miles of preliminarily suitable segments would be coordinated with the Idaho Department of Water Resources to protect river values~~Continuing interim management of 112 miles of eligible river segments to protect free-flowing and outstandingly remarkable values. 29 miles of suitable rivers or river segments recommended for inclusion in the NWSRS. Tentative designations could limit or preclude certain activities, uses, or authorizations~~.	Same as Alternative B. In addition all 29 miles of suitable rivers or river segments would be recommended for inclusion in the NWSRS which would increase the segments chances of becoming designated. ~~Same as Alternative B.~~	~~Similar to Alternative B, except 24 miles of suitable rivers or river segments recommended for inclusion in the NWSRS~~Same as Alternative B.
SUMMARY OF EFFECTS ON WILDERNESS AND WILDERNESS STUDY AREAS			
Protective management of one Wilderness (750 acres) and two WSAs (12,034 acres) would continue, including discretionary and nondiscretionary closures to minerals, prohibiting motorized and mechanized vehicles in wilderness areas, excluding realty authorizations and managing wilderness areas and WSAs to maintain wilderness characteristics.	Same as Alternative A.	Same as Alternative A.	Same as Alternative A.

Table 2-2
Summary of Effects by Alternative *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
SUMMARY OF EFFECTS ON WATCHABLE WILDLIFE VIEWING SITES			
Continued management of four watchable wildlife areas on 24,435 acres, with no change in efforts to designate new areas, provide information, and cooperatively manage areas.	Similar to Alternative A, except increased efforts to designate new areas, provide information, and cooperatively manage areas.	Same as Alternative B.	Same as Alternative B.
SUMMARY OF EFFECTS ON NATIVE AMERICAN TRIBAL USES			
No changes in availability, access, or land use that would affect the natural resource base used by the tribes, including fish, game, plants, minerals, and springs would occur, so no net changes in the natural resource base are expected. In time recreational uses and public presence in some areas could affect the availability of resources, disturb culturally significant areas and inhibit religious use.	Vegetation treatment programs and animal habitat enhancement could enhance traditional tribal uses for those species and habitats. However, temporary, seasonal, and permanent closures of roads and other areas for treatment programs, public health and safety, or other reasons, while protecting resources, could also limit tribal access to and availability of resources in those areas. Increased recreational uses and public presence in some areas could affect the availability of resources, disturb culturally significant areas, and inhibit religious use.	Same as Alternative B.	Same as Alternative B.

Table 2-2
Summary of Effects by Alternative *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
No changes to access or impacts on cultural resource sites, ethnographic resources, or traditional cultural properties are expected.	Ground disturbances, possible erosion, and increased public access associated with most resource management objectives could directly affect culturally significant areas and tribal use. Temporary, seasonal, and permanent closures of roads and other areas for treatment programs or other reasons, while protecting resources from additional public access and potential vandalism and looting, could also limit tribal access to and availability of resources in those areas. Additional efforts above and beyond those of current management to increase tribal consultations could better protect tribal use, tribal access, and cultural resources. Alterations in the setting of traditional cultural properties and ethnographic resource collection areas by promoting incompatible uses, such as harvesting, prescribed fires, VRM designations, and increased recreational and motorized uses, could affect tribal use and access.	Same as Alternative B.	Same as Alternative B.

Table 2-2
Summary of Effects by Alternative *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
No changes in current management are expected. As more people use the CFO, more demands combined with static management would decrease the general ecosystem health.	Efforts to maintain native plants, animals, and habitats in general could enhance the general ecosystem, water quality, and riparian areas for tribal use.	Same as Alternative B.	Same as Alternative B.
No changes in land tenure or land use are expected. No net changes or impairments to the future exercise of treaty rights are expected.	New restrictions on actions that would otherwise increase the likelihood of impacts on tribal use.	Same as Alternative B.	Same as Alternative B.
SUMMARY OF EFFECTS ON PUBLIC SAFETY—ABANDONED MINES AND HAZARDOUS MATERIALS			
No change in potential protection of public health and safety through inventories, corrective actions, closures, and other mitigative measures aimed cleaning up AMLs and hazardous materials sites.	Increase in inventories, corrective actions, closures, and other mitigative measures over Alternatives A and D with hazardous materials sites closed to motorized vehicles.	Increase in inventories, corrective actions, closures, and other mitigative measures over Alternatives A and B. Alternative C would use ACEC designations to protect significant and at-risk closed and remediated sites.	Increase in inventories, corrective actions, closures, and other mitigative measures over Alternative A.

Table 2-2
Summary of Effects by Alternative *(continued)*

Alternative A (Current Management)	Alternative B (Preferred Alternative)	Alternative C	Alternative D
SUMMARY OF EFFECTS ON SOCIAL AND ECONOMIC CONDITIONS			
Recreation connected with amenities and resources on CFO lands continues (and increases with population growth) to contribute to local economies. Variations across alternatives for levels of PSQ and AUMs and variations in NSO and CSU restrictions could result in small, localized changes to numbers of jobs in the timber, construction, ranching and mining industries. Levels of restoration actions also vary among alternatives resulting in small, localized changes to number of jobs in the contracting and construction industries.	Same as Alternative A	Same as Alternative A	Same as Alternative A

CHAPTER 3

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CHAPTER 3 – AFFECTED ENVIRONMENT

3.1 INTRODUCTION

This chapter provides a description of the existing biological, physical, and socioeconomic characteristics, including human uses, that could be affected by implementing the action alternatives for this RMP/EIS, as described in Chapter 2. Information from broad-scale assessments were used to help set the context for the planning area. The information and direction for BLM resources has been further broken down into fine-scale assessments and information where possible. Specific aspects of each resource discussed in this section (e.g., weeds, fire, OHV use) were raised during the public and agency scoping process. The level of information presented in this chapter is commensurate with and sufficient to assess potential effects of the action alternatives in Chapter 4.

Acreage figures and other numbers used are approximate projections; readers should not infer that they reflect exact measurements or precise calculations. Acreages were calculated using GIS technology, and there may be slight variations in total acres between resources.

The planning area for the Cottonwood RMP is the CFO boundary and includes all lands regardless of jurisdiction. However, the BLM makes decisions on only those lands under its jurisdiction (on BLM-administered lands).

3.2 RESOURCES

This section contains a description of the existing biological and physical resources of the CFO and follows the order of topics addressed in Chapter 2, as follows:

- Air quality
- Geology
- Soil
- Water resources
- Vegetation communities
- Fish and wildlife
- Special status species
- Wildland fire ecology and management
- Cultural resources
- Paleontological resources
- Visual resources

3.2.1 Air Quality

Airsheds with the CFO have been identified as part of the larger Interior Columbia Basin Ecosystem (Forest Service 1997), which is primarily composed of portions of Idaho, Montana, Nevada, Oregon, and Washington. An airshed is "a geographical area in which atmospheric characteristics are similar, such as mixing height and transport winds" (Montana/Idaho Airshed Group 2005). Airshed 13 and portions of Airsheds 12A, 12B, 14, 15 and 16 have been delineated within the planning area by the Montana/Idaho Airshed Group.

In considering impacts on air quality from activities within the CFO, the US EPA air quality permitting system suggests that an analysis of air impacts should include all areas within 100 kilometers of proposed facilities and projects (EPA 1992). To be consistent with this directive, the

area of consideration for air quality impacts includes airsheds over lands within the CFO, as well as lands within a 100-kilometer (62-mile) radius of the planning area boundary.

Air quality management in the CFO is coordinated through the Montana/Idaho Airshed Group and the IDEQ, which assesses atmospheric conditions and current pollution levels before approving submitted burn plans. Air quality management in the CFO places priority on protecting human health and the environment by mitigating the impacts on air quality from wildland and prescribed fire.

Planning area air quality is generally in the "good" category of the Air Quality Index. No nonattainment areas have been designated within the CFO planning area, but particulate matter with a diameter less than 10 micrometers (PM_{10}) concentrations in the Pinehurst (Shoshone County) area, approximately ~~30~~ 50 miles north of the CFO boundary, have exceeded the PM_{10} National Ambient Air Quality levels, and the area was designated as a nonattainment area. Emission sources for PM_{10} in the Pinehurst area have been identified primarily as residential wood burning. Air quality in the Pinehurst area has improved in recent years, and the area has been documented to be in compliance with the PM_{10} National Ambient Air Quality levels, though it currently remains designated as a nonattainment area. Throughout the CFO planning area, annual average particulate matter concentrations have remained fairly constant despite an increasing population base in northern Idaho. No nonattainment areas for other criteria pollutants have been identified in the CFO. However, the Spokane PM_{10} and carbon monoxide (CO), Polson PM_{10}, Ronan PM_{10}, Missoula PM_{10} and CO, and Sanders County (Thompson Falls and vicinity) PM_{10} nonattainment areas are within the 62-mile area of consideration for the planning area.

Smoke has been identified as the primary source of air quality impact in the planning area. Air quality in the planning area is affected by the strength of local and regional sources of pollution and the meteorological conditions that disperse the pollutants. Smoke from regional and local wildland fires during the late summer can degrade air quality for extended periods. Regional wind storms can create wind-blown dust that degrades air quality during the storm. Based on long-term monitoring data, air quality is generally poorest from August through September due to increased levels of biomass burning (from the combination of wildland fires and crop field burning) and atmospheric conditions trapping pollutants.

Areas that have been identified as sensitive to air quality include nonattainment areas, Class I areas, impact zones, hospitals, airports, major transportation corridors, and population centers. There are two Class I visibility areas currently designated within the CFO boundary, namely, Hells Canyon Wilderness Area and Selway-Bitterroot Wilderness Area. There are seven Class I areas identified within the area of consideration: Sawtooth Wilderness Area, Eagle Cap Wilderness Area, Anaconda-Pintlar Wilderness Area, Mission Mountain Wilderness Area, Scapegoat Wilderness Area, the Flathead Reservation, and the Spokane Reservation.

Impact zones are considered by IDEQ and the Montana/Idaho Airshed Group to be areas where smoke is likely to be a problem because of local topography, meteorology, air quality problems, or other factors (Montana/Idaho Airshed Group 2005). Impact areas have not been designated within the CFO, but the Fernan, Pinehurst, Thompson Falls, Salmon, McCall, and Missoula impact zones have been designated within the 62-mile area of consideration.

The transportation corridors that run through the CFO and the area of consideration are US Highways 12, 95, and 195, and many state highways. There are also numerous hospitals, medical centers, and airports within the CFO planning area and the area of consideration.

PM_{10} data for the planning area have shown an improvement in air quality from 10 years ago due to reductions in sources contributing to PM_{10} events, especially during winter stagnation episodes. Annual average concentrations have remained fairly constant over the past few years despite an increasing population base in northern Idaho. Monitoring for particulate matter with a diameter of less than 2.5 micrometers ($PM_{2.5}$) started in 1999 and has fewer years of complete data compared to the PM_{10} database, which started in the late 1980s. The annual averages for $PM_{2.5}$ have shown a fairly constant level for the past several years.

3.2.2 Geology

The geology of the CFO is described in detail in the CFO Planning Area Mineral Occurrence and Development Potential Report (Tetra Tech, Inc., and Silverfields Inc. 2005). The following section was summarized from this document.

Physiography

The distinct physiographic character of the Cottonwood planning area reflects geologic differences in rock types, structures, and chemical and physical weathering processes. Mountain peaks in this area reach elevations of over 8,000 feet and are surrounded by deeply incised rivers and rugged topography. The elevation at Lewiston where the Snake River flows out of Idaho, and into Washington, is around 740 feet (there is a US Geological Survey benchmark just upriver from where the Snake and Clearwater rivers join).

The eastern portion of the planning area is in the Northern Rocky Mountain Physiographic Province. This province consists of a system of northerly trending mountains and broad upland plains. Broad plains of the Tristate Uplands form the western slope of the planning area, reaching altitudes of 3,000 to 4,000 feet. The subdued nature of this feature is related to relatively flat volcanic flows in the area. The western portion of the planning area contains rugged topography, including Hells Canyon, the deepest gorge in North America, with over 7,000 feet of topographic relief.

Geologic History and Units

The geological history of central and northern Idaho is complex and spans billions of years. The following presents significant geologic units in the planning area, in order from oldest to youngest.

The oldest rocks in the planning area are metamorphic, including a series called the Belt Super Group. The Belt Super Group, estimated at over 50,000 feet thick, consists of various rocks that have been subjected to low-grade metamorphism. This series and the rocks that intruded it occur along the northern and eastern portions of the planning area. They provide sources of mineral resources in the planning area.

Along the western edge of the planning area, the Seven Devils terrain consists of volcanic rocks, rocks that cooled from magma below the earth's surface, and overlying sedimentary rocks. The terrain is exposed throughout Hells Canyon and the Seven Devils Mountains. Within the planning area, mass earth movements are more common where flat-lying volcanic flows overlie this relatively

impermeable rock. Water saturates the surface, resulting in mass earth movements, particularly in steep topographic terrain along major river systems.

Formation of the Idaho Batholith represents a dominant episode in the geologic history of the CFO planning area. This large igneous rock exposure formed beneath the earth's surface by cooling magma. Because of its granular structure, soils that develop in the Idaho Batholith are susceptible to surface erosion.

Volcanic flows of Columbia River Basalt cover the western portion of the CFO planning area. Combined, the flows are several thousands of feet thick. Extensive six-sided, columnar features formed as the basalt cooled and now are sources of decorative stone.

More recently, alluvium from weathered and reworked material has been deposited along streams and rivers in the planning area. During and following the latest Ice Age, the streams and rivers of Idaho carried a larger volume of water than they do now, enabling them to carry more sediment. The natural, enhanced river flow and the periodic floods scoured out many of the larger river canyons and increased the downcutting and erosion of the rivers and mountains, leaving the landscape that is present today. Runoff is much lower now than during the last glacial event, creating rivers and streams that are undersized compared to the erosional features that they occupy.

3.2.3 Soils

Soil Types

Soils in the Cottonwood planning area are affected by several physical properties, including elevation (and resulting climatic conditions), topography, and parent materials. Soils occur at elevations ranging from 740 feet to more than 8,000 feet. Soils form on uplands of steep and rugged mountains and on plateaus with rolling and moderate slopes. Within the planning area, primary parent materials include the Idaho Batholith, bordering metamorphic rocks (including the Belt Super Group), and Columbia River basalts.

Throughout the southern portion of the planning area, coarse-textured, highly erodible soils form in the Idaho Batholith. These soils are concentrated east and south of the Salmon River and east of the Little Salmon River. Major tributaries that drain this region include Lake Creek, Bear Creek, Elkhorn Creek, Partridge Creek, Hazard Creek, and French Creek. Generally, tributaries occupy deeply incised, steep-walled canyons dominated by high-energy streams.

North or west of the Idaho Batholith, soils associated with the metamorphic rocks are exposed in the canyon bottoms and along lower walls of the Snake, Salmon, Little Salmon, and Clearwater Rivers. Major tributaries include Big Canyon Creek, John Day Creek, and Eagle Creek. Erosion generally results in steep-sided valley walls covered by large blocks of rock. Resulting soil types are typically medium grained and highly erodible. In the Elk City area, the South Fork of the Clearwater River and its tributaries drain a region of soils formed in similar but much older metamorphic rocks. The landforms are characterized by rounded hills and meandering stream channels. Soil types are generally similar to other metamorphic rocks found in the region.

Throughout the western portion of the planning area, soils form in thick sequences of Columbia River basalt flows and interbedded sedimentary deposits. These soils meet the western margin of the

Idaho Batholith. At one time, the basalt flows formed an extensive plateau across the region. However, erosion has since created a dissected landform of deeply incised river canyons with the uplands capped by isolated remnants of basalt.

Soils in the planning area also vary based on differences in slope profiles, which contribute directly to differences in grain size and mineralogy. Coarse-grained basalt flows break down to form relatively gentle slopes, while fine-grained basalt flows weather to almost vertical cliffs. Similarly, some basalt flows weather to coarse-grained soil, while others weather to a fine-grained soil with higher clay content.

Detailed soil surveys prepared by the US Department of Agriculture, Natural Resources Conservation Service (NRCS) are available for most of the planning area. In addition, the Nez Perce National Forest has prepared descriptions of land types, including geologic erosion factors for much of the planning area. NRCS maps identify some areas of prime farmland in the planning area. However, BLM specialists have determined that prime farmlands, as defined by the NRCS, are relatively rare on any BLM-administered lands in the planning area.

Erosion

Limited mass movement has occurred in the past on BLM-administered lands within the planning area. Landslides, slumps, and massive earth movements are influenced directly by the presence of flat-lying basalt flows overlying relatively impermeable rock units, such as portions of the Seven Devils terrain. This feature creates a water-saturated surface that is prone to mass earth movements, particularly in steep topographic terrain along major river systems. Other landslide-prone areas occur where soils are deep, topography is steep, contributing drainage is substantially large, and vegetative rooting strength is minimal. In the Payette National Forest, which borders the CFO planning area, landslide-prone areas have been documented (Dixon and Wasniewski 1998) primarily in basalts, in soil depths between two and four feet deep, on ground slopes between 55 and 70 percent, and in soils that exhibit evidence of water. The failure plane of field-verified landslides was generally below the depth of major root penetration. Fifteen percent of the landslides were associated with timber harvests. Because of similar conditions, these characteristics are likely to apply to landslide-prone areas in the CFO planning area. Limited geologic and localized erosion, caused by roads and other concentrated uses, still occurs in the planning area.

A number of factors have probably contributed to reduced soil loss from erosion since 1981, including reduced road construction and improved road construction methods, reduced timber harvesting and improved timber management practices, and positive watershed restoration efforts, including road obliteration, undersized culvert removal or replacement, and revegetation. Also contributing to reduced erosion and slight upward trends in water quality during the past decade are actions attributed to improved land management as a result of federal requirements for listed fish (ESA).

Compaction

Soil compaction occurs in response to pressure exerted by field machinery or animals. The risk for soil compaction is greatest when soils are wet. Compacted soil usually allows less water to infiltrate, resulting in greater overland flow of water for longer periods of time. The overland flow has greater energy to detach and transport soil particles, resulting in increased soil erosion. Soil compaction has

the potential to affect the long-term productivity of a site by reducing the diameter and height of a stand of trees by 6 to 25 percent over the long term. Soil texture affects the potential for soil compaction. In general, finer-grained soils can withstand less soil compaction before restricting plant roots (NRCS 1996).

Heavily grazed allotments, log landings, and permanent and temporary roads within the planning area where heavy machinery has worked in the past display some soil compaction. Related research suggests that soil compaction from heavy machinery can cause long-term effects (Froehlich and McNabb 1984; Wert and Thomas 1981).

Soils that formed from fine-grained deposits throughout the planning area are particularly susceptible to soil compaction and displacement, and shallow coarse-grained soils are generally less susceptible. Where rock fragments are at the surface, soil compaction is normally not a concern.

3.2.4 Water Resources

Surface Water

Except for a small portion along the northern boundary of the planning area that is within the Spokane River watershed, the planning area is in the Snake River Basin. The Snake River Basin extends into parts of Wyoming, Idaho, Utah, Nevada, Oregon, and Washington and ultimately drains to the Columbia River in Washington. In most of the Columbia River and Snake River Basins, stream flow is dominated by runoff from snow melt. The snowpack accumulates from late fall through spring, and the snow melt begins in spring, which typically results in an early summer surge in runoff that is sustained into mid-summer. Stream water temperatures tend to start warming up in late spring, with highest temperatures generally occurring July through August. Headwater streams are relatively steep and are controlled by bedrock and glacially derived sediments (BLM and Forest Service 1995).

Within the planning area, BLM lands occur in 10 subbasins, including two subbasins of the Snake River, four subbasins of the Clearwater River, and four subbasins of the Salmon River. The BLM lands comprise from less than 0.1-percent to 7.0 percent of total lands within the subbasins. With the exception of several drainages, ownership is often fragmented and discontinuous along streams and rivers. Total stream lengths managed by the BLM in many drainages are minimal and may be less than 0.25 mile. Most drainages with stream segments managed by the BLM occur in the western two-thirds of the planning area; there are fewer than 150 acres of BLM-administered segments in the North and Middle Forks of the Clearwater River combined.

Table 3-1 lists the distribution of the planning area and CFO lands within the watersheds of the principal streams that drain the planning area (eight-digit, or "fourth field," hydrologic unit codes). Nearly 90 percent of CFO lands are in five watersheds, and nearly 40 percent of those are in the Lower Salmon River watershed.

Table 3-1
Fourth Field Hydrologic Unit Code Watersheds in the Planning Area

Basin Name Subbasin Name	**Hydrologic Unit Code Number**	**Total Watershed Area (Square Miles)**	**BLM Land in Watershed (percent of watershed that is BLM)**
Spokane River			
St. Joe	17010304	1,860 (1,190,395 acres)	0
Lower Snake River (below Hells Canyon)			
Hells Canyon	17060101	545 (348,799 acres)	4,801 acres (1%)
Lower Snake-Asotin	17060103	711 (455,038 acres)	19,583 acres (4%)
Palouse	17060108	2,360 (1,510,394 acres)	0
Rock	17060109	962 (615,678 acres)	0
Salmon River			
Middle Salmon-Panther	17060203	1,810 (1,158,395 acres)	0
Lower Middle Fork Salmon	17060206	1,370 (876,797 acres)	0
Middle Salmon-Chamberlain	17060207	1,700 (1,087,996 acres)	10,146 acres (1%)
South Fork Salmon	17060208	1,310 (838,397 acres)	1,579 acres (<1%)
Lower Salmon	17060209	1,240 (793,597 acres)	56,021 acres (7%)
Little Salmon	17060210	582 (372,479 acres)	16,798 acres (5%)
Clearwater River			
Upper Selway	17060301	997 (638,077 acres)	0
Lower Selway	17060302	1,030 (659,197 acres)	0
Lochsa	17060303	1,180 (755,197 acres)	0
Middle Fork Clearwater	17060304	213 (136,320 acres)	93 acres (<1%)
South Fork Clearwater	17060305	1,170 (748,797 acres)	14,074 acres (2%)
Clearwater River	17060306	2,340 (1,497,594 acres)	20,692 acres (1%)
Upper North Fork Clearwater	17060307	1,320 (844,797 acres)	0
Lower North Fork Clearwater	17060308	1,170 (748,797 acres)	11 acres (<1%)
Middle Snake-Powder River			
Brownlee Reservoir	17050201	1,290 (825,597 acres)	0

Source: BLM 2004a; Seaber et al. 1987

Many watersheds are split between different jurisdictions, such as states, BLM field offices, and counties. Nearly half of the major watersheds in the planning area either straddle a state line or extend beyond the planning area into adjacent BLM field offices to the north or south. Because some natural systems are organized around, or are highly influenced by, topography and drainage patterns, cooperation among stakeholders within both large and small hydrologic units is increasingly needed in order to achieve common ecological objectives, such as protection of fisheries. Among the major watershed-based planning initiatives undertaken in recent years are the Forest Service/BLM ICBEMP, the Forest Service Inland Native Fish Strategy (INFISH), the Forest Service/BLM PACFISH, and the USFWS Bull Trout Draft Recovery Plan (USFWS 2005b), all of which are based on regional basin management because the stream systems that support both anadromous (migrating from the sea up a river to spawn) and land-locked fisheries in the northwestern US are both vast and interconnected.

Approximately 625 miles of streams and rivers flow across CFO lands, a little over half of which are perennial (flowing continuously), and the remainder of which are intermittent (flowing only at certain times of the year when receiving water from springs and melting snow) (BLM 2004a). Major rivers on CFO lands are summarized in **Table 3-2**. About 6.5 miles of rivers are listed as being state protected by the Idaho Department of Water Resources.

Table 3-2
Major Rivers on CFO Lands

River	Linear Miles that Border and/or Cross BLM Parcels
Snake River	3.05
Clearwater River	15.75
South Fork Clearwater River	5.49
Salmon River	78.75
Little Salmon River	3.82
Lolo Creek	14.48

Source: BLM 2004a

Section 303(d) of the Clean Water Act requires that waterbodies violating state or tribal water quality standards be identified and placed on a 303(d) list. Waterbodies in which the water quality consistently does not meet these criteria are identified as impaired under section 303(d) of the Clean Water Act. It is the state's responsibility to develop its own 303(d) list and to establish a TMDL for the parameter(s) causing waterbody impairment. The development and implementation of water quality restoration plans (or, in some specific instances, sufficiently stringent management measures) provide the specific action by which the BLM will meet TMDL requirements on lands under its jurisdiction.

Updated 303(d) lists are issued every two years. The 303(d) list from 1998 is the most recent list approved by the US EPA. **Figure 43** (US EPA Water Quality Limited Water Bodies) (see Volume IV of Cottonwood Draft RMP/EIS) shows the locations of the impaired water quality segments within the planning area. **Table 3-3** is a summary list of those impaired water quality segments that may have relevance to BLM management decisions because of their location relative to BLM lands, although other segments that are not listed could also be relevant. **Table 3-3** also lists the completed TMDLs and the schedule for TMDLs under development (Settlement Agreement 2002). **Appendix O**, Watershed and Stream Water Quality Conditions (see Volume III), discusses in more detail the watershed and stream water quality conditions in the watersheds containing BLM land. The US EPA has approved the Idaho 2002 Integrated Report (IDEQ 2002). The draft Idaho 2004 Integrated Report is expected to be approved in 2006. These Integrated Reports were previously referred to as 303(d) lists.

Table 3-3
303(d) Listed Waterbodies with BLM Lands in Watershed

Waterbody (Water Quality Limited Segments Number)	Boundaries	Hydrologic Unit Code Number	Pollutant(s) of Concern	Total Maximum Daily Load Status
Snake River Subbasin				
Snake River	Hells Canyon Dam to Salmon River (RM247-188)	17060101	Mercury, temperature (Oregon); temperature (Idaho)	Temperature completed 2004; mercury 2006
Divide Creek (2905)	Headwaters to Snake River	170601010201	Sediment	2007
Wolf Creek (2906)	Headwaters to Snake River	170601010301	Sediment	2007
Getta Creek (2907)	Headwaters to Snake River	170601010402	Sediment	2007
Lower Snake River Subbasin				
Snake River	Salmon River to Washington State Line	17060103	Temperature (added by EPA in 1998 and included by Washington Department of Ecology)	NA
Lower Salmon River Subbasin				
China Creek (3321)	Headwaters to Salmon River	170602090103	Sediment	2007
Deer Creek (3323)	Headwaters to Salmon River	170602090301	Sediment	2007
Cottonwood Creek (3324)	Headwaters to Salmon River	170602090403	Sediment	2007
Maloney Creek (3325)	Headwaters to Salmon River	170602090402	Bacteria, flow alteration, nutrients, sediment, temperature	2007
Deep Creek (3326)	Headwaters to Salmon River	170602090501	Bacteria, flow alteration, habitat alteration, nutrients, sediment, temperature	2007
Rice Creek (3327)	Headwaters to Salmon River	170602091701	Sediment	2007

Table 3-3
303(d) Listed Waterbodies with BLM Lands in Watershed *(continued)*

Waterbody (Water Quality Limited Segments Number)	Boundaries	Hydrologic Unit Code Number	Pollutant(s) of Concern	Total Maximum Daily Load Status
Rock Creek (3328)	Confluence of Johns and Telcher Creeks to Salmon River	170602090601	Sediment	2007
Skookumchuck Creek (5157)	Confluence of North and South Forks To Salmon River	170602091001	Sediment	2007
Slate Creek (3333)	Headwaters to Salmon River	170602091101	Sediment	2007
China Creek (5041)	Headwaters to Salmon River	170602091201	Sediment	2007
Race Creek (3336)	Headwaters to Salmon River	170602091205	Sediment	2007
Little Salmon River Subbasin				
Little Salmon River (2863)	Round Valley Creek to Mouth Upstream of Round Valley Creek	17060210	Sediment Unknown	2007
Squaw Creek (2865)	Headwaters to Little Salmon River	170602100103	Sediment	2007
Elk Creek (2869)	Headwaters to Little Salmon River	170602100102	Sediment	2007
Big Creek (2877)	Headwaters to Little Salmon River	170602100403	Nutrients, sediment	2007
Middle Salmon River Subbasin				
Warren Creek (3352)	Headwaters to Wilderness Boundary	170602071901	Habitat alteration (dredge mining)	Subbasin assessment only (December 2002)
Clearwater River Subbasin				
Clearwater River (3139)	Confluence of North Fork to Washington line	17060306	Total Dissolved Gas	2005
Lapwai Creek (3143)	Unnamed tributary 16 miles downstream to Clearwater River	170603063103	Bacteria, dissolved oxygen, flow alteration, habitat alteration, nutrients, sediment, temperature	2005

Table 3-3
303(d) Listed Waterbodies with BLM Lands in Watershed *(continued)*

Waterbody (Water Quality Limited Segments Number)	Boundaries	Hydrologic Unit Code Number	Pollutant(s) of Concern	Total Maximum Daily Load Status
Catholic Creek (3148)	Headwaters to Clearwater River	170603060201	Bacteria, dissolved oxygen, flow alteration, habitat alteration, ammonia, nutrients, organic, sediment, temperature	2005
Potlatch River (3149)	Bear Creek to Clearwater River.	170603060202	Bacteria, dissolved oxygen, flow alteration, habitat alteration, ammonia, nutrients, oil/gas, organic, pesticides, sediment, temperature	2005 (under development)
Middle Potlatch Creek (5125)	Headwaters to Potlatch River	170603060302	Bacteria, flow alteration, habitat alteration, nutrients, sediment, temperature	2005
Big Bear Creek (5225)	West Fork Big Bear Creek to Potlatch River	170603060401	Temperature	2005

Table 3-3
303(d) Listed Waterbodies with BLM Lands in Watershed *(continued)*

Waterbody (Water Quality Limited Segments Number)	Boundaries	Hydrologic Unit Code Number	Pollutant(s) of Concern	Total Maximum Daily Load Status
Bedrock Creek (3162)	Headwaters to Boundary	170603060803	Bacteria, dissolved oxygen, flow alteration, habitat alteration, ammonia, nutrients, sediment, temperature	2005
Big Canyon Creek (7164)	Headwaters to Sixmile Canyon	170603061001	Bacteria, dissolved oxygen, flow alteration, habitat alteration, ammonia, organics, pesticides, temperature	2005
Big Canyon Creek (3164)	Sixmile Canyon to Clearwater River	170603061001	Bacteria, flow alteration, habitat alteration, nutrients, temperature	2005
Lolo Creek (3173)	Eldorado Creek to Clearwater River	17060306	Bacteria, dissolved oxygen, flow alteration, habitat alteration, nutrients, oil/gas, sediment, temperature	2005 (under development)
Texas Creek (5222)	Headwaters to Lolo Creek	17060306	Unknown	2005
Schmidt Creek (5223)	Headwaters to Lolo Creek	17060306	Unknown	2005
Mud Creek (5130)	Headwaters to Lolo Creek	17060306	Sediment	2005

Table 3-3
303(d) Listed Waterbodies with BLM Lands in Watershed *(continued)*

Waterbody (Water Quality Limited Segments Number)	Boundaries	Hydrologic Unit Code Number	Pollutant(s) of Concern	Total Maximum Daily Load Status
Sixmile Creek (3179)	Headwaters to Clearwater River	17060306	Bacteria, dissolved oxygen, flow alteration, habitat alteration, ammonia, nutrients, oil/gas, organics, sediment, temperature	2005
Sevenmile Creek (3181)	Headwaters to Lawyer Creek	17060306	Habitat alteration, sediment	2005
South Fork Clearwater River Subbasin				
South Fork Clearwater River (5185)	Red River to Clearwater River	17060305	Habitat alteration, sediment, temperature	2004
Cottonwood Creek (3288)	Headwaters to South Fork Clearwater River	170603051311	Bacteria, dissolved oxygen, habitat alteration, ammonia, nutrients, sediment, temperature	2000
Threemile Creek (3291)	Headwater to South Fork Clearwater River	170603051201	Bacteria, dissolved oxygen, flow alteration, habitat alteration, ammonia, nutrients, sediment, temperature	2004

Table 3-3
303(d) Listed Waterbodies with BLM Lands in Watershed *(continued)*

Waterbody (Water Quality Limited Segments Number)	Boundaries	Hydrologic Unit Code Number	Pollutant(s) of Concern	Total Maximum Daily Load Status
Butcher Creek (3292)	Headwaters to South Fork Clearwater River	170603050106	Bacteria, dissolved oxygen, flow alteration, habitat alteration, sediment, temperature	2004
Buffalo Gulch (5030)	Headwaters to American River	170603050601	Sediment	2004
Big Elk Creek	Headwaters to Mouth	170603050602	Temperature	2004
Little Elk Creek	Headwaters to Mouth	170603050602	Temperature	2004

Source: IDEQ 2002

The State of Idaho has identified on its draft 303(d) list for 2002 43 stream segments with impaired water quality, totaling about 62 miles, on planning area CFO lands. Most of the impairments are due to excessive suspended sediment loading or excessive temperature. Both criteria are set primarily for the purpose of protecting fish. In particular, they are intended to protect anadromous (migrating from the sea up a river to spawn) fish, such as salmon *(Oncorhynchus* spp.) and steelhead trout (*O. mykiss*), bull trout *(Salvelinus confluentus)*, and other salmonids (such as cutthroat trout *[O. clarki]*). (Salmonids are any member of the family Salmonidae, which includes all species of salmon, trout, char *[Salvelinus alpinus]*, whitefish *[Prosopium* spp.*]*, and grayling *[Thymallus arcticus]*.) Besides sediment and temperature, other pollutants of concern identified for 17 drainages includes a combination of bacteria, dissolved oxygen, nutrients, ammonia, organic pollutants, oil or gas, pesticides, habitat alteration, and flow alteration. Many of the pollutants or issues may be related to agricultural use of the land.

Groundwater

Most of the planning area is in the Northern Rocky Mountain Intermontane Basins Regional Aquifer System. This region extends eastward into Montana and northward into British Columbia, Canada. It is bordered on the west by the Columbia River Regional Aquifer System and on the south by the Snake River Plain Regional Aquifer System (Whitehead 1994).

Most of the Northern Rocky Mountain Intermontane Basins Regional Aquifer System consists of small isolated aquifers in pre-Miocene rocks. The geologic materials that compose these aquifers vary widely and include igneous and metamorphic rocks, volcanic rocks, and consolidated marine and nonmarine sedimentary rocks, with a wide range of thicknesses and permeabilities. Water from wells completed in these aquifers is used mostly for domestic and livestock watering supplies.

Most of the western half of the planning area, including the plateau area north and west of Grangeville and south of the Clearwater River from Lewiston to the North Fork of the Clearwater River, is underlain by the Miocene Grande Ronde basalt formation of the Columbia Plateau Regional Aquifer System. This is the principal formation of the Columbia Plateau. Layers of basalt lava up to 15,000 feet thick occur in the central portion of the Columbia Plateau, but the basalts are thinner on the margins of the basin. The permeable zones in these layered basalt aquifers tend to be at the tops and the bottoms of the individual lava flow units, in cooling fractures or basalt rubble that formed on the flows, in permeable materials deposited between lava flows, or in fault fractures. Wells that are deep enough to penetrate several permeable zones can yield large volumes of water, but the yields in individual wells are highly variable, ranging from one to several thousand gallons per minute. Wells in Nez Perce County, which overlies the Grande Ronde basalt, yield up to 2,000 gallons per minute, although small yields are more common. The most intensive groundwater development in Nez Perce County is near the city of Lewiston. Wells withdraw water for public supply, domestic and commercial, agricultural, and industrial purposes. Water-resource development in the remainder of the area is sparse because of rugged topography and small population. Aquifers in the eastern part of the Columbia Plateau in Idaho generally are discontinuous and isolated (Whitehead 1994).

The plains in the central and western portion of the planning area are covered with a thin sheet of unconsolidated deposits consisting mainly of glacial outwash and containing local groundwater aquifers. The thickness of these aquifers is typically less than 50 feet throughout the region (Whitehead 1994).

As defined by EPA, "Source Water is untreated water from streams, rivers, lakes, springs, and aquifers that is used as a supply of drinking water." Source Water Areas within the CFO planning area are the sources of drinking water delineated and mapped by the IDEQ. The BLM uses the source water database provided by the IDEQ to coordinate with the State regarding proposed activities within these areas. The BLM also continues to notify and coordinate with the public water system operator for proposed activities within all source water areas. Specific potential contaminants and protective measures for a proposed activity are identified at the project level.

Floodplains

Floodplains are flat areas adjacent to stream courses that are subject to inundation during high water flows, including 100-year flows. ~~Typically, floodplains must be at least one acre or more to be considered in an analysis.~~ Floodplains also receive special protection under Executive Order 11988, the goal of which is to minimize the potential for flooding because of development. Most of the larger floodplains within the planning area are associated with larger rivers and streams, which include the Snake, Salmon, Clearwater, Little Salmon Rivers and South Fork of the Clearwater River.

3.2.5 Vegetation—Forests

Forest vegetation groups in the CFO are primarily low elevation, mixed conifer forest ranging from early to mid-seral to old growth stands. Stand-replacement fires and fire suppression have significantly changed historic species composition and stand density.

Based on findings from the ICBEMP (BLM and Forest Service 1997) and statewide guidance, the CFO has identified the following priority vegetation communities to conserve and restore to historic sustainable conditions:

- **Ponderosa pine** *(Pinus ponderosa)* has decreased across its range, with a significant decrease in the amount of old trees in single-story structure. The primary transitions were to interior Douglas-fir *(Pseudotsuga menziesii)* and grand fir *(Abies grandis)*/white fir *(A. concolor)*.
- **Western larch** *(Larix occidentalis)* has decreased across its range. The primary transitions were to interior Douglas-fir, lodgepole pine *(Pinus contorta)*, or grand fir/white fir.
- **Whitebark pine** *(Pinus albicaulis)***/alpine larch** *(Larix lyallii)* cover type has decreased by 95 percent across its range, primarily through a transition into the whitebark pine cover type. Overall, however, the whitebark pine cover type has also decreased, with compensating increases in subalpine fir *(Abies lasiocarpa)*.
- There has been a loss of the **large tree component** (live and dead) within roaded and harvested areas. In dry and moist forests, there has been a loss of the large, scattered, shade-intolerant tree component and an increase in density of smaller-diameter shade-tolerant trees.
- **Old growth** forests are considered as ecosystems that are distinguished by old trees and related structural attributes. They encompass the later stages of stand development that typically differ from earlier stages in such characteristics as tree age, tree size, number of large trees per acre, and basal area. Specific attributes vary by forest type (Scott et al. 2002).

Table 3-4 shows the differences between the 1974 and 1992 extensive inventories completed by the CFO.

Table 3-4
Forest Inventory Results, 1974 and 1992

Indicator	1974 Inventory	1992 Inventory	Change
Live trees per acre five inches diameter at breast height[1] or less	807	1,574	+95%
Live trees per acre greater than an average of five inches diameter at breast height	144	120	-17%
Gross board feet per acre	12,156	13,882	+14%
Net board feet per acre	10,467	11,536	+10%
Average diameter at breast height trees greater than five inches diameter at breast height	11 inches	12 inches	+9%
Suppressed live trees per acre	29	484	+1,545%
Mortality trees per acre	21	41	+91%

[1] Diameter at breast height is a standard.

Table 3-5 describes the vegetation cover types and general forest health interpretations by vegetation type. As noted in Table 3-5, the Gap Analysis Program (GAP) identified approximately 70 percent (100,990 acres) of the lands managed by the CFO to be in the dry conifer and wet/cold conifer cover types. Table 3-4 indicates that there has been a marked increase in stocking levels from 1974 to 1992. Forest Service data and observations from field staff show that this increase has continued into the present within the CFO.

Table 3-5
Vegetation Types and Forest Health

Vegetation Type	GAP Cover Type[1]	General Forest Health[2]	BLM Acres[3]
Dry conifer: ponderosa pine, lodgepole pine, Douglas-fir, grand fir, western larch	Dry conifer	Generally poor. Douglas-fir and grand fir growing into forests in the absence of disturbance have overstocked a majority of these stands and are infected with insects and root rot.	66,431
Mid-elevation shrub steppe	Mid-elevation shrub steppe	N/A	5,677
Mountain shrub	Mountain shrub	N/A	4,642
Perennial grass and other (including canyon grasslands, agriculture, barren, and rock)	Perennial grass	N/A	30,113
Aspen *(Populus tremuloides*)/conifer mix	Aspen/conifer mix	Good to fair. Many aspen patches are approaching maturity and beginning to fill in with conifers.	22
Wet/cold conifer: whitebark pine, lodgepole pine, spruce *(Picea* spp.*)*, western larch, grand fir, subalpine fir	Wet/cold conifer	Poor. Blister Rust and Mountain pine beetle are decimating Whitebark Pine. Root Rot is prevalent in the DF and GF stands. Our lodgepole pine forests are mature and mountain pine beetle is at epidemic levels. Western larch stands are being lost to density competition except where management actions have favored the species. Spruce stands experienced epidemic spruce beetle outbreak in the mid 1980's and subsequent wildland fire in 1994 to 1996.	34,537
Cottonwood *(Populus* spp.), Riparian – Conifer, broadleaf, mixed conifer/broadleaf, mixed forest/nonforest, graminoid/forb, shrub	Riparian	N/A	2,404

[1]Using remote sensing and GIS technologies, the State of Idaho, with the support of the National Fish and Wildlife Foundation, mapped and analyzed Idaho's natural resources to produce the GAP (US Geological Survey 1995).
[2]Forest health interpretations in the table are based on observations by BLM foresters, as well as from forest inventory data collected in the 1974 and 1992 extensive forest inventories.
[3] Source: BLM 2004a

The departure from the historic condition on forested lands managed by the CFO shows an increase in stand density. Historically, before wildfire suppression, stocking levels of shade-tolerant trees were much lower than currently exist today. Extensive stand-replacing fires burned in Marshall Mountain (1994 and 2000), Elkhorn Creek (1994), and Craig Mountain (2000). Within the CFO, existing old growth or potential old growth stands have not been identified for all forested types.

As can be seen above, stocking levels increased significantly between 1974 and 1992. The number of dead trees within a stand also increased significantly. Not shown here are the significant increases in Douglas-fir bark beetle and the increasing population of mountain pine beetle now infecting the lodgepole pine stands or losses from stand-replacing fire mentioned above. The indicator forecast for forests and woodland vegetation in north-central Idaho demonstrates deteriorating forest health, which is expected to continue. Additionally, forest health conditions in their current state contribute to increasing accumulations of hazardous fuel, which affect management of the growing WUI. As the WUI expands, wildfire suppression will become more necessary, as will the need to reduce fuels and improve forest health.

Forests within the CFO are some of the most productive in Idaho and the area has historically supported timber harvesting as a livelihood and management tool, although there has been a dramatic decline in timber harvesting in the last two decades.

3.2.6 Vegetation—Weeds

Weeds include undesireable native or nonnative species. Legally, a noxious weed is any plant designated as undesirable by a federal, state, or county government as injurious to public health, agriculture, recreation, wildlife, or property. As such, noxious weeds typically require control. A noxious weed is defined as any living stage (including seeds and reproductive parts) of a parasitic or other plant of a kind that is of foreign origin, is new to or not widely prevalent in the US, and can directly or indirectly injure crops or other useful plants, livestock, poultry, or other interests of agriculture, including irrigation, navigation, fish and wildlife resources, or the public health (Federal Noxious Weed Act of 1974).

Invasive plants and noxious weeds are not the same. Invasive plants include not only noxious weeds but also other plants that are not native to the US. The BLM considers plants invasive if they have been introduced into an environment where they did not evolve. As a result, they usually have no natural enemies to limit their reproduction and spread (Westbrooks 1998). Some invasive plants can produce significant changes to vegetation, composition, structure, or ecosystem function (Cronk and Fuller 1995).

Many state and county governments in the western states have designated noxious weed lists. The Idaho Department of Agriculture maintains the Idaho State Noxious Weed List, which includes 36 different species of weeds that are designated noxious by state law. Weed species affect all resources that depend to some degree on vegetation. Weeds have degraded rangeland health and diversity by changing fire regimes. The most abundant invasive plant (also on Idaho's Noxious Weed List) in the planning area is yellow starthistle *(Centaurea solstitialis),* especially in the canyon grasslands. Management emphasis is directed toward regions in the planning area where cooperative management strategies are already in place and for which data exists through studies or GIS compilations. In addition to the species that are well documented in the planning area, new species

are appearing and may be even more disruptive to the native plant community than species that have existed in the planning area for a longer time.

Although weeds are spreading rapidly throughout the Upper Columbia River Basin (BLM and Forest Service 1997), which includes the planning area, a complete inventory of such species does not exist. The most common invasive species are yellow starthistle, spotted knapweed *(Centaurea biebersteinii~~Centaurea stoebe~~* ssp*. ~~micranthus~~),* Dalmatian toadflax *(Linaria dalmatica* ssp. *dalmatica)*, and rush skeletonweed *(Chondrilla juncea)*. These four species are also on Idaho's Noxious Weed List. In addition, cheatgrass (*Bromus tectorum*) has invaded many disturbed areas primarily in the canyon grasslands. Habitat areas that have been heavily disturbed by mining, grazing, roads, and other soil-disturbing activities may be composed almost entirely of annual invasive plants, while other areas may have such species as only a minor component. Plant communities at higher elevations seem to be more resistant to invasions of annual grasses and forbs.

Weeds have a competitive advantage over native plants because of characteristics that evolved as responses to grazing pressures. Therefore, plants already established in the planning area will likely continue to spread. Weeds will continue to proliferate in areas that have been disturbed and along roads. New species will appear within the planning area. Management strategies already in place may be able to slow or stop the spread of well-established weeds and the introduction of new species. Successful weed control depends on local cooperative efforts to prioritize and implement management strategies. The extent to which established populations will spread or new populations will become established depends on many factors, including climate, success of treatments, management on adjacent private lands, and the efforts of the CFO staff in cooperation with the County Weed Management Areas.

3.2.7 Vegetation—Rangelands

BLM rangelands in much of the planning area are comprised of scattered parcels of grasslands and forested grasslands. Conifer habitat encompasses approximately 57 percent of the public lands within grazing allotments (BLM 1981a). Vegetation types are diverse and represent a range of seral stages that are primarily influenced by livestock grazing, timber harvest, fires, and moisture availability. The canyon grasslands are primarily a broad extension of the Pacific bunchgrass formation. The dominant habitat types are bluebunch wheatgrass *(Agropyron spicatum)* and Idaho fescue *(Festuca idahoensis)*. Sand dropseed *(Sporobolus cryptandrus)* and red three-awn *(Aristida longiseta)* have become disclimax species on some river benches, bars, and toeslope areas. Disclimax communities are derived from other vegetative types, usually as a result of a disturbance such as grazing or fire. Yellow starthistle and annual grasses (e.g., cheatgrass) are common invaders of poor and fair ecological condition canyon grasslands within the CFO area. When a suitable seed source is available, yellow starthistle is also invading good condition grasslands.

Elevations above 3,000 feet often have patterned grassland and timbered sites, with bluebunch wheatgrass/Idaho fescue on south and west aspects and Douglas-fir sites on north and east aspects. Dry south-facing slopes may have grasslands, with scattered overstory conifers and shrubs. Grasslands are primarily located in the slope-bench complex of major river drainages within the southern half of the CFO. Basalt outcrops may be common on these sites. Draw bottoms and north- and east-facing slopes have mixed conifers and shrubs. Localized, steep rocky areas exist with low vegetation production. The mixed conifer overstory includes Douglas-fir, grand fir, western

larch, and ponderosa pine. Riparian vegetation is found at wet seeps, shorelines of reservoirs and catchment basins, outflow areas of springs, and along ~~perrenial~~ perennial streams. Plants commonly associated with riparian areas include willow (*Salix* spp.), cottonwood, rose *(Rosa* spp.*)*, cattail *(Typha latifolia)*, sedges *(Carex* spp.*)*, and grasses. Above 5,000 feet, Douglas-fir and grand fir habitat types are common. At higher elevations (above 7,000 feet), Engelmann spruce *(Picea eng~~l~~elmanii)* and subalpine fir habitat types are common and whitebark pine may occur. The timber is interspersed with patches of perennial grassland, brush, and riparian vegetation, while other areas are heavily forested. In addition, a small amount of meadow habitat (approximately 350 acres) is found on CFO lands. Meadows are both dry and semi-wet, and are found between 2,500 and 8,400 feet elevation (BLM 1981b).

3.2.8 Vegetation—Riparian and Wetlands

Riparian zones are vegetated areas found along rivers and streams. They are important from an ecological standpoint because they provide a transition zone between aquatic and upland areas, provide cover for wildlife that access aquatic environments, and are a food source for fish and wildlife. They also provide water quality benefits by filtering out nutrients from runoff, for maintaining stream temperature by providing shade, and by controlling erosion.

Within the planning area, riparian areas and wetlands are generally associated with stream and river bottoms and springs/seeps. Approximately 625 miles of streams and rivers flow across CFO lands; a little over half are perennial, and the remainder is intermittent. Rivers and streams often have narrow riparian zones that typically vary from 25 to 200 feet wide and are confined by steep side slopes. Approximately 195 acres of wetlands (mainly springs, seeps, marshes/ponds, and wet meadows) occur on CFO lands. Acreage for wetlands may be somewhat higher, however, because new springs and seeps are being located while intensive vegetation inventories are being conducted for a variety of proposed projects on BLM lands. Vegetation cover types of riparian areas are listed in **Table 3-6**.

Table 3-6
Riparian Vegetation Cover Types on CFO Lands

Riparian Vegetation Cover Type	Acres on BLM Land
Cottonwood	156
Riparian—conifer	381
Riparian broadleaf	95
Riparian—mixed conifer/broadleaf	21
Riparian—mixed forest/nonforest	35
Riparian—graminoid (all grasses and grasslike plants)/forb	931
Riparian—shrub	848
Riverine riparian	1
Marsh—deep	6
Total	**2474**

Source: BLM 2004a

The riparian area adjacent to mainstem rivers, including the Snake, Salmon, and Clearwater, often is very narrow (20 to 40 feet) within steep-sloped confined canyonland areas and is primarily associated with the area between mean high and mean low water. Some wider river bottom and floodplain areas may have large riparian habitats. The banks generally are rock and cobble and have a bank slope of 10 to 40 percent. Common riparian vegetation includes coyote willow *(Salix exigua),* riverbank sage *(Artemisia ludoviciana),* poison ivy *(Rhus radicans),* hackberry *(Celtis reticulata),* and common burdock *(Arctium minus)*. It is often common to have upland vegetation extend upslope immediately adjacent to the riverbank. Such vegetation may include ponderosa pine, Douglas-fir, and various shrubs. On drier sites, annual grasses that are mainly bromes *(Bromus* spp.*),* weedy species, bluebunch wheatgrass, and sand dropseed are commonly found adjacent to the riverbank.

Tributary streams often have narrow riparian zones that typically vary from 25 to 200 feet wide and are confined by the steep side slopes. The lower elevation riparian area overstories are dominated by white alder *(Alnus rhombifolia),* black hawthorn *(Crataegus douglasii),* and water birch *(Betula occidentalis),* with occasional ponderosa pine, Douglas-fir, and black cottonwood *(Populus trichocarpa)*. Common understory species include mockorange *(Philadelphus lewisii),* serviceberry *(Amelanchier alnifolia)*, blue elderberry *(Sambucus cerulea),* coyote willow, redosier dogwood *(Cornus stolonifera* var. *stolonifera),* poison ivy, oceanspray *(Holodiscus discolor),* and grasses/forbs. At the mid- to upper-elevation areas, Douglas-fir and grand fir are more common in the overstories of the riparian areas. Common understory species include mockorange, black hawthorn, oceanspray, blue elderberry, gooseberry *(Ribes* spp.*),* rose, chokecherry *(Prunus virginiana),* ~~rocky~~ Rocky ~~mountain~~ Mountain maple *(Acer glabrum),* redosier dogwood, alder *(Alnus* spp.*),* willow, and grasses/forbs. The higher elevation areas may have grand fir, Engelmann spruce, lodgepole pine, and subalpine fir. Meadow areas may be dominated with sedges, willow, and alder.

Proper functioning condition is a qualitative method for assessing the condition of riparian wetland areas. Riparian and wetland areas are functioning properly and are rated as being in PFC when adequate vegetation, landform, or debris is present to dissipate flows and erosional processes to improve water quality, filter sediment, reduce erosion, and provide necessary habitat components for riparian/aquatic biodiversity and fish production. Functional-at-risk riparian-wetland areas are those that are in functional condition but have a soil, water, or vegetation attribute that makes them susceptible to degradation. Nonfunctional riparian-wetland areas do not have adequate vegetation, landform, or woody debris to dissipate high water flows and thus are not reducing erosion, improving water quality, or providing adequate riparian/aquatic habitats and biodiversity.

Streams and rivers crossing BLM lands within the planning area are classified by functioning condition as follows: about 86 percent (537 miles) are classified as being in PFC, about 13 percent (84 miles) are functional-at-risk, and less than 1 percent (4 miles) are nonfunctional. Of 195 acres of riparian wetlands in the planning area, 71 percent are in PFC, and the remaining area is classified as functional-at-risk. For most of the riparian corridors and wetlands, no trend in condition, either upward or downward, is apparent. Less than 1 percent of the riparian corridor and about 4 percent of the wetlands appear to be declining in quality, while a similar percentage are improving, suggesting that there is currently little change taking place in the condition of the resources and therefore little short-term risk of a decline in quality.

3.2.9 Wildlife and Special Status Wildlife

Wildlife

The BLM manages fish and wildlife habitat, while fish and wildlife populations are administered by Idaho Department of Fish and Game, USFWS, or National Marine Fisheries Service.

The diverse topography, vegetation, and climate in the planning area provide habitats for a variety of wildlife species. The presence of any species may be seasonal or year-round, depending on individual species requirements. Habitats vary from low-elevation canyon grasslands to high-elevation subalpine fir habitats. Of particular importance to wildlife are critical habitat niches and preferred habitats used by specific species for breeding, young rearing, feeding/foraging, traveling, habitat connectivity, and security.

Approximately 250 species of wildlife occupy CFO lands, either seasonally or yearlong. There are four federally listed species, one candidate species, and 37 BLM sensitive species (see Special Status Wildlife, below). Other species of special interest include big game, upland game birds, waterfowl, carnivores, raptors, snag-dependent species, predators, furbearers, and amphibians/reptiles.

Big Game

Big game species in the planning area include elk *(Cervus canadensis),* mule deer *(Odocoileus hemionus),* white-tailed deer *(O. virginianus),* moose *(Alces alces),* Rocky Mountain bighorn sheep *(Ovis canadensis),* black bear *(Ursus americanus),* and mountain lion *(Felis concolor).* **Table 3-7** provides a summary of BLM big game habitats and their approximate acreage within the planning area.

Table 3-7
Big Game Species and Habitat Summary of BLM Lands within Planning Area

Species	BLM Acres	Comments
Elk	130,000	Area-wide, primarily associated with forested areas and early seral/conifer habitats. Canyon grasslands and breaklands used for winter/spring range and transitional late fall/winter range.
Mule Deer	137,000	Area-wide, primarily associated with canyon grasslands and breaklands. Also utilizes adjacent forested areas for summer and fall habitats.
White-Tailed Deer	130,000	Area-wide, primarily associated with forested areas and forest/early seral habitats. Utilizes canyon breaklands and patterned grassland/forested areas.
Moose	29,500	Primarily found in grand fir/mixed conifer habitats and associated wetland/riparian habitats. Key winter range associated with grand fir habitats and understories of Pacific yew. Primary BLM land use areas occur in the Elk City area, higher elevations of the John Day drainage, and portions of the Marshall Mountain township.
Bighorn Sheep	65,000	Primarily found in Snake and Salmon River canyonlands. Primary current use areas associated with Snake River, lower Salmon River, and upriver from Little Salmon River. Utilizes canyon grasslands and breaklands (patterned grassland/forested areas); and seasonal use of associated uplands.

Table 3-7
Big Game Species and Habitat Summary of BLM Lands within Planning Area *(continued)*

Species	BLM Acres	Comments
Mountain Goat	2,000 – 4,000	Suitable habitat found in a few localized areas, preferred habitats include steep sloped topography, cliff areas, and subalpine habitats. Seasonal use areas may include lower elevation areas to higher elevation areas within planning area.
Black Bear	110,000	Primarily associated with forested areas. Will utilize canyon breaklands (patterned grasslands and forested areas) and riparian habitats.
Mountain Lion	110,000 – 120,000	Area-wide, associated with big game ungulate seasonal use areas (canyon grasslands to forested habitats).

~~Upland game birds found within the planning area include chukar partridge *(Alectoris chukar)*, gray partridge *(Perdix perdix)*, ruffed grouse *(Bonasa umbellus)*, blue grouse *(Dendragapus obscurus)*, spruce grouse *(Canachites canadensis)*, ring-necked pheasant *(Phasianus colchicus)*, wild turkey *(Meleagris galloparo)*, California quail *(Callipepla californica)*, and mountain quail *(Oreortyx pictus)*. The mountain quail is a BLM sensitive species, and no authorized hunting season exists for this species in Idaho.~~

Elk

Elk use a variety of habitats seasonally within the planning area, from low- to mid-elevation area grasslands and forested areas, to higher elevation forested and subalpine areas. Year-long or spring-summer-fall elk ranges are present at mid and lower elevation areas where ever cover and forage areas provide good security from roads, motorized trails, and other human activities. Important winter range areas vary within the planning area, and include canyon grassland-winter range areas and shrub/forest winter range areas at low to mid-elevations. Dependent on winter range vegetation type, primary forage may include perennial grasses or shrubs. Noxious weeds are encroaching on canyon grassland habitats within the planning area.

Mule Deer

Mule deer are commonly associated with canyon grasslands, and associated shrub and forested areas. They also are found in mid- to higher elevation forested areas. Year-long use areas are found at lower to mid-elevation areas. Spring-summer-fall mule deer ranges are found at higher elevations. Preferred habitats include a mosaic of grass/shrub foraging areas, with shrub/forest or rugged topography in unroaded areas providing hiding and security cover. Low to mid-elevation shrub and shrub/grassland areas provide important winter range areas. Noxious weeds such as yellow starthistle are encroaching on canyon grassland habitats. Proximity to water is an important factor during the spring, summer, and fall periods. Overall, mule deer populations are presently considered low, with management direction emphasis on improving numbers.

White-Tailed Deer

White-tailed deer are found in various habitats, from forests to fields or grasslands with adjacent cover. White-tailed deer habitats primarily include forest and shrub habitats, interspersed with openings and riparian areas. Agriculture areas, associated with adjacent shrub/forest areas providing cover and security areas also provide preferred habitats. With the exception of higher elevation

areas, white-tailed deer may utilize areas yearlong at the mid to lower elevations. White-tailed deer populations are presently increasing in some areas that were commonly used by mule deer.

Moose

Moose are commonly associated with mid- to high elevation moist and cool forest habitats, which are interspersed with riparian and wetland habitats. Riparian and wetland habitats provide important components of preferred moose habitats, particularly during the summer. Winter habitats primarily occur in mid elevation areas with winter forage species and thermal cover requirements consisting of mature dense conifer stands. Preferred winter forage species include Pacific yew, willow, serviceberry, and other palatable shrubs.

Bighorn Sheep

Existing bighorn sheep populations associated with BLM lands in the planning area occur in the Salmon River and Snake River drainages. The Salmon River, from the Middle Fork down, provides habitat for the only native (i.e., not reintroduced) bighorn sheep in Idaho. Populations have been greatly reduced from once common abundance throughout the historical range of the species. It has been estimated that, within the Columbia River Basin, half of the bighorn sheep habitat currently contains no bighorn sheep. Bighorn sheep populations are influenced by numerous factors, which include habitat, harvest, and disease. The largest population declines likely resulted from diseases transmitted from domestic sheep and over-harvest during settlement of the region 150 years ago. The current harvest of bighorn sheep is strictly controlled by state wildlife agencies. Re-introduced bighorn sheep populations have become established and are expected to expand, but only in those habitats where domestic sheep and goats are absent or confined because of potential disease concerns.

The majority of bighorn sheep habitat in the planning area occurs on lands administered by the federal government. Historically, bighorn sheep occupied the canyonlands and associated uplands within the planning area. Bighorn sheep population size and connectivity can be limited by habitat modifications on private lands, expansion of urban areas, highway construction, and reservoirs. Low to mid-elevation canyon grasslands and low elevation dry conifer forests are at high risk for noxious weeds and other non-native plant infestations. Yellow starthistle and other noxious weed infestations of canyon grasslands have reduced habitat quality in areas for bighorn sheep.

Mountain Goat

Mountain goat populations occur within the planning area in localized areas. They are primarily associated with alpine and subalpine areas. Mountain goats utilize steep slopes, cliff areas, and alpine meadows. BLM lands within the planning area comprise a very small amount of suitable habitat.

Black Bear

Black bear utilize a variety of habitats, and are primarily associated with coniferous forests. Within the planning area, most black bear habitat is found at the mid- and higher elevations, including the mountain shrub, riparian habitats, and dry conifer and moist conifer types. The black bear is an opportunistic omnivore; feeding on plant and animal food, including carrion and items from garbage

dumps. Idaho study found individuals fed on forbs/grass in spring, and mast in summer and fall. Black bear on occasion prey on livestock, primarily sheep.

Mountain Lion

Mountain lions utilize a variety of habitats that are commonly utilized by deer and elk. Mountain lion are opportunistic and eat small and large mammals, but in many areas the primary prey is deer. They typically prefer remote montane and semi-wooded canyons and canyon grasslands with timbered stringers and shrubs. Generally, mountain lions rely heavily on deer, followed by elk. And will be found where there are healthy populations of deer and elk, and concentrated use may occur in winter range areas. They also occasionally prey on livestock, primarily sheep and cattle.

Upland Game

Upland game birds found within the planning area include chukar partridge *(Alectoris chukar)*, gray partridge *(Perdix perdix)*, ruffed grouse *(Bonasa umbellus)*, blue grouse *(Dendragapus obscurus)*, spruce grouse *(Canachites canadensis)*, ring-necked pheasant *(Phasianus colchicus)*, wild turkey *(Meleagris gallopavo)*, California quail *(Callipepla californica)*, and mountain quail *(Oreortyx pictus)*. The mountain quail is a BLM sensitive species, and no authorized hunting season exists for this species in Idaho.

Wildlife Habitats

The 13 primary wildlife habitat vegetation types that occur in the planning area are riparian/wetlands; canyon/foothills grasslands, interspersed rock; agriculture; shrub steppe (low- and mid-elevation shrub); mountain shrub; montane parklands/subalpine meadows; dry conifer (ponderosa pine); dry conifer (Douglas-fir); dry conifer/mixed (Douglas-fir, grand fir, lodgepole pine); wet cold conifer (grand fir, mixed mesic, and western red cedar *[Thuja plicata]*); wet cold conifer (subalpine fir and mixed subalpine); wet cold conifer (lodgepole pine); and wet cold conifer (whitebark pine).

BLM lands comprise less than 0.1 to 7 percent of the lands within the subbasins that occur in the planning area. With the exception of a few areas, ownership is often fragmented and intermingled with private, state, and Forest Service lands. In several areas, larger contiguous tracts of public lands occur (e.g., Elk City township, Marshall Mountain township, Craig Mountains, Lower Salmon River, and Little Salmon River). Many tracts of public lands do not have public access provided, and access is dependent on private landowner permission. Primary vegetation/wildlife habitat cover types are summarized in **Table 3-8.**

A hierarchical habitat classification system (Wisdom et al. 2000) classifies wildlife species' use of habitats in the planning area. The three broad source habitats include: coniferous forest habitat; combination of forests, early-late seral forests; and rangelands. Wildlife diversity is directly tied to maintaining habitat diversity. Historic wildlife population levels and trends were a reflection of historic high vegetation diversity. For a variety of reasons, vegetation and wildlife habitats are less diverse than historic conditions. Such reasons include past timber harvest practices and fire exclusion, roading, livestock grazing, conversion of native vegetation to agriculture, noxious weed infestations, and increased recreational use of public lands.

Table 3-8
Primary Wildlife Habitat Vegetation Cover Types Occurring on BLM Lands

Cover Type	BLM Acres	Percent BLM Lands	Comments (Non-Native Plant Species Risk, HRV/DFC)
Riparian/Wetlands	2,800	2.0	Low to high risk for nonnative species infestations. High risks for weed infestations along roads, mined areas, recreations sites, and other disturbed areas.
Canyon/Foothills Grasslands Interspersed Rock	22,749 8,359	21.5	High risk for nonnative species infestations. Estimated that 60 to 80 percent of grasslands have more than 25 percent vegetation composition of weedy/nonnative species.
Agriculture	835	0.5	High risk for nonnative species infestations. Old agriculture fields, with the exception of recent restoration on several sites, generally are dominated with nonnative species. Historically primarily native grasslands. High potential for wildlife food plots.
Shrub Steppe – Low and Mid Elevation Shrub	5,740	4.0	Moderate to high risk for nonnative species infestations.
Mountain Shrub	4,594	3.0	Moderate to high risk for nonnative species infestations. Compared to HRV, loss of early seral shrub fields.
Montane Parklands/Subalpine Meadows	2,253	1.5	Moderate to high risk for nonnative species infestations. Some tree encroachments in meadows.
Dry Conifer – Ponderosa Pine	28,039	19.5%	Moderate to high risk for nonnative species infestations. Compared to HRV, loss of large trees and old forest ponderosa pine stands.
Dry Conifer – Douglas Fir	17,170	12.0	Moderate risk for nonnative species infestations. Compared to HRV, increase of mid-aged stands, loss of early seral stands, and loss of large/mature stands.
Dry Conifer/Mixed – Douglas Fir, Grand Fir, Lodgepole Pine	20,765	14.0	Moderate risk for nonnative species infestations. Compared to HRV, increase of mid-aged stands, loss of early seral, and loss of large tree/old forest stands.
Wet Cold Conifer– Grand fir, Mixed Mesic, and W. Red Cedar	18,799	13.0	Low to moderate risk for nonnative species infestations. Compared to HRV, increase of mid-aged stands, loss of early seral stands, and loss of large tree/old forest stands. Loss of larch, Douglas-fir, and ponderosa pine.
Wet Cold Conifer– Subalpine fir and Mixed Subalpine	5,294	4.0	Low to moderate risk for nonnative species infestations. Compared to HRV, increase of mid-aged stands, loss of large tree/old forest stands.
Wet Cold Conifer– Lodgepole Pine	5,333	4.0	Low to moderate risk for nonnative species infestations. Compared to HRV, increase of mid-aged/mature stands of lodgepole pine. Mid-aged to mature lodgepole stands have high risk for beetle infestation or are dead and dying. Loss of large tree/old forest stands (e.g., grand fir, Douglas-fir).
Wet Cold Conifer– Whitebark Pine	1,700	1.0	Low to moderate risk for non-native species infestations. Compared to HRV, large decrease overall of whitebark pine.

Maintenance of compositional, structural, and functional diversity is essential for sustaining ecological processes. Wisdom et al. (2000) developed a system to evaluate source habitats for individual species as well as for groups of species. This hierarchical system placed 37 groups of broad-scale species of focus into 12 families or source habitats dominated by cover types and

structural stages (e.g., low elevation old forest, forest mosaic, range mosaic, grasslands, etc.). The 12 families have been grouped into three general source habitats, which include forests only, combination of forests and rangelands, and rangelands only. The three broad source habitats identified above and riparian habitat will be discussed briefly as they relate to the public lands and associated wildlife habitats in the planning area.

Coniferous Forest Habitat (50 percent of BLM lands in planning area)

Low to mid elevation forest vegetation types are generally dominated with Douglas-fir and grand fir habitats, followed by ponderosa pine forests. These habitats are commonly used seasonally by mule deer, white-tailed deer, elk, black bear, and mountain lion. Moose will use the mid to higher elevation grand fir habitats and the majority of moose habitats associated with public lands occurs in the Elk City township area. Upland game utilizing these habitats includes ruffed grouse, spruce grouse, and turkeys. Low elevation areas on south and west aspect may provide important winter range areas for big game. These habitats provide source habitats for species such as white-headed woodpecker, Lewis' woodpecker, blue grouse, Northern goshawk (summer), flammulated owl, marten, fisher, Williamson's sapsucker, black-backed woodpecker, and mountain quail. Many of the drier "open" canopy cover habitats and/or disturbed (e.g., roads, timber harvest, fire, etc.) timbered stands may be at risk for noxious weed or non-native species invasions.

High-elevation forest vegetation types are generally dominated with lodgepole pine, Engelmann spruce, and subalpine fir. These higher elevation areas provide summer and fall habitat for big game such as elk, mule deer, whitetailed deer, and mountain lion. Many wildlife species utilizing this habitat are seasonally migratory. The most extensive tracts of public lands associated with these habitats occur in the Marshall Mountain township.

Combination of Forests, Early-Late Seral Forests, and Rangelands (30 to 35 percent of BLM lands in planning area)

This includes a broad range of forest and rangeland cover types, and combinations of rangeland and early- and late-seral forests. Public lands within the planning area in this cover type generally occur at low to mid elevations. Typical areas include patterned breaklands that occur within the large river canyons or mid-aged timbered stands interspersed with early seral stands (e.g., fire, timber harvest). Timbered areas are dominated with Douglas-fir, grand fir, and ponderosa pine. Patterned areas consist of timbered/shrub fields on north and east aspects, while the south and west aspect may be canyon grasslands with scattered trees and shrubs. These areas may be used yearlong or seasonally by big game such as mule deer, whitetailed deer, elk, bighorn sheep, black bear, and mountain lion. These areas may provide important big game security and/or thermal cover (e.g., mid- and late-seral forested areas for wildlife). Grasslands and early seral shrub/forested areas provide important forage areas for big game ungulates. Upland game utilizing these areas include ruffed grouse, blue grouse, chukar partridge, gray partridge, and turkey. The higher elevation areas may be transitional use areas for big game using summer and winter ranges. The canyon grasslands often consist of bluebunch wheatgrass and/or Idaho fescue, however, poor ecological condition sites may have a high proportion of non-native species (e.g., yellow starthistle, cheatgrass). Some recent large fires have burned through these habitats in the past twenty years (e.g., Maloney Creek fire, Elkhorn fire, Corral fire, Burgdorf Junction fire, etc.). These habitats provide source habitats for species such as gray wolf, long eared owl, Rocky Mountain bighorn sheep, rufous hummingbird, black-chinned

hummingbird, Northern goshawk (winter), Yuma myotis, long eared myotis, fringed myotis, long-legged myotis, pine siskin, Townsend's big-eared bat, western small footed bat, and western bluebird. The grasslands are at high risk for noxious weed or non-native species infestations.

Rangelands (15 to 20 percent of BLM lands in planning area)

This includes canyon grasslands and a broad range of grasslands, shrublands, and other cover types. Public land rangelands within the planning area are primarily associated with canyon grassland areas. The canyonland rangelands may include moderate sloped river terraces and toeslopes, to steep and rugged topography with rock outcrops and cliffs. Typical habitat types are bluebunch wheatgrass and Idaho fescue. Some of the river terrace areas, benches, and toeslopes may be dominated with sand dropseed and red three awn. Noxious weeds and nonnative species infestations have resulted in significant degradation of wildlife habitats within this cover type. The most common invaders include yellow starthistle, Dalmation toadflax, and cheatgrass. Scattered trees such as hackberry ponderosa pine and Douglas-fir occur in some areas. Common shrubs include smooth sumac, snowberry, poison ivy, and service–berry. These rangelands may be used yearlong or seasonally during the winter and spring by big game, such as mule deer, elk, bighorn sheep, whitetailed deer, and mountain lion. Primary bighorn use on public lands is associated with Snake River canyonlands downriver from the Salmon River and the lower portion of the Salmon River downriver from Wapshilla Creek (Craig Mountain WMA). Common upland game species include chukar partridge, gray partridge, blue grouse, ruffed grouse, and mourning dove. These habitats provide source habitats for species such as short eared owl, vesper sparrow, lark sparrow, western meadowlark, Preble's shrew, Brewer's sparrow, and grasshopper sparrow. The grasslands are at high risk for noxious weed or nonnative species invasion and infestations.

Riparian (2 percent of BLM lands in planning area)

Approximately 624 miles of intermittent and perennial streams/rivers flow across public lands in the planning area. Approximately 84 percent of the stream/river length is rated as being in PFC, with 13 percent rated as functional at risk, and less than 1 percent is rated as non-functional. Lower elevation riparian community types often represent stringers of habitat through canyon grasslands, which may extend from mid and higher elevation forested areas. Overstories may include one or more of the following: white alder, black cottonwood, Douglas fir, and grand fir. Understory species may include mockorange, red-osier dogwood, willow, poison ivy, forbs, and grasses.

Mid- to high-elevation riparian habitats within forested and range/forested areas often include grand fir, lodgepole pine, Douglas fir, Engelmann spruce, or subalpine fir overstory trees. Understory species may include alder, willow, red-osier dogwood, forbs, and grasses. Some low gradient streams may have stringer meadows of sedges, willow, and alder.

Riparian habitats provide habitat for the largest number of wildlife species and may be used for watering, feeding, security, travel corridors, nesting, and thermal cover. These areas and associated waters are critical habitat niches for several amphibians such as spotted frog, tailed frog, western toad, Idaho giant salamander. Riparian habitats provide important travel corridors and connectivity between wildlife habitats.

Wildlife Habitat Trends

The scientific assessment done for ICBEMP indicates that vegetation has changed significantly from historic conditions (Wisdom et al. 2000). Noxious weeds are spreading rapidly throughout the Upper Columbia River Basin, which includes the planning area (BLM and Forest Service1997). Vegetation assessments done on public lands have validated these changes. Some forest types and structures have declined, while others have increased. Significant changes compared to historic include the following: old single story ponderosa pine forests have decreased, early seral forests have decreased, mid-age/mature stands of lodgepole and grand fir have increased, and white pine blister rust has almost eliminated western white pine and whitebark pine. Native canyon grasslands, primarily bluebunch wheatgrass and Idaho fescue have declined due to weed invasion. With the exception of a few remnant areas, agriculture has eliminated the majority of native Palouse grasslands within the planning area. These changes have implications for the health of ecosystems within the planning area.

Road densities and associated human use of wildlife habitats have increased in the planning area. Various road-associated factors negatively affect habitats of populations of many wildlife species. Effects of road associated factors can be direct, such as habitat loss and fragmentation because of road construction and maintenance. Effects also can be indirect, such as displacement or increased mortality of populations in areas near roads in relation to motorized traffic and associated human activities. Because of the high density of roads present across large areas of the basin, effects from road-associated factors must be considered additive to that of habitat loss.

Wildlife diversity is directly tied to maintaining habitat diversity. Historic wildlife population levels and trends were a reflection of historic high vegetation diversity. For a variety of reasons, vegetation and wildlife habitats are less diverse than historic conditions. Such reasons include: past timber harvest practices and fire exclusion, roading, livestock grazing, conversion of native vegetation to agriculture, noxious weed infestations, and increased recreational use of public lands.

Noss and others (1995) concurred with this conclusion when they reported 60 to 70 percent of old-growth ponderosa pine forest in Idaho has been degraded from fire suppression and logging of superior trees in more accessible areas. They also reported 85 to 98 percent decline of this same forest in the northern Rocky Mountains, Intermountain West, and eastside Cascades Mountains.

Among 132 neotropical migratory land bird species that breed in the interior Columbia River basin, 38 species showed significant population trends over two time periods: 1968 to 1994 (26 years) and 1984 to 1994 (10 years). Fourteen species had significant declines over the 26-year period and 13 over the 10-year period; 13 and 12 species showed significant increases over those same periods, respectively. More species were predicted to be more negatively affected by consumptive demand than any other theme (Saab and Rich 1997).

Several carnivores (e.g., grizzly bear, gray wolf) in the western US have declined dramatically in the last century and a half and are listed as threatened or endangered species, or are considered sensitive by land management agencies (Witmer et. al. 1998).

Various road-associated factors negatively affect habitats or populations of most of the 91 species of focus. Effects of road-associated factors can be direct, such as habitat loss and fragmentation because of road construction and maintenance. Effects also can be indirect, such as displacement or

increased mortality of populations in areas near roads in relation to motorized traffic and associated human activities. Because of the high density of roads present across large areas of the basin, effects from road-associated factors must be considered additive to that of habitat loss. Moreover, many habitats likely are underused by some species due to the effects of roads and associated factors; this may be especially true for species of carnivorous mammals (Wisdom et al. 2000)

The Idaho Department of Fish and Game has learned that: (1) elk in roaded habitats are more than twice as likely to be killed by a hunter than those in unroaded areas; (2) selective road closures help reduce the number of bull elk taken and allowed for longer hunting seasons; (3) the number of hunters in an area is often directly related to the number of roads; and (4) with more roads (i.e., easy access) and more hunters in an area, more elk are taken, resulting in low bull-to-cow ratios and fewer mature bulls.

Wildlife habitats for BLM management priority and emphasis within the planning area include low-elevation dry conifer (66,413 acres), wet/cold conifer (34,537 acres), perennial grass–canyon grasslands (30,113 acres), and riparian habitats (2,404 acres; 625 miles). Within some high road density areas that are open to public motorized use, wildlife habitat fragmentation and increased potential for disturbance ~~has~~ have occurred. Measures that reduce roads open to public motorized use would improve quality of wildlife habitats and provide security areas. Emphasis for road closures should occur in areas that have larger tracts of BLM lands or in areas where Forest Service or Idaho Department of Fish and Game have similar goals and objectives. The following are discussions of emphasis areas for wildlife habitat management.

Low-elevation Dry Conifer

Departure from the historic condition has been influenced primarily by fire suppression and timber harvest. Old single story ponderosa pine forests have decreased on BLM lands within the planning area. Noss and others (1995) concurred with this conclusion when they reported 60 to 70 percent of old-growth ponderosa pine forest in Idaho has been degraded from fire suppression and logging of superior trees in more accessible areas. Many of the drier "open" canopy cover habitats and/or disturbed timbered stands (e.g., roads, timber harvest, fire, livestock grazing) may be at risk for noxious weed or nonnative species invasions. Management emphasis should be on achievement and maintenance of historic conditions, with special emphasis on mature and old growth stands of ponderosa pine, followed by Douglas-fir. In addition to providing a source habitat for several special status wildlife species (e.g., flammulated owl *[Otus flammeolus]*, Northern goshawk *[Accipiter gentilis]*), these mature stands provide source habitats for other wildlife species, such as white-breasted nuthatch *(Sitta carolinensis)*, pygmy nuthatch *(Sitta pygmaea)*, and broad-elevation species such as pileated woodpecker *(Dryocopus pileatus)* and American three-toed woodpecker *(Picoides dorsalis)*. These areas are used yearlong or seasonally by a variety of big game species, including elk, mule deer, white-tailed deer, black bear, and mountain lion. Lower-elevation areas also provide important big game winter ranges; consequently, management for historic conditions of early seral habitats and improved forage quality are important in these areas. Winter range areas should receive a management emphasis for weed-control activity. Where feasible, prescribed burning should be used for achievement and maintenance of historic conditions.

Wet/Cold Conifer

Departure from the historic condition is also attributed to fire suppression and timber harvest. An abundance of midaged stands has resulted in conditions that are not similar to historic conditions, with a lack of old growth stands, followed by early seral. BLM management emphasis should be on achievement and maintenance of historic conditions, with special emphasis on old growth and potential old growth stands. In addition to providing a source habitat for special status species (e.g., fisher *[Martes pennanti]*), these mature stands provide source habitats for other wildlife species, such as Boreal owl *(Aegolius funereus)*, and broad-elevation species such as great gray owl *(Strix nebulosa)*, American marten *(Martes americana)*, and pileated woodpecker. These areas also provide late spring, summer, fall, and early winter habitats for elk, white-tailed deer, and moose.

Perennial Grass/Canyon Grasslands

This habitat includes canyon grasslands and a broad range of grasslands, mixed grass/shrublands, and other cover types. BLM grasslands within the planning area are primarily associated with canyon grassland areas, such as those found in the Salmon and Snake River canyons, and to a lesser extent in the Clearwater River canyon. The canyonland grasslands may include moderate sloped river terraces and toeslopes to steep and rugged topography with rock outcrops and cliffs. Typical habitat types are bluebunch wheatgrass and Idaho fescue. Some of the river terrace areas, benches, and toeslopes may be dominated with sand dropseed and red three awn. Noxious weeds and other nonnative species infestations have resulted in degradation of wildlife habitats and reduced ecological condition within a large percentage of the canyon grassland plant communities. The Snake and Salmon River canyon grasslands provide important big game winter range areas for elk and deer. The Snake River canyon and Craig MountainWMA provide important winter and yearlong habitats for Rocky Mountain bighorn sheep. These habitats provide source habitats for species such as short-eared owl *(Asio flammeus)*, vesper sparrow *(Pooecetes gramineus)*, lark sparrow *(Chondestes grammacus)*, western meadowlark *(Sturnella neglecta)*, Preble's shrew, Brewer's sparrow *(Spizella breweri)*, and grasshopper sparrow *(Ammodramus savannarum)*. Special management emphasis for big game winter ranges would include noxious weed control, improved livestock management in localized areas, and restoration activities for establishment of native rangeland species (e.g., seeding, plantings). Highest priority for weed-control activities should include ~~weed infestations~~native plant communities in good and excellent ecological condition (e.g., prevention of weed encroachment), followed by other cooperative weed-control actions.

Riparian and Wetland Areas

More species of wildlife inhabit riparian and wetland areas than any other habitat because of the close proximity of food, water, and shelter. In addition to providing a source habitat for special status species, such as the federally listed bald eagle, salmon, steelhead, bull trout, and candidate yellow-billed cuckoo, these areas also provide an important habitat component for more than 140 species found in the planning area, such as waterfowl, amphibians, North American river otter *(Lontra Canadensis)*, beaver *(Castor canadensis)*, American mink *(Mustela vison)*, and many migratory birds. Restoration of riparian habitats would benefit a large number of species within the planning area. Land uses that have impacted riparian areas to varying levels include, mining, roads, livestock grazing, timber harvest, and recreation. Emphasis should occur in areas where the majority of

ownership of the drainage is comprised of federal and/or Idaho Department of Fish and Game lands and in areas where private land cooperation would occur.

Special Status Wildlife

Federally listed threatened or endangered wildlife occurring within the CFO includes the gray wolf *(Canis lupus)*, bald eagle *(Haliaeetus leucocephalus)*, Canada lynx *(Lynx canadensis)*, and northern Idaho ground squirrel *(Spermophilus brunneus brunneus)*. The yellow-billed cuckoo *(Coccyzus americanus)* is a federal candidate species that could occur within the planning area. A total of 37 BLM-designated sensitive species occur within the planning area (**Appendix G**, Idaho BLM Sensitive Species, **Table G-2**) (see Volume II~~I~~).

Federally Listed and Candidate Species

Gray wolf. This species was listed as endangered in 1973. As part of the recent reintroduction effort, all wolves in central Idaho were listed in 1994 as an "experimental/nonessential population" under the ESA. Quality of wolf habitat is generally characterized by the quality of ungulate big game (prey species) habitat. Although isolation from human disturbance is not as important to wolf management as once thought, it is a factor in maintaining high quality big game habitat and reducing the risks of incidental wolf mortality. The Northern Rocky Mountain Wolf Recovery Plan identifies the key components of wolf habitat as a sufficient year-round prey base of ungulates and alternate prey, suitable and semisecluded denning and rendezvous sites, and sufficient space with minimal exposure to humans (USFWS 1987).

The USFWS removed the distinct population segment of the gray wolf in the Northern Rocky Mountains from the list of endangered and threatened wildlife (Federal Register 2008), and the rule became effective March 28, 2008. The species is being delisted by the USFWS because the Northern Rocky Mountain population has exceeded recovery goals and potential threats have been resolved. Future management of the species will be in accord with applicable state and federal laws.

Bald eagle. This species was listed as endangered in 1978. In 1995, the bald eagle was downlisted from endangered to threatened. In 1999, the proposed rule to remove the bald eagle in the lower 48 states from the list of endangered and threatened wildlife was published in the *Federal Register*. The bald eagle was removed from the threatened and endangered species list with an effective date of August 8, 2007 (Federal Register 2007b). The protection provided to the bald eagle under the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act will continue to remain in place.~~To date, no final action has been taken on the proposal to delist the bald eagle. However, USFWS reopened the comment period for removing the species from ESA protection on February 13, 2006 (USFWS 2006b). The species would still receive protection from the Bald Eagle Protection Act and Migratory Bird Treaty Act if it were delisted.~~

With the exception of three nest sites in the Dworshak Reservoir area (North Fork Clearwater River subbasin), bald eagles are not known to nest in the planning area. These nest sites do not occur on BLM lands. The bald eagle is fairly common during the winter along larger mainstem rivers (e.g., Snake, Salmon, Clearwater, and South Fork Clearwater Rivers). Within the planning area, peak numbers occur between November and February, but periods of winter use occur from October 1 through April 1. Winter habitat for bald eagles is a function of perch and roost site availability, as well as access to fish, waterfowl, and ungulate carrion as forage/prey. Perch sites are characterized

by prominent, large trees in close proximity to winter foraging areas. Roost sites often are wind-sheltered, dominant trees in the canyon bottoms of larger rivers or along Dworshak reservoir. The factor that is considered most limiting is the availability of carrion, fish, or other forage species. Wintering bald eagles have also been observed on the Camas Prairie and may eat carrion, which is often associated with winter livestock feeding or calving operations on farms and ranches.

Canada lynx. The lynx was listed as threatened in 2000. The Lynx Conservation Assessment and Strategy (Ruediger et al. 2000) was developed by the Forest Service, USFWS, National Park Service, and the BLM to provide a consistent and effective approach to conserve Canada lynx on federal lands in the contiguous states. The Northern Rockies Lynx Amendment and Draft EIS will amend existing Forest Service and BLM land use plans.

In Idaho, lynx are most often found in Engelmann spruce/subalpine fir forests above 4,000 feet (Koehler and Brittell 1990). Important habitat features include den sites and foraging habitat. Den sites are typically located in hollow logs or rootwads within mesic, mature, or old growth coniferous forest (Koehler and Brittell 1990). Lynx foraging habitat corresponds with snowshoe hare *(Lepus americanus)* habitat because the hare is the lynx's primary prey, making up 35 to 97 percent of its diet throughout the range of the lynx (Koehler and Aubry 1994). Snowshoe hare are most abundant in seedling/sapling lodgepole pine, subalpine fir, and Engelmann spruce forest stands. Other prey species taken by lynx include red squirrel *(Tamiasciurus hudsonicus)*, grouse, northern flying squirrel, ground squirrel *(Glaucomys sabrinus)*, mice, vole, porcupine (*Erethizon dorsatum)*, beaver, and ungulates as carrion or occasionally as prey.

Northern Idaho ground squirrel. The northern Idaho ground squirrel was listed as threatened in 2000. In 2003 the USFWS approved a Recovery Plan for the species (USFWS 2003). The northern Idaho ground squirrel is found only in Idaho. It has the smallest geographic range of any squirrel subspecies and one of the smallest mammal ranges in North America (Gill and Yensen 1992). Its present range is north of Council, Idaho, extending to the Boulder River and Rapid River divide. No known populations are documented as occurring on BLM lands. Some BLM lands within the Little Salmon River subbasin provide suitable habitat for the species and no site specific surveys have been conducted to date.

This ground squirrel occupies dry, rocky, sparsely vegetated meadows surrounded by forests of ponderosa-pine or Douglas-fir at elevation of 3,800 to 5,200 feet (Yensen 1991, Dnyi and Yensen 1996). Nearly all the meadow sites used by this ground squirrel are on dry, shallow soils with no young tree invasion (Sherman and Yensen 1994). Nest burrows are located in adjacent small patches of well-drained deeper soils (Yensen et al. 1991). Surface features, such as logs or rocks, make a site more attractive to this species. Ponderosa pine-shrub steppe habitat associations on south-facing slopes at less than 30 percent slope and elevations below 6,000 feet are considered to be potentially suitable habitat (USFWS 2003). During 2005, a new population of northern Idaho ground squirrels was located along a divide ridge between Boulder Creek and Rapid River. The habitats consisted of sub-alpine meadow habitats along a ridge at approximately 7,500 feet in elevation. This is approximately 2,000 feet higher and is several miles north of other previous documented probable historical distribution. Idaho ground squirrels have a long annual seasonal torpor (physical inactivity) that continues for seven to eight months from late July or early August to late March or early April (Yensen 1991, Yensen and Sherman 2003). Adult males emerge first, followed by adult females, then yearlings.

This species needs large quantities of native grass seed and other green leafy vegetation to store enough body energy for long hibernation period. Their diet consists of grasses, forb leaves, flowers, roots, and bulbs, and, as the summer progresses, seeds (Yensen and Sherman 1997). If vegetation grows too high, so that both the tender growing parts of the plants and the energy important seed head are out of the reach of this ground squirrel, these ground squirrels do not fatten properly and are likely to suffer increased mortality during their long hibernation (Sherman and Yensen 1994).

Most northern Idaho ground squirrel populations are found in areas with shallow reddish parent soils of basaltic origin (Yensen 1991). Nesting burrows are in well-drained soils greater than three feet deep in areas not covered with trees or used by Columbian ground squirrels *(Spermophilus columbianus)*. The lack of extensive use of the same areas by the two species is probably a result of competition rather than different habitat requirements (Sherman and Yensen 1994). There are dietary similarities between these two species that make competition more likely (Dyni and Yensen 1996).

Yellow-billed cuckoo. The yellow-billed cuckoo is a candidate species. It prefers riparian areas with dense stands of cottonwood and willow. No recent observations for yellow-billed cuckoo have been documented within the CFO Area.

BLM Sensitive Wildlife

A total of 37 BLM-designated sensitive species occur on BLM lands within the planning area (**Appendix G**, Special Status Species, **Table G-3** [see Volume II~~I~~]). Table G-3 provides a brief summary of preferred habitats for each species. However, because of land ownership, species occurrences, preferred habitats, and land uses occurring on BLM lands, several sensitive species have priority and special emphasis and management concerns for BLM lands in the planning area. One group of species occupy forested areas, which may be characterized as mature to old growth and/or open stands and/or snag dependent (i.e., Northern goshawk, flammulated owl, Lewis woodpecker *[Melanerpes lewis]*, white-headed woodpecker *[Picoides albolarvatus]*, Williamson's sapsucker *[Sphyrapicus thryoideus]*, Hammond's flycatcher *[Empidonax hammondii]*, and fisher). Several sensitive invertebrate species have very limited range and preferred habitats and are endemic to the Lower Salmon River canyonlands or beaches/riparian habitats (i.e., marbled disc *[Discus marmorensis]*, shortface lanx *[Fisherola nuttalli]*, Columbia pebblesnail *[Fluminicola columbianus]*, Idaho banded mountainsnail *[Oreohelix idahoensis idahoensis]*, whorled mountainsnail *[O. vortex]*, boulder pile mountainsnail *[O. jugalis]*, and striate mountainsnail *[O. strigosa goniogyra]*). The mountain quail *(Oreotys pictus)* has very limited range within Idaho, and localized populations are associated with BLM lands in the west portion of the planning area. Preferred habitats include riparian, shrub/forest, coniferous forests, and forest edges.

3.2.10 Aquatic Resources, Fish, and Special Status Fish

Fish

Fish species are widely distributed and occupy a variety of habitats, including large rivers, tributary streams, ponds, and lakes. Aquatic habitats occur from low elevation canyonlands to high elevation subalpine areas. The planning area is known to support 39 species of fish, including 26 native species (**Table 3-~~7~~9**) and 13 nonnative species (**Table 3-~~8~~10**). The planning area provides habitat for

Table 3-9
Native Fish Known to Inhabit the Planning Area

Common Name	Scientific Name
Bridgelip sucker	*Catostomus columbianus*
Bull trout	*Salvelinus confluentus*
Chiselmouth	*Acrocheilus alutaceus*
Coho salmon	*Oncorhynchus kisutch*
Fall chinook salmon	*Oncorhynchus tschawytscha*
Largescale sucker	*Catostomus macrocheilus*
Leopard dace	*Rhinichthys falcatus*
Longnose dace	*Rhinichthys cataractae dulcis*
Mottled sculpin	*Cottus bairdi semiscaber*
Mountain sucker	*Catostomus platyrhynchus*
Mountain whitefish	*Prosopium williamsoni*
Northern pikeminnow	*Ptychocheilus oregonensis*
Pacific lamprey	*Lampetra tridentate*
Paiute sculpin	*Cottus beldingi*
Peamouth	*Mylocheilus caurinus*
Redband trout	*Oncorhynchus mykiss* ~~*gibbsi*~~*gairdneri*
Redside shiner	*Richardsonius balteatus balteatus*
Shorthead sculpin	*Cottus confuses*
Slimy sculpin	*Cottus cognatus*
Sockeye salmon	*Oncorhynchus nerka*
Speckeled dace	*Rhinichthys osculus*
Spring/summer chinook salmon	*Oncorhycnhus tschawytscha*
Summer steelhead	*Oncorhycnhus mykiss*
Torrent sculpin	*Cottus rhotheus*
Westslope cutthroat trout	*Oncorhynchus clarki lewisi*
White sturgeon	*Acipenser transmontanus*

Table 3-10
Nonnative Fish Known to Inhabit the Planning Area

Common Name	Scientific Name
Blue catfish	*Ictalurus furcatus*
Bluegill	*Lepomis macrochirus*
Brook trout	*Salvelinus fontinalis*
Brown bullhead	*Ictalurus nebolusus*
Carp	*Cyprinus carpio*
Channel catfish	*Ictalurus punctatus*
Flathead catfish	*Pylodictus olivaris*
Kokanee salmon	*Oncorhynchus nerka kennnerlyi*
Rainbow trout	*Oncorhycnhus mykiss*
Smallmouth bass	*Micropterus dolomieu*
White crappie	*Pomoxis annularis*
Yellow perch	*Perca flavescens*
Yellowstone cutthroat trout	*Oncorhynchus clarki bouveri*

five federally listed species and four BLM sensitive species (also see Section 3.2.7, Special Status Species).

The BLM manages fish and wildlife habitat, while fish and wildlife populations are administered by Idaho Department of Fish and Game, US USFWS, or National Marine Fisheries Service.

Approximately 625 miles of streams and rivers flow across BLM lands (BLM 2004a). Approximately 214 miles of fish-bearing streams and rivers flow across or are adjacent to BLM lands within the planning area (**Table 3-11~~9~~**). Six lakes (28 acres) occur on BLM lands and provide fish habitat. With the exception of Marshall Lake, none of these lakes support native salmonids, and fish presence is a result of fish transplants/stocking (e.g., rainbow trout, cutthroat trout, and brook trout). **Table 3-~~1~~12~~0~~** summarizes rainbow trout, cutthroat trout, brook trout, and white sturgeon streams and rivers that flow across or are adjacent to BLM lands within the planning area.

Table 3-11
BLM Land Ownership within Subbasins

Subbasin Name and Hydrologic Unit Number	BLM Fish-Bearing Main Stem River (Miles)	BLM Fish-Bearing Tributaries (Miles)	BLM Total (Miles)
Lower Snake– Hells Canyon 17060101	0.0	1.8 (4 streams)	1.8
Lower Snake – Asotin 17060103	1.5	6.4 (4 streams)	7.9
Middle Salmon –Chamberlain 17060207	0.0	6.0 (3 streams)	6.0
South Fork Salmon 17060208	0.0	0.4 (1 stream)	0.4
Lower Salmon 17060209	78.75	20.35 (30 streams)	99.1
Little Salmon 17060210	3.2	11.4 (11 streams)	14.6
Middle Fork Clearwater 17060304	0.0	0.5 (1 stream)	0.5
South Fork Clearwater 17060305	5.5	29.2 (20 streams)	34.7
Clearwater 17060306	16.0	32.8 (28 streams)	48.8
Lower North Fork Clearwater 17060308	0.15	0.0	0.15
Total			**213.95**

Table 3-12
Fish Habitat Summary for Selected Species

Common Name	Scientific Name	Length of Streams/Rivers on BLM Lands
Rainbow trout	*Oncorhynchus mykiss*	204 miles
Cutthroat trout	*Oncorhynchus clarki*	157 miles
Brook trout	*Salvelinus fontinalis*	32 miles
White sturgeon	*Acipenser transmontanus*	80 miles

Historic aquatic and watershed conditions ranged from highly disturbed to highly stable. It is assumed that the landscape is constantly changing, either by natural or human caused events, or both. The influence of human activities on natural watershed processes and recognition of the natural range of variability is critical for evaluation of watershed conditions. Insect/disease impacts on forests, drought, large fires, floods, and debris torrents interact with human-caused disturbances such as timber harvest, roads, mining, livestock grazing, and development to either accentuate or lessen the intensity and duration of natural disturbance (Lee et al. 1997). Direct or indirect effects to instream channel condition, riparian habitats, and water quality have occurred.

Overall connectivity between populations within the planning area remains intact; the primary exception occurs at some road crossings (e.g., culverts/roads) where partial or complete barriers may prevent passage for juvenile and adult fish. Connectivity between populations and subpopulations is critical for providing genetic diversity.

In general, water quality, riparian habitats, and fish habitat have experienced slight upward trends during the past one to two decades within drainages that have a majority of ownership as federal and/or Idaho Department of Fish and Game. Such aquatic habitat improvements are primarily attributed to improved public land management practices, restoration activities, and federal listing of fish (ESA).

Special Status Fish

Special status species are those that are listed as threatened or endangered under the federal ESA and species designated as sensitive by the BLM. The planning area provides habitat for eight special status fish species (**Table 3-13~~11~~**). Five federally listed threatened and endangered fish species occur within the planning area, the Snake River sockeye salmon (*Oncorhynchus nerka*), Snake River spring/summer chinook salmon (*O. tschawytscha)*, Snake River fall chinook salmon (*O. tschawytscha)*, steelhead trout, and bull trout. The Snake River steelhead Evolutionarily Significant Unit is proposed for relisting as the Snake River Basin *O. mykiss* Evolutionarily Significant Unit, which includes both resident and anadromous forms within the range of the existing steelhead Evolutionarily Significant Unit. Three additional species designated as BLM sensitive species occur within the planning area including and include the Pacific lamprey (*Lampetra tridentate)*, redband trout (*O. mykiss gibbsi)*, and westslope cutthroat trout (*O. clarki lewisi)*. The Snake river spring/summer chinook salmon (Clearwater River basin) is listed as both federally threatened and BLM sensitive. Critical habitat has been designated within the planning area for spring/summer chinook salmon, fall chinook salmon, sockeye salmon, and steelhead trout. USFWS designated critical habitat for bull trout; however, such

Table 3-13
Federal Listed and BLM-listed Sensitive Fish Species in the Planning Area

Common Name and Scientific Name	Status
Sockeye salmon *Oncorhyncus nerka*	Endangered
Fall chinook salmon *Oncorhyncus tschawytscha*	Threatened
Spring/summer chinook salmon *Oncorhynchus tschawytscha*	Threatened—Snake and Salmon River basins BLM sensitive—Clearwater River basin
Summer steelhead *Oncorhynchus mykiss*	Threatened
Bull trout *Salvelinus confluentus*	Threatened
Westslope cutthroat trout *Oncorhynchus clarki lewisi*	BLM sensitive
Pacific lamprey *Lampetra tridentate*	BLM sensitive
Redband trout *Oncorhynchus mykiss gibbsi*	BLM sensitive

designations did not include any streams or rivers flowing across BLM lands within the planning area.

The BLM has consulted with National Marine Fisheries Service and USWFWS per Section 7 of the ESA for federally listed fish as they relate to a variety of activities, such as timber sales, new recreation sites, and herbicide spraying, and to such programs as livestock grazing and recreation. The BLM also has consulted at a subbasin and watershed level for all ongoing activities and programs for federally listed salmon, steelhead, and bull trout.

Sockeye Salmon

The Snake River sockeye salmon was listed as endangered in 1991. Critical habitat was designated in 1994. Within the planning area, approximately 80 miles of the Snake and Salmon Rivers flowing across or adjacent to BLM lands provide habitat for the sockeye salmon. Sockeye salmon were once an abundant and widely distributed species in the Columbia River basin. Native stocks have declined and a remnant population of sockeye salmon exists at Redfish Lake in the upper Salmon River basin. An intensive, captive brood-stock program has been initiated to conserve the remaining population (Quigley and Arbelbide 1997).

Fall Chinook Salmon

The Snake River fall chinook salmon was listed as threatened in 1992. Critical habitat was designated in 1994. Within the planning area, approximately 98.4 miles of the Snake River, Salmon River, Clearwater River, North Fork of the Clearwater River, and lower South Fork of the Clearwater River flowing across or adjacent to BLM lands provide habitat for the fall chinook salmon. Fall chinook

salmon are found in mainstem Snake River, Salmon River, and lower portion of South Fork of Clearwater River. The Nez Perce Tribe has initiated an active reintroduction effort for fall chinook salmon in the Snake and Clearwater Rivers, and fall chinook returns to mainstem rivers has increased substantially. **Table 3-~~12~~ 14** shows monitoring results for the Salmon, Snake, and Clearwater Rivers.

Spring/Summer Chinook Salmon

The Snake River spring/summer chinook salmon was listed as threatened in 1992. Critical habitat was designated in 1994. Within the planning area, approximately 119 miles of the Snake River, Salmon River, Little Salmon River, and tributary drainages flowing across or adjacent to BLM lands provide habitat for the federally listed spring/summer chinook salmon.

Spring/summer chinook salmon occurring within the Clearwater River basin are designated BLM sensitive species. Spring/summer chinook salmon in the Snake River and Salmon River are considered an Evolutionarily Significant Unit and are federally listed as threatened. However,

Table 3-14
Fall Chinook Salmon Redds Counted in the Snake, Salmon, and Clearwater Rivers, 1986-2005

Year	Snake River	Salmon River	Clearwater River
1986	7	No surveys	No surveys
1987	66	No surveys	No surveys
1988	64	No surveys	21
1989	58	No surveys	10
1990	37	No surveys	4
1991	51 [1]	No surveys	4
1992	47 [1]	1	26
1993	127 [1]	3	36
1994	67 [1]	1	37
1995	71 [1]	2	20
1996	113 [1]	1	69
1997	58 [1]	1	72
1998	185 [1]	3	78
1999	373 [1]	0	181
2000	346 [1]	0	173
2001	709 [1]	22	312
2002	1113 [1]	31	524
2003	1512 [1]	18	571
2004	1709 [1]	19	630
2005	1442 [1]	27	487

[1]Redd counts include helicopter and underwater video.

spring/summer chinook salmon in the Clearwater River basin are not considered part of this Evolutionarily Significant Unit because it is believed that indigenous spring/summer chinook populations were eliminated from the Clearwater River Basin by construction of Lewiston Dam. It is widely believed that Lewiston Dam, constructed near the mouth of the Clearwater River in 1927,

virtually eliminated all runs of wild chinook salmon in the Clearwater basin until its removal in the 1940s. Harpster Dam, constructed on the South Fork Clearwater River in 1910, may have eliminated or reduced runs of spring chinook salmon into the South Fork Clearwater River prior to the construction of Lewiston Dam. Both dams have been removed and naturally spawning runs of chinook salmon have been established through supplementation with hatchery fish. Within the planning area (Clearwater River Basin), approximately 55 miles of streams and river flowing across or adjacent to BLM lands provide habitat for the designated BLM sensitive spring/summer chinook salmon.

Bull Trout

The Klamath and Columbia River population segment was listed as threatened in 1998. Bull trout critical habitat was designated in 2004; however, the designation did not include any streams or rivers crossing BLM lands in the planning area. Bull trout appear to have more specific habitat requirements than other salmonids (Rieman and McIntrye 1993). Habitat characteristics including water temperature, stream size substrate composition, cover, and hydraulic complexity have been associated with the distribution and abundance (Jakober 1995; Rieman and McIntyre 1993). Bull trout have repeatedly been associated with the coldest stream reaches within the basins (Lee et al. 1997). Within the planning area, approximately 145 miles of main stem rivers and tributary streams provide habitat for bull trout.

Summer Steelhead

Steelhead trout in the Snake River basin were listed as threatened in 1997. Critical habitat for steelhead trout was designated in 2005 and includes most streams historically occupied by steelhead trout crossing BLM lands within the planning area. Within the planning area, approximately 204 miles of mainstem river and accessible fish-bearing tributary streams provide habitat for steelhead trout and flow through BLM lands.

Westslope Cutthroat Trout

Three life history strategies of westslope cutthroat trout are known to occur, which include adfluvial, fluvial, and resident forms (Likenes and Graham 1988). Those most common in central Idaho include fluvial and resident forms, with fluvial fish comprising the only migratory populations in larger river systems. Historically, westslope cutthroat trout were the dominant salmonid in streams of central and northern Idaho (Behnke and Wallace 1986). Westlope cutthroat trout presently remain widely distributed within their historical range, and some extension of the natural distribution has also occurred through hatchery introductions (Quigley and Arbelbide 1997). Despite wide distribution, there appear to be a few remaining healthy populations outside the central Idaho mountains. Rieman and Apperson (1989) estimated that strong westslope populations exist in only 11 percent of the historical range in Idaho, and populations that were both numerically strong and genetically pure existed in only 4 percent of the historical range. Three factors believed to contribute most to the decline of westslope cutthroat trout include: 1) introduced species; 2) angling; and 3) habitat disruption (Quigley and Arbelbide 1997). Within the planning area, approximately 157 miles of streams and river flowing across or adjacent to BLM lands provide habitat for westslope cutthroat trout.

Steelhead trout, bull trout, and westslope cutthroat trout distribution in streams is similar to the historic distribution, with the exception that steelhead trout no longer exist in the North Fork Clearwater River upstream of the Dworshak dam. Although present in much of their historic range, it is believed that the abundance and resiliency of these three trout species has been significantly reduced from historic conditions as a result of habitat degradation, introduced species, harvest, and migration barriers (Lee et al. 1997).

Pacific Lamprey

Pacific lamprey is anadromous and parasitic during the ocean phase. Historical distribution of Pacific lamprey is similar to Pacific salmon. Pacific lamprey enter freshwater between July and September and migrate several hundred miles inland (Quigley and Arbelbide 1997). They spawn in tributary streams during the following spring. Ammocoetes spend four to six years burrowing into fine stream sediments and filter feeding on algae, diatoms, and detritus. Juvenile lamprey migrate downstream after completing metamorphosis, or during its final states, in late fall through spring. They remain in the ocean 12 to 20 months before returning to freshwater to spawn. Similar to other anadromous fish, the distribution and abundance of Pacific lamprey has been reduced by the construction of dams and water diversions as well as degradation of spawning and rearing habitat. All mainstem rivers provide habitat for Pacific lamprey. The larger tributary drainages that are accessible to anadromous fish probably historically provided habitat for Pacific lamprey. Pacific lamprey upstream adult passage counts at Lower Granite have shown the decline in Pacific lamprey entering Idaho streams. Hydroelectric impacts (fish passage) and alteration of rearing habitat are considered to be two major factors contributing to Pacific lamprey decline in the Columbia River basin and Snake River subbasin (Jackson et al. 1996).

Redband Trout

Nonanadromous rainbow (redband) trout in the Upper Columbia River basin have been further divided into two groups, one group which evolved in sympatry with steelhead and the other allopatric, or those that evolved outside the historical range of steelhead. Sympatric rainbow trout are considered, a nonanadromous form, historically derived or associated with steelhead and have been termed "residuals." Both anadromous and nonanadromous forms exist in sympatry in most populations, and morphologically, juveniles of both forms are indistinguishable. The BLM has conducted genetic verification for presence of allopatric redband trout in several drainages and preliminary results indicated the presence of redband trout above several fish passage barriers.

Redband trout appear to be widely distributed within the Columbia River basin; however, their status is clouded by the uncertainty over taxonomic classification within the species and by more than a century of stocking nonnative rainbow trout and steelhead (Behnke 1992). Habitat degradation, hybridization or competition with introduced species, and a restricted range for some populations are the principal threats to conservation of the remaining redband trout (Williams et al. 1989).

3.2.11 Special Status Plants

BLM special status plants are defined as those currently listed as threatened or endangered under the ESA, as well as species that are proposed or candidates for listing. It also includes species designated as sensitive by the BLM State Director. The BLM sensitive species are protected, managed, and

conserved in the same manner as federal candidate species. In Idaho, the BLM has defined and further clarified the management of special status plants by designating species as either BLM sensitive or watch list.

Threatened and Endangered Plants

The CFO provides habitat for two federally listed as threatened plants, MacFarlane's four-o'clock *(Mirabilis macfarlanei)* and Spalding's catchfly *(Silene spaldingii)*. Five populations of MacFarlane's four-o'clock occur on BLM lands in the lower Salmon River canyonlands, one of which is a transplanted population. One of these five populations occurs on both BLM and private lands, while the other four populations are located entirely on BLM-administered lands. ~~Several~~ Seven populations of Spalding's catchfly occur on BLM lands in the lower Snake River canyonlands, and three populations occur in the lower Salmon River canyonlands.

MacFarlane's Four-o'clock

In 1979, the USFWS listed MacFarlane's four-o'clock as endangered under the ESA and downlisted it to threatened in 1996. The USFWS published a recovery plan in 1985 (USFWS 1985) and updated the recovery plan in 2000 (USFWS 2000). Ten populations of *M. macfarlanei* are currently known to occur on federal lands in Idaho and Oregon, including the Hells Canyon/Snake River canyon area, Salmon River area, and Imnaha River area. ~~Six~~ Five populations of *M. macfarlane~~i~~i* occur on CFO lands, one of which was transplanted by the BLM at the Lucile Caves ACEC/RNA. A few small populations of *M. macfarlanei* occur on privately owned lands within the planning area. The total geographic range that the species occupies is an area of approximately 29 by 18 miles.

M. macfarlanei occurs in river canyon grassland habitats that are characterized by regionally warm and dry conditions. Precipitation occurs mostly as rain during winter and spring. Sites are dry and generally open, although scattered shrubs may be present. Plants can be found on all aspects, but plants often occur on southeast to western aspects. Slopes may be steep or nearly flat. Soil texture varies from sand to sandy-loam with inclusions of talus (consisting of gravel and cobbles). *M. macfarlanei* populations range from approximately 1,000 to 3,500 feet in elevation. Habitat for *M. macfarlanei* generally consists of bunchgrass communities dominated by bluebunch wheatgrass. The updated recovery plan (USFWS 2000) has identified the following as reasons for the decline of and the current threats to *M. macfarlanei*: (1) accidental herbicide and pesticide spraying; (2) slope failures/landslides; (3) road repair/maintenance; (4) insect damage and disease; (5) invasion of habitat by exotic plant species; (6) livestock grazing; (7) fire suppression; (8) trampling; (9) off-road vehicles; (10) collecting; (11) mining; (12) competition for pollinators; and (13) inbreeding and depression. No documented off-road vehicle use exists in any known population occurring on CFO lands. Nonnative plant species pose a serious threat to *M. macfarlanei* and other native plants because they compete for space, light, water, nutrients, and pollinators.

Spalding's Catchfly

The USFWS listed Spalding's catchfly as threatened under the ESA in 2001. The CFO has the largest known population of *S. spaldingii* in Idaho. These populations are the only ones occurring on federal lands in the state and occur in the Snake River and Salmon River canyon grasslands (Lower Snake River and Lower Salmon River subbasins). Seven populations occur on BLM lands within the Lower Snake River subbasin, and three populations occur on BLM lands in the Lower Salmon River

subbasin. These populations are threatened by yellow starthistle infestations. One of the Salmon River canyonland populations is currently threatened by the noxious weeds leafy spurge *(Euphorbia esula),* whitetop *(Cardaria draba),* and other weeds (Gray and Lichthardt 2003).

This species is primarily restricted to mesic (not extremely wet or extremely dry) grasslands. These grasslands may occur in prairie, steppe, or canyon grassland communities and make up the Palouse Region in southeastern Washington, northwestern Montana, and adjacent portions of Idaho and Oregon. In addition, there are approximately 100 plants in British Columbia. Palouse habitat is considered to be a subset of the Pacific Northwest bunchgrass habitat type (Tisdale 1983). In Idaho, Palouse habitat is confined to a narrow band along the western edge of central and north-central Idaho centering on Latah County (Tisdale 1983). Large-scale ecological changes in the Palouse region over the past several decades, including agricultural conversion, changes in fire frequency, and alterations of hydrology, have resulted in the decline of numerous sensitive plant species, including *S. spaldingii* (Tisdale 1961). More than 98 percent of the original Palouse prairie habitat has been lost or modified by agricultural conversion, grazing, invasion of nonnative species, altered fire regimes, and urbanization (Noss et al. 1995).

BLM Sensitive Plants

The CFO has 19~~6~~ plant species designated as sensitive. These sensitive plant species are listed in **Appendix G**, Idaho BLM Sensitive Species, **Table G-1** (see Volume II~~I~~), along with their preferred habitat, their status, and the number of known populations within the CFO. These species occupy a wide range of habitats that include, but are not limited to, open grasslands, shrublands, forested areas, wetlands, riparian areas, rock outcrops, and specific substrates. Many of these habitats have had varying levels of impacts from a variety of land uses, such as livestock grazing, timber harvest, fire exclusion, mining, roads, and recreation. The greatest threats to BLM sensitive plants that occupy grassland habitats are from infestations of nonnative species. Some populations are experiencing habitat degradation and downward trends from nonnative plant species encroachment on preferred habitats. Currently, some populations of BLM sensitive plants have noxious and other weed infestations.

The Idaho Department of Fish and Game, Conservation Data Center and the Idaho Native Plant Society are tracking ~~four~~ two watch list species that occur on CFO lands: ~~Payson's milkvetch *(Astragalus paysonii),* deer-fern *(Blechnum spicant),*~~ sticky goldenweed *(Haplopappus hirtus* var. *sonchifolius)~~,~~* and wolf's currant *(Ribes wolfii)* (Idaho Conservation Data Center 2004; Idaho Native Plant Society 2004). The CFO reports occurrences of these species to Idaho Department of Fish and Game, Conservation Data Center, but the Idaho BLM does not recognize them as special status plants.

3.2.12 Wildland Fire Ecology and Management

Wildland-Urban Interface

Since the MFP was approved in 1981, more homes, infrastructure, and other structures have been built near and around forests. These structures within the WUI are vulnerable should fires occur. People, homes, and structures continue to occupy the WUI as hazard fuels continue to accumulate due to fire suppression and lack of controlled burns or other fuel management measures, which creates a high-risk and volatile situation. A list of all WUI communities that are at high risk from wildland fire was published in the *Federal Register* (Volume 66, August 17, 2001). Approximately 63

communities of varying size and development are considered to be at risk within the CFO. Additionally, the CFO identifies Communities of Interest that are not on the *Federal Register* list, but have been identified at high or moderate risk from wildland fire.

Adams, Clearwater, Idaho, Latah, Lewis and Nez Perce counties have recently (August 2005) completed Community Wildfire Protection Plans that characterize risks and preparedness and recommend and prioritizes treatments. These plans identified 94,093 acres of WUI on CFO-administered lands. The "urban" WUI is 33,584 acres and is a subset of the total WUI. The area considered WUI is expected to expand with continued development.

Fuel Conditions

Fuels include live and dead vegetation. Grass, dead needles and leaves, dead branches (on the ground or on the tree), bark, and standing live or dead trees and shrubs can be fuel for a fire. Historically, on the dry sites, fires periodically removed forest floor fuels and dead trees, and even smaller standing live trees. Successful fire suppression has allowed these fuels to build up. On the wet-cold and wet-warm vegetation types, mixed severity and stand-replacing fires were the historic fire regime. Many of the mixed severity areas have transitioned to stand-replacing fires because of increased stocking and fuel load.

Fuel conditions caused by deteriorating forest health are conducive to supporting high-intensity fire behavior. As the number of trees-per-acre increases, so does fuel loading and extreme fire behavior potential. More small-diameter trees increase fuel loading, suppress tree populations, and promote tree mortality by insect and disease.

The change in fuel conditions on the forested lands in the CFO can be indicated using forest health condition measurements (stocking and mortality). **Table 3-~~13~~ 15** shows the change in fuels related to live and dead trees that could be fuels in a fire, based on continuous forest inventories conducted in 1974 and 1992.

Table 3-15
Forest Health and Fuel Indicators, 1974 to 1992

Indicator	1974 Inventory	1992 Inventory	Change
Live trees per acre five inches diameter at breast height[1] or less	807	1,574	+95%
Live trees per acre greater than an average of five inches diameter at breast height	144	120	-17%
Suppressed live trees per acre	29.4	483.7	+1,545%
Mortality trees per acre	21.3	40.7	+91%

[1] Diameter at breast height is a standard.

Fuel conditions have also been affected in the perennial grass type by nonnative, invasive species such as cheatgrass and yellow starthistle. When burning, these species exhibit fire behavior and effects that are different from the native bunch grasses which historically were found on these sites. Cheatgrass dries out faster in the summer, producing more fine fuels earlier in the fire season.

Yellow starthistle retains moisture longer and grows larger than native plants, so when it finally dries out, the fuel it creates is larger and burns slower and hotter, increasing fire severity.

Fire History

There is a sharp decline in acres of large fires (greater than 10 acres or extending beyond the first 24 hours of suppression activities) in north-central Idaho from 1920 through the 1950s, most likely due to fire suppression. However, in recent decades, the acreage of large fires is increasing or is variable, which may be due to the buildup of fuels resulting from successful fire suppression and the increased risk and severity of fires.

BLM-specific data for the CFO from 1983 to 2002 indicates there were a total of 12,600 fire starts that burned 1.3 million acres in the planning area, with 26,000 acres of BLM-managed lands burned (BLM 2004b). There have been few fires on BLM-managed lands in the planning area that have needed emergency stabilization and rehabilitation, which is unlikely to change in the future.

Fire Regime Condition Class

The success of fire suppression efforts and resource management activities over the last 100 years has influenced the structure and composition of forests and fuel conditions by changing tree species composition, increasing trees per acre, changing understory and overstory vegetation, and changing the volume of dead and dying woody vegetation that remains on-site. The function and process of ecological systems has changed. Fire is no longer a major agent of change, and tree species composition and density has led to increasing insect and disease problems. Population and development densities continue to increase within forested environments of the CFO. The risk and severity of fires continue to grow. On a large scale, the ICBEMP projects that if current fire management continues, ecological integrity will decline. Additionally, wildland fires have a high likelihood of adversely affecting human assets (BLM and Forest Service 1997).

Scientific findings from the ICBEMP highlight fire as a major ecosystem process. Fire severity and frequency have changed across the landscape. Before Euro-American settlement, most fires in low- and mid-elevation forests were nonlethal. Forests and rangelands benefited from these frequent surface fires, which thinned vegetation and favored growth of fire-tolerant ~~trees~~species. Lethal or stand-replacing fires played a lesser role on these landscapes; now those types of fires predominate. Lethal fire regimes now exceed nonlethal fire regimes in forested areas, where they should be the norm on only about 26 percent of the CFO. Fire exclusion, livestock grazing, timber harvest, and exotic plant introduction have contributed to these changes (BLM and Forest Service 1997). More detailed trend analysis for fire management is provided in the CFO Fire Management Plan (BLM 2004b, 2005c).

Fire regimes (**Table 3-~~14~~16**) are used as part of the fire condition class discussion to describe fire frequency (average number of years between fires) and fire severity (effect of the fire on the dominant overstory vegetation: low, mixed, or stand replacement).

The FRCC is a classification system that describes the amount of departure an area or landscape is from the historic condition to the present condition. Three FRCCs are used to classify existing ecosystem conditions that categorize the departure. **Table 3-~~15~~ 17** presents total percentage of BLM

Table 3-16
Historical Fire Regimes

Fire Regime	Description
I	0 to 35 year frequency, low severity
II	0 to 35 year frequency, stand replacement severity
III	35 to 100+ year frequency, mixed severity
IV	35 to 100+ year frequency, stand replacement severity
V	200+ year frequency, stand replacement severity 100 years

Source: Hardy et al. 2001

Table 3-17
Fire Regime Condition Classes on CFO Lands

FRCC	Amount of CFO Lands	Definition of FRCC
1	13,880 acres 10%[1]	• Fire regimes are within or near an historical range; • The risk of losing key ecosystem components is low; • Fire frequencies have departed from historical frequencies by no more than one return interval; and • Vegetation attributes (species composition and structure) are intact and functioning within an historical range.
2	47,529 acres 33%[2]	• Fire regimes have been moderately altered from their historical range; • The risk of losing key ecosystem components has increased to moderate; • Fire frequencies have increased or decreased from historical frequencies by more than one return interval, resulting in moderate changes in fire size, frequency, intensity, severity, or landscape patterns; and • Vegetation attributes have been moderately altered from their historical range.
3	82,342 acres 57%[3]	• Fire regimes have been significantly altered from their historical range; • The risk of losing key ecosystem components is high; • Fire frequencies have departed from historical frequencies by multiple return intervals, creating dramatic changes in fire size, frequency, intensity, severity, or landscape patterns; and • Vegetation attributes have been significantly altered from their historical range.

Source: BLM 2004a; Schmidt et al. 2002
[1] Mostly in wet/cold conifers, with less than 10 percent in water.
[2] Across all vegetation types, except perennial grass.
[3] All of perennial grass and 72 percent of dry conifer.

lands (forested and nonforested) by FRCC. Methodology used to determine FRCC is outlined in Idaho IM-2005-062.

The FRCC strategy is one tool that projects the quantity and rate of fuels reduction treatments required on a landscape scale to restore fire-adapted ecosystems. Additionally, WUI risk reduction, or the change in vegetative conditions from supporting stand-replacing fire, to one that will not, is the rating method for WUI fuel-reduction efforts. FRCC 1 ecosystems are considered to be healthy and functioning adequately. FRCC 2 ecosystems are considered to be unhealthy and their rate of

deterioration is expected to increase moderately to rapidly. FRCC 3 ecosystems are considered to be unhealthy and nonfunctioning. It should be noted that stands within the WUI in a stand-replacing regime may be functioning within historic regimes (FRCC 1), but stand-replacing fire may not be socially acceptable and management activities to reduce the likelihood of stand-replacing fire may be encouraged. As a part of the 2005 FMP effort, FRCC was determined and confirms that significant changes have occurred in the ecosystems because 90% of BLM lands are classified as FRCC 2 or 3.~~The CFO Fire Management Plan confirms that significant changes have occurred in the forest ecosystems because 90 percent of BLM lands are in FRCC 2 and FRCC 3 (BLM 2004b)~~. **Table 3-~~16~~ 18** presents percentage of forested lands by FRCC.

Table 3-18
Forested Vegetation on BLM Lands by FRCC

Historic Fire Regime Group	GAP[1] Cover Type	Approximate BLM GAP Acres[2]	Current FRCC[3]	Reason for Departure from Historical Condition
I	Dry conifer	66,431	FRCC 3	Modification of historic fire regimes, overstocked conditions, accumulations of litter and woody material, and multiple insect and disease pathogens.
II	Mid-elevation shrub steppe	5,677	FRCC 2	Modification of historic fire regime, heavier than historic fuel loads, decadent plants.
II	Mountain shrub	4,642	FRCC 2	
II	Perennial grass and other (including canyon grasslands, agriculture, barren, and rock)	30,113	FRCC 3	Modification of historic fire regime, invasion of nonnative vegetation.
III	Aspen/conifer mix	22	FRCC 2	Modification of historic fire regime, decadent vegetation, encroachment by conifers.
IV	Wet/cold conifer	34,537	FRCC 2	Modification of historic fire regime and disease infestation.
V	Riparian	2,404	FRCC 2	NA

Source: [1] Scott et al. 2002; [2] BLM 2004a; [3] BLM 2004b

3.2.13 Cultural Resources

Cultural resources are locations of human activity, occupation, or use. They include expressions of human culture and history in the physical environment, such as prehistoric or historic archaeological sites, buildings, structures, objects, districts, or other places. Cultural resources can be natural features, plants, and animals that are considered to be important to a culture, subculture, or community. Cultural resources also include traditional life ways and practices.

The planning area lies in a complex setting of major drainages that form a link between three major culture areas. The Salmon River, Clearwater River, and Snake River dissect the planning area, which

provides major elevation and aspect changes, creating differences in flora and fauna seasonal availability. People living in the area would have had access to diverse natural resources found in both uplands and the drainage bottoms. This variability would have allowed for long-term settlement and use of the planning area, while allowing the exchange of diverse ideas from various other people in the Far West and Great Plains. Hence, the archaeological sites are deeply stratified and complex, indicating long-term and adaptive use of an ever-changing environment.

Cultural resources in the planning area are exceptional and have national importance. Archaeological sites along the Salmon and Snake Rivers include a substantial concentration of resources associated with multiple eras, ethnicities, and human uses. The Coopers Ferry site includes one of the earliest dated occupations in the Northwest and has already contributed valuable information on cultural and environmental history. The Lewis and Clark and Nez Perce (Nee-Me-Poo) National Historic Trail segments are a tangible link to the history of exploration and the treatment of the Nez Perce in the nineteenth century.

Cultural Periods

Three cultural chronologies have been developed, reflecting major archaeological work that has been done in the three drainage systems. Leonhardy and Rice's (1970) Lower Snake River cultural chronology still functions as the standard for the Lower Snake River but has also been used in Hells Canyon, which is peripheral to what is generally considered the lower Snake River area. Sappington (1994) developed a cultural chronology for the Clearwater River drainage. Davis (2001) has presented a new culture history model for the Salmon River that includes six phases. Most BLM-managed prehistoric sites are within the Salmon River drainage; as such, that chronology is described.

The Lower Salmon River cultural chronology incorporates more than the last 11,500 years Before Present (BP). Six phases of human occupation include the Cooper's Ferry I (11,500-11,000 BP), Cooper's Ferry II (11,000-8,400 BP), Craig Mountain (8,400-3,500 BP), Grave Creek (3,500-2,100 BP), Rocky Canyon (2,100-600 BP), and Camas Prairie (600-150 BP).

Cooper's Ferry I (11,500-11,000 BP) and Cooper's Ferry II (11,000-8,400 BP) characterize some of the earliest occupation in the Northwest. The Cooper's Ferry site is one of the oldest dated sites, with both phases defined at this site. Little is known about the people who lived during the Cooper's Ferry I phase. A tool cache that dates to this phase indicates the use of stemmed points and the reliance on large ungulates. More information is available about the people who lived during the Cooper's Ferry II phase. A food source was large animals, such as elk and deer, supplemented with small animals and plant resources. There appears to be an increase in the use of the riparian zone with increased densely occupied living surfaces. Fish were increasing in importance as a food source. The climate during this phase is characterized by very cold dry winters and very hot dry summers.

The Craig Mountain Phase (8,400-3,500 BP) witnessed intensification of settlement, with an increase in river mussel and deer as food. Other big game remains have been found as well, including elk, antelope, and bison. Climatic changes were occurring, with a shift from mild dry winters and hot dry summers to cool wet winters and warm moist summers.

During the Grave Creek Phase (3,500-2,100 BP), similar game was hunted but with the addition of Rocky Mountain bighorn sheep. River mussels are found in increased abundance. Also, tools used to

grind roots are found in increasing abundance. This suggests increased use of root crops, such as camas and cous. The climate during this phase is characterized by cool wet winters and warm moist summers.

Permanent winter villages along the major river courses became common during the Rocky Canyon Phase (2,100-600 BP). The location of permanent winter villages in the canyon bottoms provided protection in the winter due to the milder climate created by the significant change in elevation from the plateau to the canyon bottom. Semisubterranean structures often referred to as pit houses were constructed. There were cool moist winters and warm moist summers during this period. The appearance of the village pattern indicates populations were becoming more permanent. Use of net sinkers and bone tools (possibly to repair nets) is more dominant. There appears to be an increase in the use of anadromous fish as a food staple.

The Camas Prairie Phase (600-150 BP) witnessed a continuation of intensive village use along the major river courses. Increased use of Euro-American trade goods begins during this time. Also, Euro-American diseases were transmitted to Native American populations with devastating results because the native groups had little, if any, natural resistance. The horse was also traded to the local Native American people from other Native American groups from the south. Although extensive trade networks had always existed, this increased mobility allowed for travel and resource trade over greater distances.

The next cultural development in the area can be referred to as the Historic Phase, or that phase when Euro-Americans first entered the region. The Lewis and Clark Expedition arrived in the area in 1805. The trail route of the Lewis and Clark Expedition has been designated as the Lewis and Clark National Historic Trail. Fur trappers soon followed by 1811. In 1855, the Nez Perce Tribe signed a treaty with the US government with the understanding that they would retain control over most of their original homeland, which encompasses the entire planning unit. Gold was discovered in the 1860s, which led to a new disputed treaty in 1863.

Mining soon ensued throughout the planning area. Mining districts at Elk City, Marshall Mountain, and several districts along the Salmon River soon developed. Initial mining focused on the use of hydraulic mining techniques. Water was used to excavate the gold-bearing earth and wash it through sluice boxes to recover the gold. Ditches and reservoirs were used to transport water to the mining sites. Chinese miners arrived on the scene in the 1870s~~1880s~~ but were initially not allowed in the mining camps. Once the easily mined gold was removed by the Euro-Americans, the Chinese miners were allowed into the mine camps and reworked many of the claims that were thought to be exhausted. Lode, or hard rock, mining soon followed the 1860s rush with the extraction of minerals via underground adits and shafts in the Elk City and Marshall Mountain mine camps. Mill sites were developed to process these minerals and some operated until the 1940s.

Pack trails and wagon roads developed to supply the mines. Agriculture had its beginnings near the stations and stops along the trails to the newly formed mining districts. There are few homestead- and ranching-related sites because most of these sites are on land that was patented into private ownership.

A gold rush soon ensued, over the objections of the Nez Perce Tribe, when gold was discovered in 1860 on the Nez Perce Reservation. In 1863, a new treaty was drafted greatly reducing the area of the reservation, but only a portion of the Nez Perce agreed to the new reservation. The Nez Perce

War ignited in 1877 with the US Army chasing the non-treaty Nez Perce people who refused to sign the treaty through the planning area and into Montana before their capture. This event is memorialized by Congressial designation in 1986 as the as the Nez Perce (Nee-Me-Poo) National Historic Trail.

Nez Perce oral history relates that the Nez Perce people have used this area since time immemorial. Traditional subsistence, social, and religious activities continue to be practiced throughout the planning area. Other Native American groups may have used portions of the planning area at various times over the millennia as well. For example, the Coeur d'Alene Tribe may have used the northern end of the planning area, groups from the plains may have used the eastern part of the planning area, and groups from the Great Basin may have used portions of the southern end of the planning area.

Inventories

There are 493 known cultural resource sites administered by the CFO and many areas that have not been inventoried. These resources reflect at least 12,000 years of human use and occupation of the planning area. Cultural resource sites may be found in a variety of forms that include open lithic sites that consist of a scatter of flaked stone material that often depict seasonal camps, rock shelters, pit house sites that reflect longer terms of residence, trails, tool stone quarries, graves, rock art, including pictographs or petroglyphs, and rock cairns (stacked rock features), typically associated with Native American religious activities. Most of these sites are located along the major river corridors, riparian zones, and major ridgetops. Many of these cultural resources are multicomponent sites; that is, they have multiple layers of occupation that may span several prehistoric and historic phases, representing continuous occupation for millennia. The sites range in surface area from about 179,000 square yards to as little as one square yard. Most sites are buried under soil, with only a fraction of the cultural material exposed on the surface and the remainder extending to great depths, some over nine feet deep.

Also present are traditional cultural properties, defined as "…those beliefs, customs, and practices of a living community of people that have passed down through the generations, usually orally or through practice. The traditional cultural significance of a historic property, then, is significance derived from the role the property plays in a community's historically rooted beliefs, customs, and practices" (US Department of Interior, National Park Service 1994).

Portions of the Nez Perce (Nee-Me-Poo) National Historic Trail and segments of the Lewis and Clark National Historic Trail are found in the planning area. The archaeological sites along the Lower Salmon River, from Hammer Creek to the confluence with the Snake River, are listed on the National Register of Historic Places as the Lower Salmon River Archaeological District. A portion of the Snake River, downriver from the confluence with the Salmon River, is listed on the National Register of Historic Places as the Nez Perce Snake River Archaeological District. Most other cultural resource sites have not been evaluated for their eligibility for listing on the National Register of Historic Places, but most are thought to be eligible.

New directives for land use planning require categorizing known and expected cultural resources according to their nature and relative preservation value. Resource types are allocated to appropriate use categories that include scientific use, conservation for future use, traditional use, public use,

experimental use, or discharged from management. The BLM has established six use categories, as follows:

- **Scientific Use –** Applies to any cultural resource determined to be available for scientific or historical study using currently available research techniques;
- **Conservation for Future Use –** A cultural resource included in this category is deemed worthy of segregation from all other land or resource uses, including cultural resource uses, that threaten the maintenance of its present condition or setting;
- **Traditional Use –** 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;
- **Public Use –** May be applied to a cultural resource 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;
- **Experimental Use –** May be applied to a cultural resource judged well suited for controlled experimental study, to be conducted by the BLM or others, concerned with the techniques of managing cultural resources that would result in the property's alteration, possibly including loss of integrity and destruction of physical elements; and
- **Discharged from Management –** Is assigned to cultural resources that have no remaining identifiable use, such as small surface scatters of artifacts or debris.

In conjunction with the RMP, the BLM has developed a Class I overview of the cultural resources of the lands administered by the CFO. A Class I overview is a summary of literature, records, and other documents providing an informed basis for understanding the nature of the cultural resources of the region. The BLM is also refining a GIS program to organize records for cultural resource sites, inventories, and maps. These are important steps in allocating resources to use categories and in identifying areas where there is resource potential or where there are threats from incompatible uses.

The future demand for cultural resources within the planning area is expected to remain minimal, with the exception of some Native American groups and local communities. Native Americans will continue to have an interest in protecting and preserving cultural sites and uses. Local communities have expressed a desire for interpreting historic sites.

The condition and trend of cultural resources in the planning area varies considerably due to the diversity of terrain, geomorphology, access and visibility, and past and current land use patterns. Because recorded sites are manifest by exposed artifacts, features, and/or structures, they are easily disturbed by elements such as wind and water erosion, animal and human intrusion, natural deterioration and decay, and development and maintenance activities. Based on limited site monitoring, and site form documentation, the trend of site conditions in the planning area is considered to be downward. Vandalism or collecting (for example unauthorized digging and surface collection and use of metal detectors) has been documented. Impacts from development and maintenance (such as grazing, mining, recreation use, OHV use) are known to be affecting sites. Bank erosion has created some of the most severe impacts but to only certain sites. Also, of concern is the natural deterioration and continuing decay of wooden and rock structures at historic mining

and homesteading sites. Collectively, these agents have adversely affected and continue to adversely affect many known cultural resources.

3.2.14 Paleontological Resources

Paleontological resources are the physical remains or other physical evidence of plants and animals generally preserved in soils and sedimentary rock formations. Paleontological resources are important for correlating and dating rock strata and for understanding past environments, environmental change, and the evolution of life.

The geologic units present in the planning area have little or no fossil potential because of composition and great age. The geology is dominated by extremely thick igneous and highly metamorphosed rocks, which do not support fossils, and very early Precambrian formations, which predate most life forms. Some invertebrate fossil localities are known on private lands in the planning area, and one is known on National Park Service lands. Fossils may be found in the Martin Bridge Limestone from the later Triassic (Hamilton 1925; Vallier 1977). The remains of mammoths (an extinct Pleistocene mammal of the elephant family) were found in Tolo Lake near Grangeville, Idaho. The age of the mammoth remains is unknown, but the geology of the area is briefly described by Breckenridge et al. (1994). Invertebrate fossil localities may also be found in interbedded sediments, between the basalt flows of the Latah Formation, although none are recorded at this time. There have been no inventories for paleontological resources, and there are no known vertebrate or invertebrate fossil localities on BLM lands in the CFO.

3.2.15 Visual Resources

The CFO has a tremendous variety of visual resources. Elevations ranging from 8,400 feet at Marshall Mountain to 800 feet on the Snake River create a tapestry of visual resources with widely varying points of contrast and interest. Deeply incised river canyons up to 4,500 feet deep bisect agricultural prairies and forested uplands. Vegetation ranges from subalpine to semiarid near-desert. From panoramic vistas to intimate scenic views, scenic variety is abundant. Generally undeveloped CFO lands provide natural landscapes and scenery largely unmodified by human hand.

The BLM classifies its lands according to the VRM System, which is a way to identify and evaluate scenic values to determine the appropriate levels of management (BLM 2005e). It also provides a way to analyze potential visual impacts and to apply visual design techniques to ensure that surface-disturbing activities are in harmony with their surroundings. The BLM's VRM System consists of the inventory stage (visual resource inventory) and the analysis stage (visual resource contrast rating).

The inventory stage involves identifying the visual resources of an area and assigning them to inventory classes using the BLM's visual resource inventory process (BLM 2005e). Visual values are considered throughout the RMP process, and the area's visual resources are then assigned to management classes. **Table 3-~~17~~ 19** summarizes existing VRM classes on CFO lands, and **Figure 12** (Visual Resource Management – Alternatives A and B) (see Volume IV of Cottonwood Draft RMP/EIS) depicts these areas.

The underlying reason for establishing VRM objectives is to ensure that the visual value or scenic quality of the landscape is retained. Scenic quality is a measure of visual appeal. In the BLM system,

Table 3-19
Visual Resource Management Classes in the Planning Area

VRM Class	Objectives of VRM Class	Management Guidelines	Size (acres)	Percent of BLM Lands
Class I	Preserve the existing character of the landscape. This class provides for natural ecological changes and limited management activity. It is used for special areas where management situations require preservation of a natural environment unaltered by humans, such as wilderness and WSAs.	Generally roadless, undeveloped lands, primarily WSAs and remote river canyons along the Salmon River. Management activities generally are not seen, do not attract attention, and do not change or modify the existing landform or vegetation. Structures are hidden by topography or vegetation.	12,704	9
Class II	Retain the existing character of the landscape. The level of change should be low and management activities may be seen but should not attract attention.	High-quality scenic areas managed to protect the visual quality. Management activities are designed and located to blend into the natural landscape and to not be apparent to the casual visitor.	41,195	36
Class III	Partially retain the existing character of the landscape. The level of change should be moderate, and management activities may attract attention but should not dominate the view of the casual observer.	Managed to maintain overall visual quality of the area. Management activities may be evident to the casual visitor, but the activity should remain subordinate to the visual strength and natural character of the landscape.	62,289	35
Class IV	Provide for management activities that require major modification to the existing character of the landscape. Activities may dominate the view and be a major focus of viewer attention.	Generally background areas where management activities may be apparent or dominant in the landscape.	27,639	19

Source: BLM 2004a

an A, B, or C rating is assigned. Landscapes are rated within the context of the physiographic province in which they are located. What largely determines its rating is the degree of harmonious visual variety and diversity in a landscape's landform, vegetation, and water features in terms of form, line, color, and texture. Additional rating factors include the influence of adjacent scenery, scarcity, and the degree to which cultural modifications detract from or enhance the landscape. **Table 3-~~18~~ 20** summarizes scenic quality of CFO lands.

VRM guidelines are consistent with National Forest visual management objectives. Coordination with the Forest Service for the Payette, Nez Perce, Wallowa Whitman, and Clearwater National Forests is ongoing, particularly with regard to adjacent wilderness areas and potential or existing Wild and Scenic Rivers.

Table 3-20
Scenic Quality Areas in the CFO Planning Area

Scenic Quality Class	Degree of Visual Variety	Representative Areas
A	Distinctive, high degree of visual variety	CFO lands along the Salmon, Little Salmon, Clearwater, and South Fork of the Clearwater rivers, and along Lolo Creek; Wilderness Areas and Wilderness Study Areas
B	Common or typical, moderate degree of visual variety	Most of the CFO
C	Minimal value or below average, low degree of visual variety	Primarily limited to small parcels

The Gold Rush Historic Byway along Idaho 11 provides a panoramic view of the Clearwater Valley, and the Northwest Passage National Scenic Byway traverses the winding Clearwater River Canyon. These byways are discussed in Section 3.4, Special Designations.

The condition and trend of the visual resources on CFO lands are generally good. Class A and B scenic quality areas are being maintained. Continual and increasing encroachment and development of non-BLM-administered land increases the value of the natural scenery provided by CFO lands. Increasing numbers of recreationists increases visual sensitivity.

3.3 RESOURCE USES

This section contains a description of the existing human uses of resources in the planning area and follows the order of topics addressed in Chapter 2. These topics are as follows:

- Forest products;
- Livestock grazing;
- Minerals;
- Recreation;
- Renewable energy;

- Transportation and travel; and
- Lands and realty.

3.3.1 Forest Products

The PSQ is the amount of timber, measured in MBF, that could be produced on BLM lands where commercial forest uses are considered appropriate. Calculations are based on species, growth, mortality, land base, and sustainability. The PSQ does not include volume removed for other purposes from other areas (such as recreation sites where hazard trees are removed). The PSQ also is not a commitment to offer for sale a specific level of timber volume.

The current estimated annual harvest is 6,600 MBF. The CFO initially identified 35,757 acres of woodlands as suitable for timber management, which was used in calculating the annual harvest. De-emphasis on meeting the annual harvest, along with forestry program staff reductions, have reduced the sale quantity. Since 1992, the CFO has offered between 2,000 MBF and 11,000 MBF of timber annually.

The saw log market continues to be good, but, as historically happens, there are periodic downturns that cannot be accurately predicted. Sawlogs produced from timber sales continue to provide income for the federal government and for purchasers in the CFO. Recently, the alternative forest product markets (for example, hew wood, ton wood, hog fuel) have provided increasing income to the federal government, and mills designed to use this material are being built.

Since about 1995, the BLM has observed that the hew wood market has increased and there has been a significant increase in demand for such products. The BLM has no records to show this trend because it has been selling timber per MBF and has not tracked size of logs sold.

Much of the increased stocking that has occurred between 1974 and 1992 (**Table 3-~~13~~15**) is from ingrowth from shade-tolerant species (mostly Douglas-fir and grand fir). Much of this ingrowth is in the smaller diameter classes. As noted above, the demand for hew wood is increasing. Much of the ingrowth can supply this market. The same applies to hog fuel, which is used as burnable biomass to run cogeneration power plants. Currently, most cogeneration plants cannot compete with hydroelectric power, but an increasing number of sawmills are using cogeneration plants to run their operations and selling the surplus power. The market for alternative forest products is expected increase.

In today's sawlog market, sawlogs are generally broken into three categories: large, regular, and small. Generally, large sawlogs are considered to have scaling diameters larger than 24 inches and are sold per MBF (scaling diameter is measured at a log's small end). Regular sawlogs generally have scaling diameters ranging from nine to 24 inches. This is the most common sawlog sold in northern Idaho. Smallwood sawlogs, or hew wood, are a recent addition to the sawlog market and generally are sold by the ton. Generally, smallwood sawlogs have scaling diameters ranging between five and nine inches. In some cases, mills will accept logs with four-inch scaling diameters. As noted above, the market for these logs is increasing.

3.3.2 Livestock Grazing

The BLM manages grazing under 43 CFR 4100.0-3 by authority of the Taylor Grazing Act of 1934, as amended (43 USC 315, 315a through 315r); the FLPMA of 1976 (43 USC 1701 et seq.), as amended by the Public Rangelands Improvement Act of 1978 (43 USC 1901 et seq.); Executive Orders transferring land acquired under the Bankhead-Jones Farm Tenant Act of 1937, as amended (7 USC 1012), to the Secretary of Interior and authorizing administration under the Taylor Grazing Act; Section 4 of the Oregon and California Grant Lands Act of 1937 (43 USC 118[d]); the Public Rangelands Improvement Act of 1978 (43 USC 1901 et seq.); and public land orders, Executive Orders, and agreements authorizing the Secretary of Interior to administer livestock grazing on specified lands under the Taylor Grazing Act or other authority, as specified. Under this management, ranchers may obtain leases for an allotment of BLM-administered land on which a specified number of livestock may graze. An allotment is an area of land designated and managed for grazing of livestock. The number of permitted livestock on a particular allotment is determined by how many AUMs, which is the quantity of forage required by one mature cow and her calf (or the equivalent in sheep or horses) for one month, that land will support.

The CFO manages livestock grazing on BLM-administered lands in Adams, Clearwater, Idaho, Latah, Lewis, and Nez Perce Counties that are under CFO jurisdiction. It also manages livestock grazing for the BLM Boise District in the northern portion of the BLM Four Rivers Field Office in Adams County under a memorandum of understanding signed in 1995. In addition, the CFO manages a narrow strip of Forest Service lands east of and adjacent to the Snake River in the Hells Canyon National Recreation Area of the Wallowa Whitman National Forest in Idaho County under an agreement signed in 1981.

There are 168 ~~active~~ grazing allotments in the CFO planning area, consisting of 122,732 acres (**Appendix P,** Current Grazing Allotments, **Table P-1** [see Volume III]). These allotments are used by 135 livestock operators with 7,20~~4~~0 AUMs. Sixty-seven percent of grazing allotments in the planning area are small isolated tracts that are surrounded by large blocks of private lands, typically ranches.

The CFO has a number of Section 15 grazing allotments that have remained vacant for over ten years. These vacant allotments range in size from 3 acres to 12,541 acres, and from 1 AUM to 809 AUMs. There are various reasons why these allotments have remained vacant over the years. For example, the Wapshilla Ridge Allotment (36279), Craig Mountain Allotment (36289), and Corral Creek Allotment (36290) have remained vacant for over ten years because the base property owner has no interest in grazing livestock. In addition, these three allotments are intermingled with the base property; therefore, they could not be leased without affecting the private ground. Other examples of why allotments have remained vacant over the years include that the owner of the base property is not a qualified applicant under 43 CFR, 4110.1, and the allotment does not have administrative or public access.

The rangeland reform process of 1994 modified the grazing regulations identified in 43 CFR 4100. A new regulation was developed and is currently being implemented throughout the BLM. The regulation, 43 CFR 4180, addresses the fundamentals of rangeland health. In 1997, the Idaho State Director approved the Idaho *Standards for Rangeland Health and Guidelines for Livestock Grazing Management* (BLM 1997a) developed in consultation with the BLM Resource Advisory Councils.

These standards and guidelines are intended to provide a clear statement of agency policy and direction for those who use public lands for livestock grazing and for those who are responsible for their management and accountable for their conditions. The process by which standards and guidelines for grazing administration will be implemented is outlined in 43 CFR 4180.2.

The Standards for Rangeland Health, as applied in Idaho, are to be used as the BLM's management goals for the betterment of the environment, protection of cultural resources, and sustained productivity of the range. They were developed with the specific intent of providing for the multiple uses of the public lands. Rangelands should be meeting the Standards for Rangeland Health or making significant progress toward meeting the standards. Meeting the standards provides for proper nutrient cycling, hydrologic cycling, and energy flow. The CFO established a plan to complete Standard and Guideline Assessment on all grazing allotments over a 10-year period (1999 to 2009). Ninety-nine of the 168 assessments (59 percent) have been completed (**Appendix P**, Current Grazing Allotments, **Table P-2** [see Volume III]).

Allotment Categorization Process

Three selective management categories of improve, maintain, and custodial were developed by the BLM in 1981 to prioritize grazing allotments according to management needs. Each allotment went through the selective management process and was then placed into one of these categories according to management needs, resource conflicts, potential for improvement, and BLM funding/staffing constraints. Improve category allotments are managed to improve current unsatisfactory resource conditions and receive the highest priority for funding and management actions. Maintain category allotments are managed to maintain current satisfactory resource conditions and are managed to ensure that resource values do not decline. Custodial category allotments are managed by the BLM to protect resource conditions and values. The CFO categorized its allotments in 1982, although the selective management criteria did not take into consideration scattered parcels, access, or management opportunities. The 1982 categorization process resulted in 40 maintain allotments, 49 improve allotments, and 82 custodial allotments.

Allotment Prioritization Process

The CFO completed the Allotment Prioritization Criteria for Completing Rangeland Standards & Guidelines for Allotments in 2000. Each allotment was reviewed and placed into one of three categories. The first is high priority grazing allotments, where there are resource issues needing resolution that can be attributed to livestock grazing, the BLM has legal access to the land regardless of the grazing lease, the allotment is not available for exchange or disposal, and the BLM can reasonably manage the resources on the allotment. The second category is medium priority grazing allotments, where there are resource issues needing resolution that can be attributed to livestock grazing, the BLM has legal access only because of the grazing lease, and the BLM can reasonably manage the resources on the allotment. The third category is low priority grazing allotments, which are all the remaining allotments that are not high or medium priority. The CFO has 10 high-priority allotments, 45 medium-priority allotments, and 116 low-priority allotments.

3.3.3 Minerals

Development of the mineral resources on federal lands is one of the multiple uses managed by BLM under the direction of FLPMA. The BLM manages the surface and subsurface of federal lands

under its jurisdiction and, in some cases, has administrative duties for mineral activities occurring on lands managed by other federal agencies (an example being acquired lands within the National Forest), or on lands with other ownership where the mineral estate remained with the federal government (known as split estate lands). Minerals exploration and development activities on BLM-administered lands are subject to the regulations in 43 CFR, Subchapter C, Minerals Management (3000). Depending on the level of activity, a plan of operations must be submitted to the BLM for approval prior to initiating any ground disturbing activities. The BLM's review of the plan includes ensuring compliance with NEPA, compliance with federal, state, county, and local laws and regulations, and ensuring that the proposed activity (if completed as approved) will not cause unnecessary or undue degradation to the lands involved. Reclamation of disturbed sites is required sometimes during and always upon completion of exploration and development activities. To help ensure that the lands are properly restored, federal regulations require the operator to post a financial guarantee (or bond) sufficient to cover the cost of reclamation.

There are three categories under which minerals on federal lands will be classified: locatable, leasable, and salable. Locatable minerals (sometimes referred to as hardrock minerals) can be explored for, developed, and disposed of by staking mining claims (Mining Law of 1872, as amended). Examples of locatable minerals include gold, silver, lead, zinc, and gemstones. Staking of mining claims is a nondiscretionary activity. In other words, unless the lands are withdrawn, the miner has the right to stake and develop a mining claim. Leasable minerals can be explored for via prospecting permits, exploration licenses, and permits to drill. If exploration results indicate a developable resource is present, then the lands covering the deposit may be leased and a royalty (usually based on a unit value, i.e., dollars per ton) will be applied to the sale of the subject resource. Examples of leasable minerals include coal, phosphate, sulphur, oil, natural gas, and geothermal resources (Mineral Leasing Act of 1920, as amended and Geothermal Steam Act of 1970, as amended). Salable minerals are used mainly for construction and are disposed of by sales or special permits to local governments, commercial operators, and the public (Materials Act of 1947, as amended and Federal Aid to Highway Act of 1958). Sand, gravel, and building stone are examples of salable minerals. Salable and leasable mineral disposals are discretionary activities.

For lands managed by another surface management agency, that agency's consent is required prior to the BLM's issuance of mineral leases for those lands. This is the case with acquired lands in National Forests. During the past 20-plus years, the BLM has administered over 40 prospecting permits and mineral leases covering more than 20,000 acres of acquired lands within the St. Joe, Clearwater, and Nez Perce National Forests. Most were issued for garnet recovery in the Emerald Creek area of Latah and Clearwater Counties; the rest were dedicated to precious metals, limestone, uranium, clay, feldspar, and mica. Currently there are 8 cases either requesting renewal, authorized, or pending on the St. Joe National Forest (6 for garnets covering over 2,160 acres) and the Clearwater National Forest (2 for precious metals covering over 70 acres). Although this information is relevant with respect to presenting the mineral resources that occur within the planning area, it must be stressed that these cases involve acquired lands in the National Forests and are not part of the CFO land base. Land management decisions outlined in the CFO RMP do not apply to these lands.

The activity level for the BLM mineral management responsibility is highly variable throughout the planning area and has historically fluctuated, depending on the viability of various sectors of the mining industry. The CFO continues to address the mineral issues on BLM-administered lands and

is involved in ongoing administration related to leasable, locatable, and salable minerals in the planning area.

Continuous mineral development has occurred within the planning area for over 140 years, including the initial rich placer gold along the major rivers and more recent extensive garnet and clay mining at the Emerald Creek District. Within the past decade, development of various industrial minerals, including sand, gravel, and aggregate, dimension stone, and limestone, has expanded in response to urban growth and construction. The mineral resources and development potential of the CFO are described in detail in the CFO Planning Area Mineral Occurrence and Development Potential Report (Tetra Tech, Inc. and Silverfields Inc. 2005). In summary, CFO lands appear to have a low potential for the occurrence of a developable leasable minerals deposit, but there is abundant evidence supporting the occurrence of locatable and salable minerals. (**Figure 44**, Mineral Potential [see Volume IV of Cottonwood Draft RMP/EIS]). Also refer to **Appendix Q**, Reasonably Foreseeable Development Scenarios for Minerals (see Volume III).

Leasable Minerals

There are no active federal leases within the planning area for any of the mineral resources covered by the Mineral Leasing Act or the Geothermal Steam Act (Sanner 2004). Several warm springs and wells occur throughout the planning area, but none qualify as a geothermal resource site under the Idaho Department of Water Resources criteria (Tetra Tech, Inc. and Silverfields Inc. 2005). No significant occurrences of leasable minerals have been identified within the planning area and the geologic environment is not favorable for the formation of leasable minerals. These facts support the low potential rating for a leasable resource on CFO land in the planning area.

Locatable Minerals

The Mining Law of 1872, as amended, provides citizens of the US with the opportunity to explore for, discover, and purchase certain valuable mineral deposits on federal lands open to that use. A mining claim is a parcel of federal land with valuable mineral deposits claimed by an individual. This right of possession is restricted to the extraction and development of a mineral deposit. The mining claimant can use only so much of the surface as is necessary for mining operations. A patented mining claim is one for which the federal government has passed its title to the claimant, making it private land.

A variety of locatable minerals occur within the planning area; however, gold has been the most sought after commodity. The BLM manages substantial blocks of land in two historic gold mining districts, Elk City and Marshall Lake, and a patchwork of BLM land is present along the Salmon River. The high terrace gravels along the Salmon were early targets for placer mining operations. All of these areas currently have locatable mineral operations that range in status from pending or authorized to expired/on going reclamation. The amount of surface disturbance attributed to these 12 operations is about 265 acres. A number of silver, lead, and zinc deposits are located throughout the planning area, but none resemble the significant Coeur d'Alene Mining District.

One current issue being addressed by this RMP/EIS is the ongoing effort to include the Salmon River in the NWSRS. Upon designation for potential addition to the NWSRS, federal lands and the reserved federal minerals (split estate lands) within one-quarter mile of the river bank were

withdrawn from all forms of appropriation under the mining laws. This withdrawal only affects the availability of locatable minerals and is subject to prior existing rights.

Strategic minerals generally have low potential for occurrence in the planning area. The CFO manages lands within the potential thorium/rare earth placer mining area in the Elk City Mining District; however, the potential development of thorium/rare earth-bearing deposits is considered low.

The Clearwater River Valley in Nez Perce County is one of few locations in the world for collecting sillimanite (fibrolite or cats eye), a popular gemstone among rock hounds. The Geuda sapphire deposit along the north fork of the Clearwater River could produce sapphires in the future if techniques are developed.

Mineral potential for mica, feldspar, and other accessory minerals in the planning area is moderate. About 18 inactive mines and prospects occur on the south side of Mica Mountain, but there is no land under BLM jurisdiction in this area. The only documented occurrence of tungsten in the planning area is in the Tenmile District in Idaho County. The potential for development is low, but the geological terrain is prospective.

Salable Minerals

Salable minerals known to be present within the planning area include sand, gravel, stone for use as aggregate, silica sand, limestone, common clay, decorative/building stone, and petrified wood. The primary sources for sand, gravel, and stone are alluvial material in the Snake, Salmon, and Clearwater Rivers. The Columbia River basalt flows along the western portion of the planning area are good sources for decorative stone, and building stone can be found almost anywhere throughout the area. The BLM currently has 2 authorized contracts for mineral materials (salables) covering approximately 40 acres, and one pending case that would involve an additional 40 acres if authorized. All three are for stone to be used as aggregate and are located in Idaho County. Two material site right-of-way leases issued by the BLM to the Idaho Transportation Department cover 35 acres for sand, gravel, and aggregate material along the Salmon River in Idaho County.

Limestone mining and development has been a significant industry, with over 10 producers located within the planning area during the past 100 years. Principal deposits are found in Nez Perce, Clearwater, and Idaho Counties. No operating limestone quarries currently exist in the planning area.

Recently, the landscaping industry has expressed interest in decorative stones from Columbia River basalt, which underlies much of the western part of the planning area between Lewiston, Grangeville, and Riggins, and is well exposed south of Lewiston, along the Snake River to the confluence with the Salmon River. However, no BLM sales contracts exist for dimension stone within the planning area.

3.3.4 Recreation

Recreation Opportunities and Visitor Use

Primary recreation activities on BLM lands are water sports (whitewater boating, swimming, water play), driving for pleasure, picnicking, fishing, camping, and big game hunting. The planning area receives over 500,000 recreation visits per year (BLM 2005f). Although the BLM manages a

relatively small amount of land in the region, much of the land is strategically located along major rivers in the area. Most recreation opportunities and activities are centered around water-based resources, particularly rivers. CFO lands along the Lower Salmon River and the Clearwater River receive the most visitors.

Information and education are key components of recreation management in the planning area. Numerous publications, including a Lower Salmon River Guide, river maps, and environmental ethics brochures, and signs have been developed to help educate recreationists on land use ethics and stewardship and to inform visitors of recreation opportunities and responsibilities.

The CFO recreation program has responsibility for the following:

- 11 developed recreation sites (including three fee campgrounds) (**Figure 45**, Developed Recreation Sites [see Volume IV of Cottonwood Draft RMP/EIS]);
- 183 miles of water trails;
- Over 200 undeveloped or semideveloped recreation sites along the Clearwater and Salmon Rivers;
- A 750-acre portion of the Frank Church/River of No Return Wilderness (see Section 3.4, Special Designations) (**Figure 46**, Wilderness and Wilderness Study Areas [see Volume IV of Cottonwood Draft RMP/EIS]);
- Three SRMAs (**Figure 26**, Special Recreation Management Areas – Alternative A [see Volume IV of Cottonwood Draft RMP/EIS]);
- Segments of the Nez Perce National Historic Trail and the Lewis and Clark National Historic Trail; and
- Dispersed recreation throughout the approximate 143,830 acres of lands administered by the CFO.

The CFO has developed management strategies to protect and enhance the recreation resources in the planning area, particularly along the Salmon and Clearwater Rivers. These strategies include acquiring key access parcels and recreation areas, acquiring conservation easements, supporting key withdrawals along the Salmon River, and entering into cooperative management agreements with local, state, and federal partners to enhance management capabilities.

Recreation Opportunity Spectrum

The BLM uses the ROS framework to identify recreation opportunities and to develop strategies to manage recreation use of CFO lands. The MFP identified recreation values and plans for recreation uses within the framework of ROS classes (BLM 1981a). The ROS inventory characterizes lands in terms of the types of recreation experiences, activities, and settings that are provided. These opportunities are within a spectrum of six land classes (**Table 3-~~19~~21**), and all BLM land in the planning area is categorized within an ROS class (**Figure 25**, Recreation Opportunity Spectrum Classifications [see Volume IV of Cottonwood Draft RMP/EIS]).

Table 3-21
Recreation Opportunity Spectrum in CFO

ROS Class	Description of Class	Acres	Percent of BLM Lands	General Location
Primitive	Areas characterized by essentially unmodified natural environments of relatively large size where there is opportunity for isolation from the sights and sounds of man.	14,381	10	East of the Snake River
Semiprimitive nonmotorized	Areas characterized by a predominantly unmodified, moderate to large natural environment, where there is some opportunity for isolation from the sights and sounds of man.	18,816	13	Craig Mountain ACEC/RNA and south of Lower Salmon River
Semiprimitive motorized	The same as semiprimitive nonmotorized, except motorized use is permitted within the area.	26,206	18	Concentrated around Captain John Creek ACEC/RNA, Marshall Mountains WSA, and north and south of the Lower Salmon River SRMA
Roaded natural	Areas characterized by a generally natural environment, with moderate evidence of human sights and sounds. There is about equal opportunity for affiliation with other user groups and for isolation.	55,988	39	Primarily in the northwest and southeast planning area and outside major road and river corridors
Rural	Areas characterized by a substantially modified natural environment where sights and sounds of man are readily evident.	27,349	19	Concentrated around roads weaving from Potlatch to Lewiston and east/southeast through the Cottonwood area; also along the Lower Salmon River (south of Whitebird)
Urban	Areas characterized by a highly modified environment, although the background may have natural elements. Opportunities to experience affiliation with individuals and groups are prevalent.	40	<0.1	Scattered
Unclassified areas	These areas are currently not classified in the ROS system (per the 1981 MFP).	1,046	<1	Scattered

Source: BLM 2004a

Special Recreation Management Areas

The SRMAs are those that have congressional or secretarial designations or have significant recreation issues requiring special management and for which activity plans are required. to address recreation settings; management of resources, facilities, and visitors; administration, marketing and visitor information; and monitoring. These areas provide specific structured recreation opportunities (i.e., activity, experience, and benefit opportunities). The portions of the planning area that are not designated as SRMAs may provide recreation opportunities but may not require intensive management. These recreation areas outside of SRMAs are extensive recreation management areas. Direction for extensive recreation management areas focuses primarily on visitor safety, use and user conflict, and resource protection. Changes in demand or recreation opportunities trigger future planning for SRMAs.Changes in demand or recreation opportunities trigger future planning for SRMAs.

The three SRMAs covering approximately 26,682 acres in the planning area are the Lower Salmon River—Scenic (16,245 acres), the Lower Salmon River—Recreational (6,899 acres), and the Clearwater River (3,538 acres) (**Figure 26**, Special Recreation Management Areas – Alternative A [see Volume IV of Cottonwood Draft RMP/EIS]). Activity plans have been written and implemented for all three. In addition, cooperative management plans for the Clearwater River and for the Craig Mountains SRMA have been developed and implemented with the Clearwater Management Council and the Idaho Department of Fish and Game, respectively.

Special Recreation Permits

Special Recreation Permits for commercial use, competitive use, group use, and individual use of special areas have been analyzed and authorized in SRMAs and in extensive areas. Most commercial Special Recreation Permits are for commercial use on the Salmon River. Individuals are required to obtain a Special Recreation Permit for boating on the Salmon River, and organized groups meeting established criteria are required to obtain Special Recreation Permits along the Salmon and Clearwater Rivers. Commercial recreation use of the upland areas primarily involves big game hunting and trail rides.

Interagency Coordination

When appropriate, the CFO coordinates recreation management with other agencies. Cooperative management plans for the Clearwater River and the Craig Mountains SRMA have been developed and implemented with the Clearwater Management Council and the Idaho Department of Fish and Game, respectively. The BLM has also entered into four other formal cooperative management agreements, as follows:

- With Idaho, to manage recreation use on the Salmon River;
- With the Nez Perce and Wallowa-Whitman National Forests, to coordinate management of the Salmon and Snake Rivers;
- With the Idaho Department of Fish and Game, to coordinate recreation management along the Clearwater River and the Craig Mountain area.

In addition to these cooperative management agreements, the BLM participates in the development of the Statewide Comprehensive Outdoor Recreation and Tourism Plan with the Idaho Department

of Parks and Recreation and has interagency agreements with the Forest Service and Idaho Outfitters and Guides Licensing Board. The BLM's recreation management is generally consistent with and complementary to the state plan.

3.3.5 Renewable Energy

Renewable energy includes solar power, wind, biomass, and geothermal resources. As demand has increased for clean and viable energy to power the nation, consideration of renewable energy sources available on public lands has come to the forefront of land management planning. No special management provisions were considered in the MFP (BLM 1981a) specifically for renewable energy resources.

In cooperation with the National Renewable Energy Laboratory, the BLM assessed renewable energy resources on public lands in the western US (BLM and DOE 2003). The BLM reviewed the potential for concentrated solar power, photovoltaics, wind, biomass, and geothermal energy on US Department of the Interior, Bureau of Indian Affairs, and Forest Service lands in the West. Hydropower was not addressed.

The planning area lacks commercial concentrated solar power and photovoltaics energy potential (BLM and DOE 2003). There is little commercial potential for geothermal resources, as geothermal potential on CFO lands is low.

Wind power classes range from 1 (lowest) to 7 (highest). BLM-managed lands in portions of the planning area are Class 3 and higher, although the planning area is not in the top 25 BLM planning units in the US having the highest wind energy potential (BLM and DOE 2003). The Final Programmatic EIS on Wind Energy Development on BLM-Administered Lands in the Western United States (BLM 2005d) categorizes BLM-administered lands into areas having a low, medium, or high potential for wind energy development from 2005 through 2025, on the basis of their wind power classification. Wind resources in Class 3 and higher could be developed economically with current technology over the next 20 years. Class 3 resources have medium potential; resources in Classes 4 and higher have high potential. The Final Programmatic EIS identifies scattered CFO lands with medium or high wind resource potential that might be developed economically with current technology; these are concentrated south of Riggins and northwest of Cottonwood. This finding was based on historical weather data and the MesoMap System, which produces a high-resolution assessment of wind resources to identify and characterize the most attractive wind project sites. The MesoMap System combines the strengths of a mesoscale weather model and a microscale wind flow model (AWSTruewind 2005). None of the areas with medium or high potential are of sufficient size, have suitable topography, or are located in sufficient proximity to necessary infrastructure (such as roads and transmission lines) to be developed economically. The identified areas are in remote locations that are miles from improved roads and power lines and are mostly on steep slopes with dense timber and vegetation. Due to these physical constraints, there is realistically no potential for commercial wind energy development.

The BLM/National Renewable Energy Laboratory study identifies portions of the planning area as having high potential for biomass resources, although the area is not in the top 25 BLM planning units having the highest potential for biomass resources (BLM and DOE 2003). The planning area provides for biomass utilization for energy production via fuels and forest products contracts

through either salvage rights or as a product. The CFO is working with the Forest Service, US Department of Energy, and private entities to develop cogeneration capabilities in the planning area.

3.3.6 Transportation and Travel Management

The scattered and fragmented nature of BLM lands in the planning area, as well as the rugged terrain, has physically limited off-road use and minimized conflict in the CFO, compared to other BLM field offices. However, there is a steady increase in the number of motorbikes and all-terrain vehicles registered in Idaho and in the planning area. Technological advances in motorized recreation equipment have increased accessibility to areas that had limited use in the past. Conflicts between motorized and nonmotorized recreation continue to grow.

The MFP (BLM 1981a) identifies areas in the planning area as open, limited, or closed to vehicle use (**Table 3-~~20~~22**):

- **Open.** Designated areas where all types of motorized vehicles (jeeps, all-terrain vehicles, motorized dirt bikes, etc.) are permitted at all times, anywhere in the area, on roads or cross country, subject to the operating regulations and vehicle standards set forth in 43 CFR subparts 8341 and 8342.
- **Limited.** Designated areas where motorized vehicles are restricted to designated routes. Off-road, cross-country travel is prohibited in Limited areas, unless an area is specifically identified as an area where cross-country over-snow travel is allowed. Some existing routes may be closed in Limited areas.
- **Closed.** Designated areas where off-road motorized vehicle travel is prohibited yearlong. Emergency use of vehicles is allowed yearlong.

Table 3-22
Current OHV Designations on CFO Lands

OHV Designation	Area (Acres)	Approximate Percentage of CFO Lands
Closed to vehicle use	18,054	13
Limited vehicle use	40,437	28
Undesignated or open to vehicle use	85,308	59

Source: BLM 2004a

There are currently no designations for mechanized travel (such as mountain bikes, wheelbarrows, and game carts). They are permitted at all times, anywhere in the planning area, on roads or cross-country, except in designated wilderness.

There are approximately 393 miles of roads and trails on 143,830 acres of BLM lands in the CFO, 346 miles (approximately 88 percent) of which are managed by the BLM. BLM routes total 238 miles in Open areas, about 30 miles in Closed areas, and 83 miles in Limited areas.

Within Limited areas, designations include both open and restricted routes. Restrictions are placed on routes because of resource concerns, including threatened and endangered species, cultural resources, and riparian areas. Restrictions can range from full vehicle closures yearlong to seasonal

and/or various vehicle size restrictions. **Table 3-~~21~~ 23** depicts current OHV route designations within Limited areas on CFO lands.

Of the 83 miles of routes within Limited areas on CFO lands, all routes are identified as either open or restricted. There are approximately 49 miles of open routes with public access, available yearlong, and almost 12 miles of open routes that do not have public access. Approximately 31 miles of routes have vehicle restrictions, designated as full vehicle closure yearlong. Seventy percent of CFO lands are currently open to over-snow travel.

The CFO maintains a road classification in accordance with the BLM Manual 9113-Roads (**Table 3-~~22~~24**). Route maintenance on CFO lands provides for resource protection and accommodation of users. Most of the identified BLM-managed roads within the CFO (approximately 72 percent) are classified as Road 3. These are segments that were once a road, but may no longer be passable because of lack of maintenance or because of natural causes. Approximately 11 percent of BLM-managed roads are passable, classified as Road 2, but may not be passable by all vehicles, and 3 percent are highly maintained, classified as Road 1. Trails make up nearly eight percent of the travel routes and six percent of the routes are classified as "unknown," identifying routes no longer in use or features that could not easily be defined.

Table 3-23
Current OHV Route Designations within Limited Areas on CFO Lands

OHV Designation	Approximate Distance or Area
Open Routes within Limited Areas:	
Open routes with public access that are open yearlong	40.69 miles
Open routes with no public access that are open yearlong	11.91 miles
Total open routes in Limited areas	61.30 miles
Approximate density of open routes within Limited areas	0.97 miles/square mile
Restricted Routes within Limited Areas:	
Full vehicle closure yearlong	30.82 miles
Open yearlong for vehicles under 50 inches	0 miles
Open 6/15-9/15 for vehicles under 50 inches (closed 9/16-6/14)	0 miles
Seasonal vehicle closure 10/1-6/15 (open 6/16-9/30)	0 miles
Two-wheel motorized only	0 miles
Other vehicle restrictions	0 miles
Route restrictions total	30.82 miles
Total open and restricted routes in Limited areas	83.42 miles
Over-Snow Travel Areas:	
Open to over-snow travel	101,545 acres
Closed to over-snow travel	42,149 acres

Source: BLM 2004a

Table 3-24
Miles of Road and Trail on BLM-managed Lands in CFO

Route Type	Total Miles
Road 1 [1]	11
Road 2 [2]	38
Road 3 [3]	248
Trails [4]	27
Unknown [5]	22
Total BLM-managed Route Miles	**346**
Proportion of Total Route Miles	88%

Source: BLM 2004a
[1]Road 1: Passable by most all types of vehicles; highly maintained road.
[2]Road 2: Passable road, but may not be passable by all types of vehicles (may not be paved or wide enough for some vehicle types) or may not be maintained with the assumability of a Road 1
[3]Road 3: These are segments that were once a road, but may or may not be passable because of not being maintained or because of natural causes. The history/condition on these roads is limited.
[4]Trails: Trail segments that have an established use as a motorized or nonmotorized trail.
[5]Unknown: Items such as railroads that are no longer in use or features that could not easily be classified into other road/trail types.

3.3.7 Lands and Realty

Utility Corridors and Communication Sites

There are no communication sites within the planning area. The BLM has not formally designated any right-of-way corridors or use areas within the planning area, although it attempts to group compatible facilities where possible. The CFO currently has no right-of-way exclusion or avoidance areas in its land use plans, although specially designated areas, such as wilderness, WSAs, ACEC/RNAs, and proposed Wild and Scenic Rivers, do restrict such uses. The CFO right-of-way program is consistent with the recommendations of the Western Regional Corridor Study, completed by the Western Utility Group (Western Utility Group 1992) and updated in 2003, which identified priority utility corridors, none of which are within the planning area.

Land Tenure

Land ownership in the planning area is mixed (**Table 3-~~23~~25**). BLM-administered lands total 143,830 acres. The CFO manages numerous blocks of BLM land, ranging in size from less than 40 acres to over 12,000 acres.

Table 3-25
Land Ownership in the Planning Area

Land Ownership	Size (Acres)	Percent of Total
BLM	143,830	<2
Forest Service	5,528,167	63
Nez Perce tribal lands	94,705	1
State	444,791	5
Private	2,581,685	29
Other	48,019	<1
Total	**8,841,197**	

Land Use Authorizations

The CFO administers several land use permits of small acreage. These permits are for agricultural uses and for beekeeping sites. There are no Recreation and Public Purposes Act leases within the planning area.

The CFO has five memorandums of understanding that permit other agencies and organizations to occupy or conduct certain activities on BLM-administered lands. These agencies include the Idaho Department of Fish and Game, Idaho Department of Lands, The Nature Conservancy, and the Nez Perce Tribe Fisheries Restoration Department.

The planning area currently has more than 200 active rights-of-way that encumber over 5,000 acres of CFO lands. These rights-of-way are for a variety of uses (**Table 3-~~24~~26**) and are held by private individuals and groups, as well as various businesses and government entities.

The CFO completes approximately 20 right-of-way actions annually, including processing applications for new rights-of-way and amending, assigning, renewing, or terminating existing right-of-way grants. The number of active rights-of-way and other authorizations changes weekly as new authorizations are issued and existing ones expire or are terminated.

Table 3-26
Active Right-of-Way Authorizations in the Planning Area

Type	Number of Authorizations	Length (Miles)	Size (Acres)
Road	136	194	1,927
Railroad	24	131	3,196
Powerline	22	26	142
Telephone	10	36	42
Water facilities	20	3	9
Other	4	n/a	5
Total	**216**	**390**	**5,321**

Source: Grant 2005

Land Tenure Adjustment

Land tenure, or land ownership, adjustment refers to those actions that result in the disposal of BLM-administered lands and the acquisition of non-federal lands or interests in nonfederal lands. Current planning guidance for changes in land ownership is provided by the 1989 District Land Tenure Adjustment Plan, a supplement to the 1981 MFP. Land exchange is the preferred method of land ownership adjustment. The Land Tenure Adjustment Plan establishes management areas, where the BLM will retain public land ownership and in some cases acquire additional lands, and adjustment areas, where BLM-administered lands are potentially available for disposal. Management areas typically are larger blocks of BLM-administered lands, but some are areas with smaller tracts or scattered parcels of BLM-administered lands that have high resource and public values that justify their being retained in public ownership, such as the Clearwater River SRMA. BLM-administered lands outside of management areas, in the adjustment area, are potentially available for the full range of land ownership adjustment opportunities, including retention, exchange, sale, or transfer. Land ownership adjustment proposals in the planning area are analyzed in project-specific reviews using the aforementioned guidance.

Since the completion of the MFP (BLM 1981a), the primary means of land ownership adjustment within the planning area has been through exchange and purchase, utilizing funds allocated from the Land and Water Conservation Fund. There are currently two active congressionally recognized Land and Water Conservation Fund projects in the planning area, the Lower Salmon River ACEC Project and the Clearwater River SRMA Project.

As part of the resolution of the Nez Perce Tribe's water right claims in the Snake River Basin Water Rights Adjudication, the Snake River Water Rights Act of 2004 (Public Law ~~108-792~~108-447, Division J, Title X, Section 6) authorizes the transfer of administration of approximately ~~11,297~~ 11,304 acres from the CFO to the Bureau of Indian Affairs to be managed in trust for the benefit of the Nez Perce Tribe. This administrative transfer became effective upon publication of the *Federal Register* Notice (Federal Register 2007a) on May 15, 2007. The revised surface management planning area is shown in the revised **Figure 1**, Planning Area Land Status (see Chapter 1). ~~This administrative transfer can occur upon a finding by the Secretary of the Interior that certain requirements specified in the legislation have been satisfied. At that time, the CFO would make the appropriate changes necessary to reflect the revised CFO acreage.~~

Access

Access, as used here, refers to the physical ability and legal right of the public, agency personnel, and authorized users to travel across and use lands that are not owned or administered by the BLM. The lands and realty program acquires easements for this purpose in support of various BLM programs and needs. An easement is a right afforded to the BLM to make limited use of another's real property for access or other purposes. Most easements are in support of the CFO's timber management program. Emphasis for easement acquisition is on those roads or trails identified through a route analysis process.

Access to CFO lands is an issue of concern to both the BLM and the public. The planning area's fragmented pattern of BLM ownership, intermingled with private, state, and other federal lands, creates considerable problems in providing access to the CFO lands. Easements are acquired only from willing landowners, and very seldom will landowners agree to allow the public to cross their

property. There are estimated to be more than 30,000 acres of BLM-administered lands in the planning area that lack legal access. The large amount of BLM-administered lands without legal public or administrative access is one of the principal reasons that the 1989 Land Tenure Adjustment Plan was developed.

The planning area has approximately 70 existing easements that provide access across private, state, and federal land. The majority of these easements are for road access, but some authorize such activities as stream improvements on nonfederal land. Most easements are permanent, but some are short term for the life of a specific project, such as a BLM timber sale. Some easements include the right of public access, while others are limited to use by federal employees and their designated agents. The CFO acquires approximately four to six easements each year to facilitate the BLM's programs.

Current planning guidance for access is provided in the MFP. In accordance with that guidance, the CFO has focused access acquisition efforts on larger blocks of BLM-administered lands that are designated for retention in BLM ownership, areas with important resource values, areas where public demand for access is high, and areas with substantial BLM investments.

Generally speaking, access is acquired from willing landowners on a case-by-case basis as needs or opportunities arise, using criteria and direction provided in the guidance referred to above. There is far more demand and need for public access to BLM-administered lands than can be met by the CFO.

Although used much less frequently than easement acquisition, land exchanges can provide needed access to BLM-administered lands. When disposing of BLM-administered lands containing roads or trails necessary for access to other BLM-administered lands, the CFO protects these access routes by reserving them in the conveyance documents.

Withdrawals

A withdrawal is created by statute or secretarial order that withdraws public land and minerals from the operation of the public land and mining laws. The practical effect of a withdrawal is to restrict or prohibit specific uses or activities on public land. A withdrawal can also transfer jurisdiction of the land from the BLM to another federal agency, such as the Army Corps of Engineers, the Federal Energy Regulatory Commission, or the Forest Service, for specific dedicated uses.

Power site reserves are one of the most common types of withdrawal. They are located along rivers where there is either a federal water project, such as a dam or the potential to construct one. Public lands are withdrawn to restrict or prohibit uses that would be inconsistent with the federal water project. There are approximately 15 existing power site reserves in the planning area.

Other withdrawals protect valuable resources from being affected by certain uses. Since the 1981 MFP, the CFO has processed three withdrawals, one to transfer 10 acres of BLM-administered lands to the Forest Service for a pine tree seed orchard and two to protect critical resource values along 112 miles of the lower Salmon River. The withdrawals on the Salmon River were renewed in 2006 and prohibit mining, mineral entry, and mineral patents. ~~These two withdrawals will expire in 2006 and 2008 if they are not renewed before then. There is an application for renewal pending.~~

Other types of withdrawals serve miscellaneous purposes such as the protection of recreation sites or government facilities from being affected by mining or the risk of mineral patent.

Unauthorized Use

Generally, there are three categories of unauthorized use or trespass: use, occupancy, and development. ~~u~~Unauthorized use is an activity that does not appreciably alter the physical character of the BLM-administered lands or vegetative resources, such as the abandonment of property or trash, enclosures, or use of existing roads and trails. ~~for purposes that require a rights-of-way grant; unauthorized~~ Unauthorized occupancy involves human occupancy or use, such as the construction, placement, occupancy, or assertion of ownership of a facility or structure (for example, cabin, house, natural shelter, or trailer). ~~; and unauthorized~~ Unauthorized development is an activity that physically alters the character of the BLM-administered lands or vegetative resources, such as cultivation of BLM-administered lands or road construction.

The scattered BLM-administered lands pattern in the planning area contributes to trespass problems, particularly where the topography and vegetation make the determination of federal/private property lines difficult. The CFO attempts to abate trespass through prevention, detection, and resolution. Priority for resolving trespass is given to newly discovered, ongoing uses, developments, or occupancies where resource damage is occurring and must be stopped to prevent further environmental degradation. Lower priority is given to historic trespass cases where little or no new resource damage is occurring. ~~Old trespass cases are resolved as time permits.~~ Each year the CFO processes and resolves approximately two to four unauthorized use or trespass cases. There are typically five to 10 pending cases of unresolved trespass or suspected trespass.

3.4 SPECIAL DESIGNATIONS

This section describes the existing condition of special designations areas in the planning area. Special designations include ACECs, ACEC/RNAs, WSAs, Wilderness, National Trails, Backcountry Byways, Wild and Scenic Rivers, and Watchable Wildlife Areas.

3.4.1 Areas of Critical Environmental Concern and Research Natural Areas

An ACEC is an area where special management attention is required to protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources, or other natural systems or processes, or to protect life and safety from natural hazards (BLM 2005g). An ACEC/RNA is an area where natural processes are allowed to predominate and that is preserved for the primary purposes of research and education. Under current BLM policy, ACEC/RNAs must meet the relevance and importance criteria of ACECs and are also designated as ACECs (BLM 2005g).

There are four ACECs and six ACEC/RNAs totaling over 26,000 acres on CFO lands (**Table 3-~~25~~27**) (**Figure 39**, Existing ACECs and ACEC/RNAs – Alternative A [see Volume IV of Cottonwood Draft RMP/EIS]). The ACECs and ACEC/RNAs were established in 1989 (BLM 1989b).

The scientific assessment done for ICBEMP indicates that vegetation has changed significantly from historic conditions (Wisdom et al. 2000). Noxious weeds are spreading rapidly throughout the Upper

Table 3-27
Designated ACECs and ACEC/RNAs on BLM CFO Lands in the Planning Area

Name	Size (acres)	Attributes for which the Area Was Designated
1—Wapshilla Ridge ACEC/RNA	401	Supports the ecological processes associated with representative plant communities for the Tri-State Uplands Section of the Columbia Intermontane Geomorphic Province. A population of Simpson's hedgehog cactus occurs in the area.
2—Lower and Middle Cottonwood Islands ACEC/RNA	43	Excellent condition plant communities of ponderosa pine/bluebunch wheatgrass and coyote willow; has high values for research reference areas. The islands provide valuable nesting habitat for geese and ducks. Bald eagles use the Clearwater River corridor during the winter.
3—Captain John Creek ACEC/RNA	1,321	Near-pristine representative plant communities and supports the ecological processes for the Tri-State Uplands Section of the Columbia Intermontane Geomorphic Province. Provides habitat for the spring/summer chinook salmon and steelhead trout.
4—Long Gulch ACEC/RNA	47	MacFarlane's four-o'clock, a federally listed plant (threatened) occurs in the area.
5—Lucile Caves ACEC/RNA	404	Provides a unique example of a wet limestone cave environment, along with associated vegetation and vegetative communities of the Lower Salmon River drainage. Designation necessary for protection, maintenance, and enhancement of the area, as well as to provide an education, research, and reference area.
6—Skookumchuck ACEC/RNA	18	MacFarlane's four-o'clock, a federally listed plant (threatened), occurs in the area.
7—Craig Mountain ACEC	3,956	Area managed for high-quality wildlife, fisheries, ecological, recreational, cultural, and historical values. The Craig Mountain WMA is the largest Idaho Department of Fish and Game management area in Idaho.
8—Elk City/American Hill Lake ACEC	30	American Hill Lake and the old Elk City landfill site include CFO lands that have been adversely affected by past mining and a public landfill.
9—Lower Lolo Creek ACEC	3,678	High-quality wildlife, fisheries, recreation, and watershed values. This is the largest undeveloped segment of the Lolo Creek Canyon.
10—Lower Salmon River ACEC (Hammer Creek to confluence)	15,702	The Lower Salmon River has very high resource values for scenic, recreation, cultural, wildlife, fisheries, watershed, and other ecological values. The recreation, cultural, and fishery resource values found in this area have been identified as being nationally significant.
Total	**25,600**	

Columbia River Basin, which includes the planning area (BLM and Forest Service 1997). Vegetation assessments done in ACEC/RNAs have validated these changes. Within ACEC/RNAs, some forest types and structures have declined, while others have increased. Old single-story ponderosa pine forests and early seral forests have decreased. Native canyon grasslands, primarily bluebunch wheatgrass and Idaho fescue, have declined because of weed invasion.

Wapshilla Ridge ACEC/RNA

This designated ACEC/RNA totals 401 acres and is approximately 40 air miles southeast of Lewiston and occurs within the Craig Mountain WMA. The vegetation in the area is primarily composed of canyon grasslands, while northerly aspects are timbered. The Wapshilla Ridge area supports the ecological processes associated with representative plant communities for the Tri-State Uplands Section of the Columbia Intermontane Geomorphic Province. A population of Simpson's hedgehog cactus occurs in the area. Since being designated as an ACEC/RNA, the adjacent lands have been acquired by the Idaho Department of Fish and Game, and livestock grazing has been curtailed within the area. Overall, the area has a slightly upward trend but is susceptible to noxious weed infestations.

Lower and Middle Cottonwood Islands ACEC/RNA

This designated ACEC/RNA totals 43 acres and is approximately 19 air miles northeast of Lewiston. Lower Cottonwood Island (river mile 19.2) and Middle Cottonwood Island (river mile 19.5) are in the Clearwater River. The area is managed under a cooperative BLM and Idaho Department of Fish and Game HMP and Sikes Act Agreement (BLM and Idaho Department of Fish and Game 1981). When designated these islands had excellent condition plant communities of ponderosa pine/bluebunch wheatgrass and coyote willow and had high values for research reference areas.

Very little information is available on plant communities that occupy islands and shoreline of Columbia River tributaries, considering how much of this habitat has been altered by dams and reservoirs. The islands provide valuable nesting habitat for geese and ducks. The federally listed bald eagle uses the Clearwater River corridor during the winter and uses larger trees for roosting. Noxious weed infestations (primarily spotted knapweed) have degraded the site since designation, and overall trend is downward. A detailed field evaluation and report was prepared for this ACEC/RNA (Lichthardt 1992) and the conclusion was that, in spite of the weed problems, the islands are good examples of several plant communities that have been degraded by historical cattle grazing elsewhere in the Clearwater River valley: ponderosa pine/bluebunch wheatgrass and black cottonwood/Idaho fescue.

Captain John Creek ACEC/RNA

This designated ACEC/RNA totals 1,321 acres and is approximately 16 air miles southeast of Lewiston, within the Craig Mountain WMA. The area is managed under a cooperative BLM, Idaho Department of Fish and Game HMP, and Sikes Act Agreement. When designated, the area contained near pristine representative plant communities and supports the ecological processes for the Tri-State Uplands Section of the Columbia Intermontane Geomorphic Province. Expansion of yellow starthistle had degraded some of the grasslands within the area. Plant communities represented include Douglas-fir, bluebunch wheatgrass, Idaho fescue, and riparian habitats. The area occurs within the Captain John Creek drainage and provides habitat for the federally listed

spring/summer chinook salmon and steelhead trout. The steep and rugged topography has restricted past land uses (e.g., timber harvest, roading), and this area is currently not leased for grazing. The area provides important habitat for a variety of BLM sensitive wildlife and plants. In addition, the area is used by a variety of nongame species, upland game, and big game species (namely Rocky Mountain bighorn sheep, elk, mule deer, mountain lion, and black bear). Noxious weeds have increased in canyon grassland habitats and have infested portions of the area.

Long Gulch ACEC/RNA

This designated ACEC/RNA totals 47 acres and is approximately 13 air miles south of White Bird. MacFarlane's four-o'clock, a federally listed threatened plant, occurs in the area. The BLM is managing the area in accord with a HMP developed in 1981 and MacFarlane's four-o'clock recovery plans (USFWS 2000, 1985). The BLM constructed a fence around the site in 1981 and cancelled livestock grazing. The BLM also has initiated noxious and other weed control projects in the area. Noxious weed infestations are increasing and have degraded portions of the area, where the BLM has done long-term monitoring studies and found that overall trends have been static to slightly downward for MacFarlane's four-o'clock plants and associated habitats.

Lucile Caves ACEC/RNA

This designated ACEC/RNA totals 404 acres and is approximately nine air miles north of Riggins. The area provides floristic and geologic components that are unique for the region. The area has a transplant population of MacFarlane's four-o'clock and also contains several state rare plant species, BLM sensitive plant species, and BLM sensitive land snails. Lucile Caves is a unique example of a wet limestone cave, along with associated vegetation and vegetative communities of the Lower Salmon River drainage. The area is currently managed under a cooperative BLM, Idaho Department of Fish and Game HMP, and Sikes Act Agreement that was developed in 1985 and under the MacFarlane's four-o'clock Recovery Plans (USFWS 2000, 1985). The ACEC/RNA designation of this area is necessary for the protection, maintenance, and enhancement of the area, as well as to provide an education, research, and reference area. During June 1987, 15 acres surrounding sensitive areas were fenced to exclude livestock grazing and now has an upward trend for ecological condition. Most of the area is still leased for livestock grazing and has a stable trend, with toe slopes and moderate sloped areas being grazed at moderate to heavy levels.

Skookumchuck ACEC/RNA

This designated ACEC/RNA totals 18 acres and is approximately 3.5 air miles south of White Bird. MacFarlane's four-o'clock, a federally listed plant (threatened), occurs in the area. The area is between US Highway 95 and the old highway that parallels the Salmon River. The BLM is managing the area in accordance with a HMP developed in 1983 and under the MacFarlane's four-o'clock recovery plans (USFWS 2000, 1985). Having steep slopes and being located between two highways have restricted cattle grazing in the area. The listed plant population is close to US Highway 95, and the BLM is coordinating with the Idaho Transportation Department to control undesirable vegetation along this 0.25-mile stretch of highway. The area has a slightly downward trend, and no increase in population size has been noted from long-term monitoring. The area is being invaded by noxious weeds and other weeds. After ACEC/RNA designation, a small group of MacFarlane's four-o'clock plants was found immediately upslope of US Highway 95.

Craig Mountain ACEC

This designated ACEC totals 3,956 acres and is approximately 12 air miles south of Lewiston, and occurs within the Craig Mountain WMA. This area is managed for high-quality wildlife and fisheries and for ecological, recreational, cultural, and historical values. The Craig Mountain WMA is the largest Idaho Department of Fish and Game WMA in Idaho. At the time of ACEC designation, the largest area managed by The Nature Conservancy in the state of Idaho also occurred in this area. The BLM has since acquired most of The Nature Conservancy lands in the area. The area is managed under a cooperative BLM, Idaho Department of Fish and Game HMP, and Sikes Act Agreement, which was developed in 1983. However, with the recent Idaho Department of Fish and Game and The Nature Conservancy acquisitions the area, a memorandum of understanding for the Craig Mountain Cooperative Management Area was developed in 1997 among BLM, Idaho Department of Fish and Game, The Nature Conservancy, and Idaho Department of Lands. Ecological trends are upward, particularly with Idaho Department of Fish and Game acquisition and management of Bonneville Power Administration mitigation lands in the Craig Mountain area. Canyon grasslands have infestations of noxious weeds, and cooperative control efforts are taking place in the Tri-State Weed Management Area.

Elk City Landfill/American Hill Lake ACEC

This designated ACEC totals 30 acres and is approximately nine-tenths of a mile south of Elk City. American Hill Lake and the old Elk City landfill site include BLM-administered lands that have been adversely affected by past mining and a public landfill. Such land uses reduce water quality and affect watershed conditions. Site closure efforts had not been effective and concerns for surface and groundwater contamination and possible contamination of the American River were identified. Further rehabilitation included closing, grading and vegetating the site. Rehabilitation efforts have been successful in establishing vegetative cover and reducing erosion. Limited water quality monitoring of American Hill Lake has not identified water quality problems. The trend is upward for the area.

Lower Lolo Creek ACEC

This designated ACEC totals 3,678 acres and is approximately 11 miles northwest of Kamiah. The purpose of the ACEC designation is to maintain the high-quality wildlife, fisheries, recreation, and watershed values. This is the largest undeveloped segment of the Lolo Creek canyon. ACEC designation gave priority recognition to this sensitive landscape, which contains very high resource values. Lolo Creek provides habitat for the federally listed steelhead trout and bull trout. Other BLM sensitive fish species occurring in the drainage include spring/summer chinook salmon, westslope cutthroat trout, and Pacific lamprey. Numerous BLM sensitive wildlife and several special status plant species also occur in the area. The area is generally still undeveloped and many land uses are restricted by steep and rugged topography. Some of the grasslands (for example, those on the south aspect) have had some noxious weeds and other weed infestations.

Lower Salmon River ACEC (Hammer Creek to Confluence)

This ACEC includes 15,702 acres, including all lands contiguous with the Salmon River or generally within 0.25- to 0.50-mile of the Salmon River from the mouth (river mile 0.0) to White Bird Creek (river mile 53.6). This designated ACEC includes 15,702 acres, including all BLM-administered lands

contiguous with the Salmon River, from Hammer Creek to the confluence. The Lower Salmon River corridor has very high resource values for scenic, recreation, cultural, fisheries, wildlife, and ecological values. The area provides critical and important habitat for a large variety of wildlife species. The scenic and cultural resources have national significance. The Lower Salmon River ACEC area encompasses primarily canyon grasslands and over-steepened canyon slopes, with moderately sloping terraces, toeslopes, and benches. The Salmon River is the longest free-flowing river in the lower 48 states.

3.4.2 Back Country Byways

There are no Back Country Byways on BLM-administered lands in the planning area. The BLM's Back Country Byways are a system of low-standard roads and trails that pass through BLM-administered lands with high scenic or public interest value. The BLM developed the Back Country Byway Program to complement the National Scenic Byway Program. There are two state scenic byways near BLM lands in the planning area. US Highway 12 along the Clearwater River is designated as the Clearwater Canyons/Northwest Passage Scenic Byway. The Idaho Transportation Department is revising its management plan for the byway, which crosses or borders approximately 16 miles of BLM-managed land. The Gold Rush Historic Byway follows Idaho 11 and does not traverse BLM lands. There are no areas on BLM lands that meet Back Country Byway designation criteria.

3.4.3 National Trails

The National Trail System Act of 1968 (Public Law 90-543) authorized the creation of a national trail system composed of National Recreation Trails, National Scenic Trails, and National Historic Trails. While National Scenic Trails and National Historic Trails may be designated only by an act of Congress, National Recreation Trails may be designated by the Secretary of Interior or the Secretary of Agriculture to recognize exemplary trails of local and regional significance in response to an application from the trail's managing agency or organization. Through designation, these trails are recognized as part of America's National Trail System.

Portions of the Nez Perce (Nee-Me-Poo) National Historic Trail and segments of the Lewis and Clark National Historic Trail are found in the planning area. The exact location of National Historic Trails is often unknown but is estimated, based on the best available information. The trail routes have been mapped from the western boundary of the Forest Service-administered lands across BLM, state, private, and tribal lands to the western boundary of the planning area. There are 169 miles of Nez Perce National Historic Trail within the planning area boundary, nine miles of which are on BLM-administered lands. There are 270 miles of the Lewis and Clark National Historic Trail, which includes the Sergeant Ordway trip to the Salmon and Snake Rivers, within the planning area boundary. Of the total, there are 12 miles of trail on BLM-administered land. These trails are discussed further under Section 3.2.13~~9~~, Cultural Resources. There are no known areas on BLM lands that meet National Trail designation criteria that are not already designated as a National Trail (Sisson 2005).

3.4.4 Wild and Scenic Rivers

Wild and scenic rivers are rivers or river sections designated by Congress or the Secretary of the Interior, under the authority of the WSR Act of 1968 (Public Law 90-542, as amended; 16 US Code

1271-2287), to protect outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values and to preserve the river or river section in its free-flowing condition (BLM 2005g).

Congress enacted this act to provide a national policy for preserving and protecting selected rivers and river segments in their free-flowing condition for the benefit and enjoyment of present and future generations. Section 5(d)(1) of the act directs federal agencies to consider potential wild and scenic rivers in their land and water planning processes. To fulfill this requirement, the BLM inventories and evaluates rivers when it develops an RMP for BLM-administered lands in a specified area. The inventory is conducted during the data gathering stage of RMP development, and the study phase is done during the formulation of the draft and proposed RMP.

There are five rivers in the planning area currently managed under the WSR Act: four are designated in the NWSRS, and one has been recommended to Congress for inclusion in the NWSRS. None are managed by the BLM. The four segments included in the NWSRS total 404 miles and include:

- 67 miles of the Snake River (through Hells Canyon), including 33 miles of Wild river designation and 34 miles of Scenic river designation. The Lower Salmon River enters the Snake River in a designated Scenic segment.
- 27 miles of the Rapid River (Wild designation). Rapid River is a tributary of the Little Salmon River.
- 125 miles of the Main Salmon River, including 79 miles of Wild river designation and 46 miles of Recreational river designation. The Main Salmon River is designated as Wild immediately upstream of the Lower Salmon River at Long Tom Bar.
- 185 miles of the Middle Fork of the Clearwater River, which includes a 54-mile stretch of the Selway River (Wild) and 131-mile segment of the Lower Selway and Lochsa Rivers (Recreational). The Middle Fork of the Clearwater River joins with the South Fork of the Clearwater River to form the Clearwater River, a BLM SRMA.

The 112-mile segment of the Lower Salmon River, Long Tom Bar to the confluence of the Snake River, was designated a study river in 1968. The river was studied, was found eligible and suitable, and was recommended to Congress for inclusion in the NWSRS as Recreational (59 miles Long Tom Bar to Hammer Creek) and Scenic (53 miles Hammer Creek to the Snake River Confluence). Congress has deliberated the issue of designation numerous times but has yet to act.

Several segments of rivers and streams within the planning area have been assessed for eligibility in conjunction with adjoining Forest Service stream segments. These include Lake Creek, French Creek, Hard Creek, and Hazard Creek. In addition, Lolo Creek has been assessed for eligibility and can be carried forward either on its own or with a concurrent Forest Service study.

Appendix K (see Volume II~~I~~) contains the Cottonwood RMP Final~~Draft~~ Wild and Scenic Rivers Eligibility and Suitability Study for this RMP/EIS. Six river segments were determined to meet the eligibility requirements for study. Four of these segments, totaling 29 miles, were determined to be preliminarily suitable for inclusion in the NWSRS, as follows:

- Lake Creek (2.18 miles), headwaters to National Forest Boundary;

- Hazard Creek (1.52 miles), National Forest boundary to confluence with Little Salmon River;
- Hard Creek (1.64 miles), National Forest boundary to confluence with Hazard Creek; and
- Lolo Creek (24 miles), National Forest boundary in Section 24, T34N, R5E, to confluence with Clearwater River.

3.4.5 Wilderness and Wilderness Study Areas

A national Wilderness Area is designated by Congress and defined by the Wilderness Act of 1964 as a place "where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain." Designation is aimed at ensuring that these lands are preserved and protected in their natural condition. Instruction Memorandum ID-2004-059 provides Idaho-specific guidance to implement Washington Office Instruction Memorandum 2003-275 stating that RMPs being developed in Idaho will not designate additional lands as WSAs, per Section 603 of FLPMA, nor propose managing any additional lands under the Interim Management Policy for Lands Under Wilderness Review (BLM 2004c). BLM has authority under Section 201 of the FLPMA to inventory public land resources including characteristics associated with the concept of wilderness and to consider such information during land use planning. Wilderness character can be defined by the following criteria as outlined under Section 2(c) of the Wilderness Act (16 US Code 1131-1136); (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) has at least five thousand acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition; and (4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value (16 USC 1131). ~~Wilderness Areas, which are generally at least 5,000 acres or more, offer outstanding opportunities for solitude or a primitive and unconfined type of recreation; such areas may also contain ecological, geological, or other features that have scientific, scenic, or historical value (BLM 2005g).~~

A WSA is an area designated by a federal land management agency as having wilderness characteristics, thus making it worthy of consideration by Congress for wilderness designation. While Congress considers whether to designate a WSA as permanent wilderness, the federal agency manages the WSA to prevent impairment of the area's suitability for wilderness designation (BLM 2005g). There are two WSAs on CFO lands and one designated wilderness area (**Table 3-~~26~~28**) (**Figure 46**, Wilderness Areas and Wilderness Study Areas [see Volume IV of Cottonwood Draft RMP/EIS]).

Table 3-28
Wilderness and Wilderness Study Areas in the CFO Planning Area

Name	Size (acres)	Wilderness Suitability Recommendation
Frank Church ~~/~~River of No Return Wilderness	750	Designated wilderness area in Marshall Mountains
Marshall Mountain WSA	5,571	Designated WSA recommended for nonwilderness
Snowhole Rapids WSA	6,463	Designated WSA recommended for nonwilderness

Congress designated the Frank Church-River of No Return Wilderness in 1980; it totals over 2.3 million acres, 750 acres of which are located on BLM-administered lands in the CFO. The remainder of the Wilderness is on six national forests. It is the second largest unit of the National Wilderness Preservation System in the lower 48 states (Wilderness.net 2006).

Most Idaho WSAs, including those located in northern Idaho, were designated through an inventory process that identified lands with wilderness characteristics as required by Congress in Sections 201 and 603 of FLPMA. The North Idaho Proposed MFP Amendment and Final EIS for Wilderness, approved in 1986 (BLM 1986a), analyzed alternative land use allocations, including wilderness suitability, for five WSAs located in northern Idaho. This document provided the basis for the Secretary of Interior's wilderness recommendations to the President and subsequently to Congress. The ROD for the Idaho Wilderness Study Report incorporated the Secretary's wilderness suitability recommendations and was signed in 1991.

The Idaho Wilderness Study Report recommended ~~T~~the Marshall Mountain WSA, 22 air miles east of the town of Riggins, ~~was recommended~~ for nonwilderness. If the ~~Upon approval of that~~ recommendation is approved by Congress, recommendations are to manage the area for semiprimitive recreation, with 3,920 acres to be managed under custodial forest management guidelines. Congressional action is pending. Marshall Mountain is surrounded by the Payette National Forest. The topography varies from 8,400 to 3,600 feet and is generally rugged mountainous terrain incised by perennial streams. Most of the area is covered with a mixed-conifer forest. There are numerous mining claims in the area, most of which are lode claims for gold. Several large fires in the past 10 years have burned large portions of the WSA. There is one grazing lease for sheep.

The Snowhole Rapids WSA, eight air miles southwest of the town of Cottonwood, was recommended for nonwilderness. ~~Upon approval of that~~ If the recommendation is approved by Congress, recommendations are to manage the area for semiprimitive recreation, primarily whitewater boating and fishing. Congressional action is pending. It is a linear unit, nearly 20 miles long and half a mile wide, on both sides of the Salmon River, from American Bar to just below China Rapids. The entire unit consists of steep, rocky river canyons. Management emphasis is on recreation and visual resources. The entire area is under lease for grazing in the winter. Several threatened and endangered species are present.

There are no anticipated, obvious, or evident trends in either the designated wilderness or the two WSAs. The designated wilderness is managed per the Wilderness Act, and the WSAs are managed under the BLM's Interim Management Policy.

The BLM interdisciplinary team reviewed existing lands that had been dropped from the previous inventory, those not already designated as wilderness or WSAs, to determine if conditions have changed and additional lands might be identified that possess wilderness characteristics. Also, lands acquired since the previous wilderness inventory were reviewed to determine if they contain wilderness characteristics. This review is based upon knowledge from resource staff that have completed field work throughout the planning area. Based upon further review, none of the lands previously dropped from the original inventory or newly acquired lands contain wilderness characteristics.

~~Criteria for lands to be designated by BLM as WSAs and subsequently considered by Congress for designation as a National Wilderness Area can be found in the Wilderness Inventory and Study Procedures Manual (H-6310-1). However, Instruction Memorandum ID-2004-059 provides Idaho-specific guidance to implement Washington Office Instruction Memorandum 2003-275 and states RMPs being developed in Idaho will not designate additional lands as WSAs nor propose managing any additional lands under the Interim Management Policy (BLM 2004c)~~

3.4.6 Watchable Wildlife Areas

The federal Watchable Wildlife Program is a cooperative, nationwide effort among 13 organizations, including the BLM, to foster the conservation of wildlife and wildlife habitats by the following means:

- Providing enhanced opportunities for the public to enjoy wildlife;
- Promoting learning about wildlife and habitat needs;
- Contributing to local economies; and
- Enhancing active public support for resource conservation.

There are four watchable wildlife areas on planning area BLM lands:

- The Craig Mountain WMA contains 24,200 acres and is managed primarily for big game and upland birds and supports Rocky Mountain bighorn sheep (Carpenter 1990). Lewiston is the closest town.
- The Lower Salmon River Canyon watchable wildlife area contains 87 miles of river. Common wildlife include the golden eagle, red-tailed hawk, and prairie falcon, American kestrel, mule deer, white-tailed deer, elk, Canada goose, chukar, and river otter. Riggins and White Bird are the closest towns.
- The Middle Salmon River Canyon watchable wildlife area contains 80 miles of river. Mountain goat, Rocky Mountain bighorn sheep, golden eagle, waterfowl, and river otter are often seen. Riggins and North Fork are the closest towns.
- Although the BLM manages no land in the Elk City (Red River) watchable wildlife area, it works in partnership with the Idaho Department of Fish and Game to manage the area. The Elk City Watchable Wildlife Area includes a 45 mile one-way route starting at McAllister Campground along the South Fork Clearwater River (Highway 14) and ending at the old Red River Ranger Station, which is the last stop (Carpenter 1990). The route includes various stops and side trips, which includes seasonal opportunity to view a variety of wildlife; including elk, white-tailed deer, bald eagles, steelhead trout, chinook salmon, waterfowl, water birds, raptors, and wild flowers that are visible in the area. The Idaho Department of Fish and Game Red River WMA provides an excellent opportunity to view a large herd of elk during the spring and Red River flows through the area and provides habitat for chinook salmon and variety of native fish. The BLM manages land in the Elk City area and has cooperated on several projects with Idaho Department of Fish and Game at the Red River WMA. A large amount of this route is through Nez Perce National Forest Service lands.

3.5 SOCIAL AND ECONOMIC

3.5.1 Native American Tribal Uses

Indian trust resources and tribal treaty rights are legal interests in assets held in trust by the federal government for federally recognized Indian tribes or nations or for individual Indians. These assets can be real property, physical assets, or intangible property rights. Examples include lands, minerals, water rights, hunting and fishing rights, other natural resources, money, or claims.

The federally recognized Nez Perce Tribe has long used natural resources and conducted its social and religious activities in the planning area. ~~Between 1855 and 1863, t~~The Nez Perce Tribe and the US signed various treaties and agreements that relinquished ownership of millions of acres of land to the US, established and modified the Nez Perce Reservation to guarantee a permanent homeland for the tribe, and maintained the tribe's rights to fish, hunt, ~~and~~ gather and pasture its animals on open and unclaimed lands (Sisson 2004). The original Treaty with the Nez Perce in 1855 specifically guaranteed the tribe a reservation homeland, as well as "the right of taking fish at all usual and accustomed places…[and] the priviledge of hunting, gathering roots and berries, and pasturing their horses and cattle upon open and unclaimed land." Due to the direct relationship with and access to natural resources guaranteed by this treaty, BLM natural resource management decisions have the potential to affect treaty rights. Developments resulting from other treaties and agreements in 1863, 1868, 1871, and 1893 resulted in ceded lands and a reduction in the reservation acreage.

The BLM manages a portion of the Nez Perce's ceded lands and maintains a government-to-government relationship with the tribe. These areas were once used by the tribe for settlement, subsistence, and religious use. The BLM now "has a trust responsibility to provide the conditions necessary for Indian tribal members to satisfy their treaty rights" (Sisson 2004) guaranteed them in the 1800s. Today, the Nez Perce utilize resources on BLM public lands within their ceded territory for subsistence and cultural purposes, but the tribe is not dependent upon BLM resources for their economic livelihood. There is little information available to define what resources or areas the tribe currently utilizes, but they have expressed their concerns regarding natural resource management, particularly water quality and fisheries management.

There is a record of long-term use of the ecosystem by the Nez Perce prior to E~~ruo~~uro-American settlement. This use was based on a balance between the human population and the ecosystem. This balance was disturbed by the ~~arrival~~ arrival of Euro-Americans in the area. Changes in resource uses have introduced nonnative plant and animal species and ~~dessimated~~ decimated or otherwise reduced other plant species that were traditionally used by the Nez Perce. "Without the plants available for use, the intertwined socio-cultural values associated with the gathering and processing of the plants or animals ~~is~~ are lost or diminished" (Sisson 2004). Other changes in resource use have created visual intrusions into the environment, further impacting Native American activities associated with subsistence gathering and hunting.

Nez Perce tribal demographics and economy are discussed in Section 3.5.4, Environmental Justice.

3.5.2 Public Safety—Abandoned Mines and Hazardous Materials

Public safety includes the management actions of the AML and Hazardous Materials Management (HMM) programs. Hazardous materials represent a significant risk to public safety, human health,

and the environment and are therefore important issues that warrant the attention of the BLM management. Hazardous materials management also involves the prevention of illegal hazardous materials actions on public lands, the proper use, authorization, permitting, and regulation of hazardous materials on public lands, and timely, efficient, and safe responses to hazardous materials incidences on public lands.

The HMM and the AML programs in the CFO have seen limited activity toward cleaning up lands affected by mining. The AML hazards on CFO-administered lands have only been investigated to a limited extent, and the specific hazards have not been documented. Currently, the preeminent concern of the AML program in the planning area is identifying and mitigating physical hazards on lands affected by mining practices.

Typical hazardous materials issues on CFO lands are associated with past mining activities, illegal dumping, past landfill activities, and accidental material releases from transport vehicles (**Table 3-~~27~~29**). There are five identified primary hazardous materials sites on CFO lands. The five sites are composed of three closed solid waste landfills and two past mining heap leach sites. The main directive for these five sites is that they are protected and not improperly disturbed by future activities.

The three former landfill sites are in Idaho County and are the Riggins Landfill, the Blackhawk Bar Landfill, and the Elk City Landfill. Closure actions have been taken at all three landfill sites, and they are considered closed. The Elk City Landfill is located partially on and near tailings piles from historical placer mining operations. The MFP (BLM 1981a) identified the site as an ACEC. The Riggins landfill is downstream of the town of Riggins, and the Blackhawk Bar Landfill is upstream of Slate Creek. Both of these landfills are on lands which are within the existing withdrawal for the Salmon River Proposed Wild and Scenic River segment.

The two past mining heap leach sites being addressed by the CFO are near Elk City and are known as the Elk City Heap and the Buffalo Gulch Heap. The heap leach process uses cyanide to remove gold or other desirable metals from mined materials. The Elk City Heap is immediately north of Elk City and about 1,200 feet from the eastern bank of Elk Creek. The reprocessing efforts at this site were generally unsuccessful and operations were suspended in 1983. Remediation efforts at the Elk City Heap site included rinsing the cyanide from the tailings, placing a plastic liner over and capping the pile, and consolidating the unprocessed tailings at the valley edge in the mid-1980s. The Buffalo Gulch Heap is northwest of Elk City and is not considered to be completely closed. The Buffalo Gulch Heap is atop an impermeable liner but is not capped. The site is being monitored until final reclamation is conducted and considered successful.

Not all AML sites include conditions that are hazardous to humans or the environment. However, the physical hazards that may be encountered at AML sites include basic trip and fall hazards from debris, obscure mine shafts, dilapidated mine buildings and equipment, harmful chemicals or contaminated soils, unused explosives, and open mine adits with oxygen-depleted or toxic environments. The potential for injuries and deaths from these hazards increases with the growth of the western population and recreational use of public lands. Therefore, sites easily accessed by the public are given first priority for implementation of mitigation or closure measures.

Table 3-29
Activities and Associated Hazardous Materials Management

Potential Hazard	Examples
Hazardous materials associated with historic and active mine operations	• Mine water drainage • Chemicals associated with processing ore or used in laboratories, such as cyanide • Explosives, such as dynamite, ammonium nitrate, caps, and boosters • Heavy metals, such as tailings, mill sites, and rock dumps • Asbestos
Illegal dumping	• Unauthorized dumps • Containers with hazardous substances dumped on public land
Illegal activities	• Drug labs • Wire burn sites
Spillage of hazardous materials	• Waste spills and residual materials • Weed spray equipment spills • Materials spilled from overturned trucks or train cars
Facilities on public land	• Leaky storage tanks • Oil dumps or landfills • Asbestos

When hazardous conditions are present at AML sites, they can include both on-site and off-site impacts. Mine wastes on AML sites may affect or preclude the growth of vegetation on-site and give rise to fugitive dust with hazardous heavy metal constituents when disturbed. Water quality issues may come from the direct flow of heavy metals-laden water out of mine adits or leaching from mined materials contributing undesirable heavy metal constituents to nearby stream and river subbasins. Heavy metal constituents can adversely affect many aquatic species and also may adversely affect avian and mammalian species around such mine sites and drainages via direct and indirect routes of intake. The metals associated with the mining activities in the CFO are primarily gold, silver, lead, zinc, copper, and arsenic. Mines within the planning area are shown on **Figure 47** (Mine Sites) (see Volume IV of Cottonwood Draft RMP/EIS).

Few AML sites for the CFO have been inventoried, and none have been entered into the BLM's Abandoned Mines Module database, due primarily to a lack of AML efforts being undertaken. The BLM estimates that the CFO may contain as many as 100 or more AML sites.

The CFO responds to a number of instances of illicit dumping on BLM-administered lands. Much of the illicit dumping activity within the CFO is intentional, small quantity waste dumping. Illicitly dumped materials may include hazardous substances, household wastes, petroleum products, solid waste, and agricultural materials. Illicit dumping may occur anywhere on BLM-administered lands, but is generally concentrated around recreation areas and alongside roadways. These dumping incidents normally do not fit the specific category of hazardous waste dumping, but the dumped materials are normally screened for hazardous components, then all of the materials are removed

and appropriately disposed. Overall, instances of significant or hazardous dumping on CFO lands are fairly limited, which is attributed to the relatively low population density around the public lands.

The CFO has responded to a number of vehicular accidents that involve the accidental release of hazardous materials or petroleum products from transport vehicles. The HMM program can become involved with a particular response action or cleanup when the release affects BLM-administered lands.

In recent years, the BLM has responded a number of times to dumped methamphetamine lab wastes, or related drug wastes, on its administered lands. Methamphetamine drug lab wastes are frequently found to include highly toxic chemicals, flammable materials, and potentially explosive materials. Discarded drug paraphernalia is also a concern as it can include wastes that present a skin puncture/disease transmission hazard. Methamphetamine drug lab wastes present a direct health and safety hazard to individuals who may inadvertently come across them and also present a hazard to wildlife.

Hazardous materials may legitimately be brought onto BLM-administered lands for weed control or resource development. The types of hazardous materials used for weed and insect control include pesticides (herbicides and insecticides). The general types of hazardous materials that may be used include petroleum products (fuels and lubricants), solvents, surfactants, paints, explosives, batteries, acids, gases, antifreeze, and mineral products (mine waste, cement, and drilling materials). Another source of hazardous materials is from actions involving rights-of-way, leases, and permits. Examples of these types of actions are on-site storage and use of fuels (oil and gas), telecommunication sites, and transportation facilities.

3.5.3 Social and Economic Conditions

The demographics and the economies of the six planning area counties are affected by public land uses within the planning area. Similarly, social structure and values within the counties influence the demand for recreation and other opportunities provided by the public lands, as well as the acceptability of proposed land management decisions. Socioeconomic resources include demographic information on population, housing, and schools; economic conditions, such as employment, income, and earnings; and social values.

Population

Table 3-~~28~~ 30 displays population trends from 1990 to 2000 and the percent change over the decade in the six planning area counties. In 2000, the three largest county populations in the planning area were Nez Perce (37,410), Latah (24,935), and Idaho (15,511) Counties, which experienced increases of 10.8 percent, 14.1 percent, and 12.5 percent, respectively, from their 1990 populations. The growth in each of these counties over the decade did not exceed the state average of 28.5 percent. Census data indicates a recent trend for all counties of a negative net domestic migration, or more persons moving out than moving in (Adams-Russell Consulting 2004).

Growth in the planning area is projected to continue to be lower than state population growth, as shown in **Table 3-~~29~~31**.

Table 3-30
County Population Totals and Median Ages (1990-2000)

County	1990	2000	1990-2000 Change	1990-2000 Percent Change	Median Age (2000)
Adams	3,254	3,476	222	6.8%	44.4
Clearwater	8,505	8,930	425	5.0%	41.7
Idaho	13,783	15,511	1,728	12.5%	42.3
Latah	30,617	34,935	4,318	14.1%	27.9
Lewis	3,516	3,747	231	6.6%	42.5
Nez Perce	33,754	37,410	3,656	10.8%	38.1
Planning area	93,429	104,009	10,580	9.3%	39.5
State of Idaho	1,273,855	1,273,593	368,417	28.5%	33.2

Source: US Census Bureau 2004; Real Estate Center 2003 (utilizing US Census Bureau data)
Note: Decade years represent April 1 Census data, not mid-year estimates.

Table 3-31
County Population Projections

County	2000	2005	2010	2015	2020	2000-2020 Population Change	2000-2020 Percent Change
Adams	3,756	3,838	3,934	4,014	4,154	398	10.6%
Clearwater	9,320	9,556	9,829	10,088	10,341	1,021	11.0%
Idaho	14,961	15,344	15,788	16,208	16,619	1,658	11.1%
Latah	32,735	33,562	34,522	35,430	36,320	3,585	11.0%
Lewis	3,914	4,019	4,138	4,252	4,363	449	11.5%
Nez Perce	36,695	37,622	38,698	39,717	40,714	4,019	11.0%
Planning Area	101,381	103,941	106,909	109,709	112,511	11,130	11.0%
State of Idaho	1,273,855	1,386,4893	1,497,548	1,609,314	1,722,954	449,099	35.3%

Source: US Census Bureau 2004

Employment and Economy

Table 3-~~30~~ 32 shows employment data for all planning area counties in 2000. The three most populated counties, Nez Perce, Latah, and Idaho, had unemployment rates ranging from 4.6 to 10.2 percent, while the planning area counties had an average unemployment rate of approximately 8.4 percent, larger than the state's 4.9 percent average. Clearwater, Idaho, and Lewis Counties, which had the highest unemployment rates in the planning area in 2000, demonstrate seasonal employment patterns because of the effects of employment in jobs related to the agriculture and timber industries (Adams-Russell Consulting 2004).

Between 1990 and 2000, the sector with the greatest percentage increase in employment (for all planning area counties) occurred in the services sector (53.2 percent). After services, the highest percentage of employment growth in the six-county area occurred in the construction (46.9 percent), public administration (40.5 percent), and finance/insurance/real estate (37.1 percent) sectors. Over

Table 3-32
County Employment Statistics (2000)

Location	Employed Persons	Unemployed Persons	Unemployment Rate
Adams County	1,403	117	7.7 %
Clearwater County	3,270	427	11.5 %
Idaho County	5,925	673	10.2 %
Latah County	17,223	1,420	7.6%
Lewis County	1,514	143	8.6 %
Nez Perce County	17,856	867	4.6 %
Planning Area	47,191	3,647	8.4%
State of Idaho	636,237	163	4.9 %

Source: US Census Bureau 2004; Idaho Commerce and Labor 2004

the decade, employment in the other industry sectors declined, including transportation/utilities (-8.9 percent), agriculture/forestry/fishing, and mining (-13.6 percent), manufacturing (-18.4 percent), and trade (-21.5 percent).

In addition, agriculture, also a historically important industry within the planning area, underwent significant changes. During the past decade and through the present, the agriculture industry in the planning area has trended toward fewer small family farms and more large corporate farms. Much of this can be explained by the difficulty in maintaining small scale operations that are economically feasible (Adams-Russell Consulting 2004).

Income and Earnings

As shown in **Table 3-~~31~~33**, in 2000, per capita personal incomes for the planning area counties remained below $20,000, with an average increase of 41.3 percent since 1990, but below the state average of $23,987 in 2000. Overall, in 2000, Nez Perce County had the highest per capita income ($18,544), and Idaho County had the lowest ($14,411) (US Department of Commerce, Bureau of Economic Analysis 2004).

Table 3-33
Per Capita Income

Location	1990	2000	Percent Change
Adams County	$13,626	$14,908	8.6%
Clearwater County	$11,234	$15,463	37.6%
Idaho County	$10,527	$14,411	36.9%
Latah County	$10,892	$16,690	53.2%
Lewis County	$9,780	$15,942	63.0%
Nez Perce County	$12,476	$18,544	48.6%
Planning Area	$11,440	$15,993	41.3%
State of Idaho	$15,858	$23,987	51.3%

Source: US Department of Commerce, Bureau of Economic Analysis 2004
Note: Figures calculated without taking into account the inflation rate.

Between 1990 and 2000, farm earnings decreased significantly in all planning area counties, with the exception of Clearwater County, which showed relatively low decrease of 11 percent. Adams County experienced the largest decrease in farm earnings of all the counties, 167 percent. All planning area counties showed an average decrease in farm earnings of 79 percent between 1990 and 2000. In a similar pattern, farm earnings decreased at the state level by 12 percent between 1990 and 2000.

Protection of Children

Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks (Executive Order 13045 [Federal Register 1997), states that each federal agency shall make it a high priority to identify and assess environmental health risks and safety risks that may disproportionately affect children and ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks. Environmental health risks and safety risks mean risks to health or to safety that are attributable to products or substances that the child is likely to come into contact with or to ingest.

Economic Influence of BLM-Managed Lands

Local economies realize direct and indirect benefits from a variety of activities on public lands, including visitor expenditures and the processing and harvesting of timber, minerals, and forage. The agricultural, hunting, forestry, and fishing sectors (which are industries that use BLM-managed lands) have shown increases in employment due to an increase in activity (Forest Service 2004). In addition, the federal government redirects revenues collected from public lands back to the states in which they were collected.

The BLM also contributes directly to the economy of the planning area through the employment of 20 permanent employees and 15 to 20 seasonal employees in the CFO. These employees live and work in the planning area and spend money on housing, transportation and general purchases. The Field Office helps support local businesses through purchases of goods and services.

The BLM collects revenues from recreational and commercial activities that take place on the nearly 12 million acres of BLM-managed lands in Idaho. These revenues are collected from facility fees (e.g., campgrounds), BLM recreation permits (special, competitive, organized group activity, and event use permits), timber sales, mining leases and mineral revenues, and grazing fees. **Table 3-~~32~~ 34** shows collections received from specific activities on Idaho BLM-managed lands in 2002.

Table 3-34
Total Federal Collections from Idaho BLM-Managed Land and Minerals in 2002

Activity	Collection
Recreation and use fees	$433,676
Grazing fees	$1,367,092
Timber receipts, public domain	$612,510
Mining claim holding fees and service charges	$791,900
Mineral royalties, rents, and bonuses	$7,874,520
Miscellaneous receipts	$513,004

Source: BLM 2004d

Recreation Sector

Growth and expansion in Idaho's tourism and recreation industry have been a significant factor in Idaho's economy. Tourism is the state's third largest industry, and in 1998 tourists and visitors spent an estimated $1.7 billion, accounting for approximately $134 million in local, state, and federal tax revenues (Business Enterprise for Sustainable Travel 2001) and 6 percent of the state's annual $29 billion in gross revenues (Idaho Game Fishery 2001), which in turn created more jobs and income for Idaho citizens (Idaho Department of Commerce and Labor 2004).

Recreation-related visits to Idaho are estimated to continue to increase at an annual rate of 1 to 4 percent within the planning area. Population growth, as well as an increase in the number of annual visitors, has created a rising demand for recreation opportunities. In 2002, the Outdoor Industry Association's State of Affairs ranked Idaho as the number one state in the nation for recreation, with 86.8 percent of residents participating in outdoor activities (Outdoor Industry Association 2002). A total of 4,732,799 visitor days were spent on recreation activities on BLM lands in Idaho in 2002 (BLM 2004d).

The planning area includes 112 miles of the Lower Salmon River, approximately 79 miles of which are on BLM-administered lands (BLM 2004a). This is a widely used recreation area and visits to the recreation sites and semideveloped campgrounds along the river corridor totaled over 300,000 in 2002 and are increasing every year (BLM 2004d).

Table 3-~~33~~ 35 presents the travel spending estimates in each of the six planning area counties. **Table 3-~~34~~ 36** shows employment and labor income information related to recreation and tourism activities in planning area. The annual figures include all part-time, seasonal, and full-time jobs, as well as proprietor incomes.

Table 3-35
Travel Spending Estimates and Travel-Generated Employment in Six Planning Area Counties in 2002

County	Payment ($000s)	Jobs
Adams	$1,642	73
Clearwater	$3,286	170
Idaho	$6,688	631
Latah	$29,024	668
Lewis	$1,855	62
Nez Perce	$29,809	472
Planning area total	$72,304	2,076

Source: Idaho Department of Commerce and Labor 2004

Table 3-36
Estimated Sales, Employment, and Labor Income Resulting from Recreation- and Tourism-Related Activities in the Planning Area in 2002

Sector: Direct Effects	Sales $000s	Employment (Average Annual Jobs)	Payroll (Average Annual Dollars)
Motel, hotel, cabin, bed and breakfast, camping	$18,012	551	$7,057
Restaurant and bars	$19,659	653	$6,627
Admission and fees	$8,476	485	$7,251
Retail trade	$19,744	580	$9,542
Wholesale trade	$2,954	38	$1,220
Local production of goods	$1,817	2	$17
Total direct effects	$70,660	2,308	$28,085
Secondary effects	$8,988	166	$3,651
Total effects	$79,646	2,474	$31,736

Source: Idaho Department of Commerce and Labor 2004

In 2001, recreation and tourism employed approximately 2,474 workers in the planning area. Of total visitors, nonresidents traveling to Idaho were estimated to be 13 percent in the summer, 11 percent in the fall, 8 percent in the winter, and 13 percent in the spring.

By 2020 the population in the planning area is expected to increase by 11 percent from its 2000 value, an increase that will further increase recreational visits to the planning area. The most common and most desired activities on BLM lands were fishing, hiking, camping, photography, wildlife/bird observation, picnicking, hunting, and OHV use (Idaho Department of Commerce and Labor 2004).

Forestry Sector

Forestry remains Idaho's number one nonfarm basic industry, providing 10.9 percent of the state's gross product and approximately 9 percent of total jobs. In 2003, forestry provided an estimated 19,000 jobs, and forest-based earnings totaled approximately $580 million (Forest Service 2004). However, the forestry industry is not as large an employer in some planning area counties as it is in others (Idaho Department of Commerce and Labor 2004). Of the CFO-managed lands in the six planning area counties, most forestry-related activities take place in Idaho and Lewis Counties (Craig 2005). All forested BLM-administered lands within the CFO are potentially available for commercial timber harvest and sales except for public lands in the Craig Mountain WMA and Marshall Mountain Township.

Although 41 percent of Idaho is forested, the CFO administers only a fraction of that area, which is used for timber harvest. Forestry is more prevalent on Forest Service and private lands within the planning area and includes the surrounding Clearwater National Forest, Payette National Forest, and Nez Perce National Forest (**Figure 1**, Planning Area Land Status) (see Volume IV of Cottonwood Draft RMP/EISChapter 1). The CFO manages 35,757 varying acres as commercial forest land within the planning area (Craig 2005), constituting 25 percent of total CFO-managed land within the planning area.

There are seven mill communities in the CFO boundary: New Meadows (Adams County); Orofino and Weippe (Clearwater County); Kooskia and Grangeville (Idaho County); Kamiah (Lewis County); and Lewiston (Nez Perce County). Additionally, many communities have small milling operations (less than 10 employees) that contribute substantially to their economy. The Elk City mill has closed and relocated in Grangeville (Idaho Statesman 2005).

During fiscal year 2002, the Idaho BLM collected $612,510 from timber sales, of which direct BLM financial transfers to the state from timber receipts amounted to approximately $253,000 (BLM 2004d). In fiscal year 2004, sales of forest products derived from the 35,757 acres of commercial forest land managed by the CFO was estimated to value approximately $130,479 from 1,037,100 board feet (BLM 2004d). These figures reflect the portion of receipts from public domain timber harvest collected by the federal government and shared with the state to distribute to the counties. Timber receipts are not a part of payments in lieu of taxes but are additional payments paid to the counties. Payments in lieu of taxes provide for payments to local governments containing certain federally owned lands and are described in more detail in the "Payments in Lieu of Taxes" section below.

Stewardship contracting is a contracting tool that authorizes the BLM to exchange goods for services. This is accomplished by entering into stewardship projects (by contract or agreement) with private persons or public or private entities to perform services that achieve public land management goals that meet local and rural community needs. Stewardship contracting provides for the sale or exchange of vegetative material, such as commercial sized timber, in exchange for service work, such as tree planting, in one contract or package. Contracts allow the value of forest products sold to offset the cost of contracted services. Projects must have close involvement with a local community group whose goal is community economic viability to maintain the woods and mill work social infrastructure. Also, the value of timber or biomass removed must be applied as payment for various conservation or restorative services. In 2004, the CFO also offered 9 million board feet of saw timber under a stewardship contract ($1.5 million in revenue), which included $1.3 million of service work. A contract requirement was to use local work force. Stewardship efforts will continue into the future and have an economic effect on communities.

Mining Sector

In 2000, mining employment data for Adams, Clearwater, and Lewis Counties were found to be either zero or suppressed. The BLM CFO administers leases and prospecting permits on acquired lands in the Payette and Clearwater National Forests. Currently, eight pending or authorized cases for gold or garnet encompass about 2,237 acres in Latah and Clearwater counties. The BLM CFO manages substantial blocks of land in two gold mining districts, Elk City and Marshal Lake. In general, the minerals of greatest economic significance within the planning area include precious metals, aggregates, garnets, clay, and dimension/decorative stone (BLM 2004e).

Livestock Grazing/Rangeland Management

The BLM manages public land grazing by issuing grazing permits/leases. The grazing fee for western public lands managed by the BLM and the Forest Service has been set at $1.43 per AUM for 2004. One AUM is equal to the amount of forage used to support one cow and calf for one month (approximately 800 pounds of forage).

Presently, the CFO has allocated a total of ~~7,204~~7,200 AUMs, and approximately 135 livestock operators in the CFO planning area actively graze 168 allotments. In addition, there are 20 vacant allotments with 1,098 AUMs that are currently not being leased. The grazing allotments vary, from less than three acres up to 11,630 acres. Presently, approximately 6,350 AUMs are allocated for cattle, 740 AUMs for sheep, and 110 AUMs for horses, bison, and goats (Danly 2005, Huibregtse 2005).

Payments in Lieu of Taxes

Congress appropriates funds for the payments in lieu of taxes to eligible units of local government each year. The BLM calculates the payment amounts using a formula based on population and the amount of federal land in a jurisdiction. These payments are in addition to federal revenues transferred to local governments under other programs, such as income generated from the use of public land for livestock grazing, timber harvests, and mineral receipts (BLM 2004d). **Table 3-~~35~~ 37** presents payments in lieu of taxes received by planning area counties in 2004.

Table 3-37
Payments in Lieu of Taxes to Planning Area Counties
(Fiscal Year 2004)

County	Payment	BLM Entitlement Acres
Adams	$102,819	5,470
Clearwater	$278,402	3,887
Idaho	$842,713	94,565
Latah	$117,699	199
Lewis	$11,307	8,194
Nez Perce	$47,570	31,486
Total	$1,400,510	143,830

Source: BLM 2004d

3.5.4 Environmental Justice

This section addresses issues related to environmental justice, in accordance with Executive Order 12898. On February 11, 1994, President Clinton issued Executive Order 12898, entitled "Federal Actions to Address Environmental Justice in Minority and Low-Income Populations." This order requires that "each federal agency make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations" (Executive Order 12898, 59 Federal Register 7629 [Section 1-201]).

All counties in the planning area have a lower per capita income than the Idaho average, and, except for Nez Perce County, all counties also have lower median household incomes than Idaho. The state's poverty rate (13.8 percent) exceeds the poverty rates of three out of six planning area counties (Nez Perce, Lewis, and Clearwater) and was below the rest of the planning area counties' percentages, which ranged from 13.5 to 16.7 percent.

In 2000, the average estimated poverty threshold for an individual in the US was an annual income of $8,787 and for a four-person household it was $17,601. The US Census Bureau estimates that approximately 12.0 to 16.7 percent of county populations in the planning area were below the poverty line in 2000. The percentages in Latah (16.7 percent), Idaho (16.3 percent), and Adams (14.3

percent) Counties exceeded the state average of 13.8 percent (US Census Bureau 2004). While these counties displayed lower values from 1990, Adams, Clearwater, and Idaho Counties had a 3.5-percent, 1.3-percent, and 2.5-percent increase, respectively, in the number of individuals below the poverty line from 1990 levels (US Census Bureau 2004).

In 2000, the Native American population formed the dominant ethnic group within the planning area, and the African American population had the smallest representation. Nez Perce (6.3 percent), Lewis (5.0 percent), and Idaho Counties (4.0 percent) had the largest Native American populations, roughly three to four times higher than the state average Native American population of 1.4 percent. The following paragraphs further describe the socioeconomic relationship of this minority group with planning area public lands.

Nez Perce Tribal Demographics and Economy

Figure 1, Planning Area Land Status (see ~~Volume IV~~Chapter 1) shows the location of the Nez Perce Tribe Reservation within Lewis, Nez Perce, and Clearwater Counties in the planning area. The CFO lies entirely within the ceded territory of the Nez Perce Tribe, whose reservation lies entirely within the CFO. There are about 17,586 acres of BLM-administered land within the reservation. There are approximately 3,300 enrolled tribal members, and there are another 1,000 members who live off the reservation. Lapwai and Kamiah are two principal communities of residence for tribal members, but members also live throughout the planning area (Adams-Russell Consulting 2004).

Table 3-~~36~~ 38 displays population, labor, housing, and income trends of the Nez Perce Tribe from 1980 to 2000. Population growth during that time totaled 638 people, representing a 43.6 percent

Table 3-38
Nez Perce Tribe Reservation Populations, Employment, and Income Trends (1980-2000)

Socioeconomic Indicator	1980 [1]	1990 [1]	2000
Population	1,463	1,863	2,101
Decade change	-	27%	12.8%
Age structure			
Under 18	44%	38%	38.4%
Ages 18-64	49%	56%	54.7%
Above 65	7%	6%	6.9%
Household type			
Family household	211	471	540
Non-family household	104	122	127
Owner occupied housing units	452	592	667
Value of owner occupied housing units	$61,761	$65,854	$82,691
Labor force participation	74%	57%	62.2%
Median household income	$16,599	$25,599	$32,383
Per capita income	$8,316	$8,715	$11,023
Poverty level	36%	30%	26%

Source: Northwest Area Foundation 2004; US Census Bureau 2004

[1] Most 1980 and 1990 numbers are rounded.

increase. In 2000, 54.7 percent of the Tribe's population was between the ages of 18 and 64, with the population of people under the age of 18 declining between from approximately 44 percent to 38 percent. During the same period, the number of family households and number of owner-occupied housing units increased, from 452 to 667 units, representing a 47.6-percent increase. In 2000, of the 7,735 tribal members in the civilian labor force (available for employment), 7,025 members (about 91 percent) were employed; although, between 1980 and 2000, labor force participation decreased from 74.4 percent to 62.2 percent. During this period median household income and per capita income increased and poverty level decreased, indicating an increase in the economic well-being of the Nez Perce Tribe population in the planning area (Northwest Area Foundation 2004).

This economic prosperity can be attributed to the financial improvement and increase of activity of Nez Perce Tribe-operated casinos in the region: the Coyote Casino in Kamiah (Lewis County) (formerly the It'se-Ye-Ye Casino) and the Clearwater River Casino in Lewiston (Nez Perce County). Together, the casinos employ approximately 250 people and annual net revenues total $2 million to $3 million. Revenues generated by the casinos support tribal government, tribal economic development, and tribal member services. The revenues are also used to support local police and fire services, as well as local schools and charitable organizations (University of Idaho 2004). Overall, tribal enterprises increased nearly 300 percent from 1995 to 2000. Most of the earnings ($10.5 million) came from the Clearwater River Casino.

Employment increased 220 percent, dramatically decreasing high winter unemployment figures (almost 70 percent) that existed before the advent of tribal gaming (University of Idaho 2004).

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CHAPTER 4

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CHAPTER 4 – ENVIRONMENTAL CONSEQUENCES

4.1 INTRODUCTION

Chapter 4 presents the likely direct, indirect, and cumulative impacts on the human and natural environment in terms of environmental, social, and economic consequences that are projected to occur from implementing the alternatives presented in Chapter 2. Because the alternatives generally describe overall management emphasis, the environmental consequences are most often expressed in comparative general terms. Separate sections describing irretrievable or irreversible commitment of resources and unavoidable adverse impacts are presented at the end of the chapter.

Impact analyses and conclusions are based on interdisciplinary team knowledge of the resources and planning area, information provided by experts in the BLM or in other agencies, and information contained in pertinent existing literature. The baseline used for the impact analysis is the current condition or situation as described in Chapter 3 (Affected Environment). Analysis assumptions have also been developed to help guide the determination of effects (see Section 4.1.1, Analytical Assumptions). Because the ~~Draft~~ Proposed RMP/EIS provides a broad management framework, the analysis in this chapter represents best estimates of impacts because exact locations of development or management are often unknown. Impacts are quantified to the extent practical with available data. In the absence of quantitative data, best professional judgment provides the basis for the impact analysis.

4.1.1 Analytical Assumptions

Several assumptions were made to facilitate the estimation of the effects of the alternatives. These assumptions are made only for the purpose of analysis and do not represent potential RMP decisions. The assumptions do provide reasonably foreseeable projected levels of development that could occur within the planning area. These assumptions should not be interpreted as constraining or redefining the management objectives and actions proposed for each alternative as described in Chapter 2. Following are the general assumptions applicable to all resource categories. Any specific resource assumptions are provided in the Methods of Analysis subheading for that resource.

- Sufficient funding and personnel would be available for implementing the final decision;
- Implementing actions from any of the RMP alternatives would be in compliance with all valid existing rights, federal regulations, BLM policies, and other requirements;
- Local climate patterns of historic record and related conditions for plant growth would continue;
- Appropriate maintenance would be carried out to maintain the functional capability of all developments;
- The discussion of impacts is based on the best available data. Knowledge of the planning area and professional judgment, based on observation and analysis of conditions and responses in similar areas, are used to infer environmental impacts where data are limited;
- Acreage figures and other numbers used in the analyses are approximate projections for comparative and analytic purposes only. Readers should not infer that they reflect exact measurements or precise calculations; and

- Acreages were calculated using GIS technology, and there may be slight variations in total acres between resources. These variations are negligible and will not affect analysis.

4.1.2 Types of Effects (Direct, Indirect, and Cumulative)

Direct, indirect, and cumulative impacts are considered in this effects analysis, consistent with direction provided in 40 CFR 1502.16. Direct impacts are caused by an action or implementation of an alternative and occur at the same time and place. Indirect impacts result from implementing an action or alternative but are usually later in time or removed in distance and are reasonably certain to occur. Cumulative effects are defined below in Section 4.1.3, Cumulative Impacts.

Effects are quantified where possible, primarily by using GIS applications. In the absence of quantitative data, best professional judgment prevailed; impacts are sometimes described using ranges of potential impacts or in qualitative terms. Only management programs with impacts are discussed. The standard definitions for terms referring to impact duration that are used in the effects analysis are as follows, unless otherwise stated:

Short-Term Effect: The effect occurs only during implementation or immediately after implementation of the alternative. For the purposes of this RMP, short-term effects would occur during the first five years.

Long-Term Effect: The effect could occur for an extended period after implementing the alternative. The effect could last several years or more and could be beneficial or adverse. For the purposes of this RMP, long-term effects would occur beyond the first five years and perhaps over the life of the RMP.

4.1.3 Cumulative Impacts

Cumulative effects are defined as the direct and indirect effects of a proposed project alternative's incremental impacts when they are added to other past, present, and reasonably foreseeable actions, regardless of who carries out the action (40 CFR Part 1508.7). Guidance for implementing NEPA (Public Law 91-190, 1970) requires that federal agencies identify the timeframe and geographic boundaries within which they will evaluate potential cumulative effects of an action and the specific past, present, and reasonably foreseeable projects that will be analyzed. Effects of past actions and activities on resources are manifested in the current condition of the resource, which is described in Chapter 3 (Affected Environment) for resources on BLM-administered lands.

Cumulative Impact Assessment Methodology

This cumulative assessment is a programmatic, broad-scale, qualitative assessment. The BLM makes both land use planning and implementation decisions. Examples of planning decisions include land use allocations, special designations, and determining which lands would be open or available for certain uses, such as OHV use. Examples of implementation decisions include designating routes for motorized or nonmotorized vehicle travel, specific recreation facilities, and actions that may be taken without preparation of additional environmental documentation. Implementation decisions generally constitute the BLM's final approval allowing on-the-ground actions to proceed.

The land use planning-level decisions that BLM will make regarding this RMP are programmatic decisions based on analysis that can only be conducted on a broad scale. Because of the broad scope, impact analysis of planning-level decisions is speculative with respect to projecting specific activities.

Subsequent documents tiered to this RMP would generally contain a greater level of detail and would be subject to NEPA ~~assessment~~ analysis and compliance. Subsequent tiered activity- and project-level plans are more definitive than plans found in an RMP. An activity-level plan typically describes projects in detail that will lead to on-the-ground action and traditionally focused on single resource programs. A project-specific plan is typically prepared for an individual project or several related projects. Activity plans (such as travel management plans) are generally more site specific and less speculative than the RMP analyses. Project-level plans (such as stream restoration) contain specific proposed actions, and site- or area-specific analysis is conducted. Activity plans may contain information that is as detailed or specific at a project level.

A cumulative impact analysis is based on numerous assumptions. The CEQ guidance limits cumulative impact analysis to important issues of national, regional, or local significance. Therefore, this cumulative impact assessment focuses only on actions and impacts that would potentially be significant.

Projects That Make Up the Cumulative Impact Scenario

For this EIS, the cumulative impact assessment timeframe is from approximately 1980 to 2025, with some exceptions where additional past data are available. This encompasses a range within which data are generally available and forecasts can be reasonably made. This analysis is provided for each resource and is general because decisions about other actions in the planning area would be made by many public and private entities, and the location, timing, and magnitude of these actions are not well known.

The geographic area of primary concern is composed of the six Idaho counties in which the Field Office is located: Latah, Clearwater, Nez Perce, Lewis, Idaho, and Adams Counties, which include various land owners (**Table 4-1**). Projects outside this six-county area, however, are also considered if they have the potential to affect resources with broad regional importance.

Table 4-1
Land Ownership in the Planning Area

Land Ownership	Size (Acres)	Percent of Total
BLM	143,830	<2%
Forest Service	5,528,167	63%
Nez Perce tribal lands	94,705	1%
State	444,791	5%
Private	2,581,685	29%
Other	48,019	<1%
Total	**8,841,197**	

Source: BLM 2004a

Public documents and data prepared by federal, state, and local government agencies are the primary information sources for past, present, and reasonably foreseeable future actions. Actions undertaken by private persons and entities are assumed to be captured in the information made available by such agencies. Specific projects with the potential to cumulatively affect the resources evaluated (e.g., water resources, vegetation) are identified below. Projects included in the cumulative impact analysis do not affect all resources equally: Some resources would be affected by several or all of the

described activities, while others would be affected very little or not at all. Cumulative impact analyses are presented in this chapter by resource topic. The projects that make up the cumulative impact scenario were analyzed in conjunction with the impacts of each alternative to determine if they would have any additive or interactive effects on a particular resource.

Land tenure actions since 1981 have resulted in increasing the total area of public lands managed by the CFO from approximately 134,417 acres to 143,826 acres, a 7-percent increase. Land tenure actions of various sizes are occurring and will continue to occur to consolidate BLM-administered lands and facilitate management.

Idaho Statewide Implementation Strategy for the National Fire Plan. The Idaho Department of Lands, in conjunction with the BLM and other federal agencies, signed the Idaho Statewide Implementation Strategy for the National Fire Plan. The implementation plan focuses on fire prevention and suppression, hazardous fuels reduction, restoration of fire-adapted ecosystems, and the promotion of community assistance in fire management (Idaho Department of Lands 2002). The CFO FMP was completed in 2004. This plan, along with the Coeur d'Alene Field Office FMP, was updated as one plan, the North Zone FMP, in 2005 (BLM 2005c).

During 2002, Idaho Department of Lands, in cooperation with federal agencies, disbursed $1.9 million to WUI projects and development of defensible space in Idaho. Additional money was used for hazardous fuels-reduction programs for several communities. Between 2002 and 2005, all planning area counties completed community wildfire protection plans that identify WUI areas. The development of community wildfire protection plans allows counties and communities to determine their current fire hazard risk and to develop effective mitigation to minimize wildland fire risks to persons and property. In addition, implementing community-based fuels-reduction programs gives private landowners opportunities to work with public land management agencies to manage the WUI.

Wildland fires:

- have been suppressed over the past 100 years;
- have burned low amounts of acreage in the Upper Columbia River Basin through the mid-1900s, with an increasing and noticeable trend in increased fire size between 1985 and 1995 (BLM and Forest Service 1997);
- burned three million acres of timberland in western Montana and northern Idaho including the CFO planning area, during the fire of 1910, the largest forest fire in US history (Idaho Forest Products Commission 2005);
- have occurred and will continue to occur over time, and although the number of fire starts on BLM land is relatively small, land ownership in north-central Idaho is fragmented, which increases the potential for fires to cross administrative boundaries and affect BLM-managed lands; and
- outside ~~FMU~~Fire Management Areas (FMAs) designated for wildland fire use are suppressed and will continue to be suppressed to reduce the risk to resource values, private property, and human safety.

Fuels treatments, including prescribed fire, chemical and mechanical treatment, and seeding, have affected vegetation. Fuels treatments, including these methods and wildland fire use, are expected to

increase, potentially affecting vegetation, soil, air, and water resources and reducing the potential for stand-replacing wildfires.

Cyclic insect and disease activity have persisted and will continue to persist in forested stands and rangelands, including bark beetle infestations and root rot in forested stands and grasshoppers in rangelands.

Fish and Wildlife. Populations of some fish and wildlife species are declining in the Pacific Northwest. Declining wildlife and fish species will likely receive increased federal and state agency restoration and conservation efforts.

Listings under the Endangered Species Act. Some flora and fauna species have declined to the level where listing under the ESA became necessary. The Northern Rockies Lynx Amendment Final Management Plan, which establishes guidelines for management of Canada Lynx on certain lands under the authority of the Forest Service and BLM, was completed in 2005. Potential listings under the ESA may occur in the foreseeable future if populations of sensitive species continue to decline; species that may have more potential for listing than other species may include federally listed candidate species and BLM sensitive species. The bald eagle and gray wolf will likely be delisted.

Livestock Grazing. Domestic livestock (cattle, sheep, and horses) have grazed and will continue to graze most of the area, including BLM-administered lands, Nez Perce Reservation lands, private lands, State of Idaho lands, and Clearwater, Payette, Nez Perce, and Wallowa-Whitman National Forest lands.

- In the CFO planning area, approximately 24 percent of forage comes from federal lands in Adams County, 4 percent in Clearwater County, 6 percent in Idaho County, 8 percent in Latah County, and less than 1 percent in Lewis and Nez Perce Counties (BLM and Forest Service 1997).
- The North Idaho Range Management Program Plan was completed in 1982. In general, the number of livestock grazing permits/leases issued by the BLM in Idaho has gradually declined over the last several decades, while the number of authorized AUMs has increased slightly (Tetra Tech Inc. 2005).
- In the CFO, 67 percent of grazing allotments are small isolated tracts that are surrounded by large blocks of private lands, typically ranches. The BLM cannot control the season of use or the number of AUMs removed from public lands on isolated tracts without cost-prohibitive measures;
- The BLM will continue to assess all livestock use allotments in Idaho with use of the Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management (BLM 1997a) (**Appendix A** [see Volume II~~I~~]). These standards are designed to provide resource measures and guidance needed to ensure healthy, functional rangelands. Livestock use allotments are evaluated to determine if Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management (BLM 1997a) (**Appendix A** [see Volume II~~I~~]) are being met or if significant progress toward meeting them is being achieved. If standards are not being met, the BLM is required to make changes that would help achieve these standards in the future.

Timber has been and is harvested on private, state, federal, and tribal lands in North Idaho, including Latah, Clearwater, Nez Perce, Lewis, and Idaho Counties (in the CFO planning area; Adams County is not included), and Benewah, Bonner, Boundary, Kootenai, and Shoshone Counties (north of and outside the CFO planning area). A total of 10,620 million board feet (MMBF) has been harvested between 1994 and 2003 on:

- private lands: 7,324 MMBF (1994-2003), which is 69 percent of all timber harvested in North Idaho during this period;
- State of Idaho lands: 1,869 MMBF (1994-2003), which is 18 percent of all timber harvested in North Idaho during this period. Additionally, within CFO planning area, 45 MMBF are planned in 2005 and 51 MMBF are planned in 2006 (Idaho State Board of Land Commissioners 2005);
- All National Forests in North Idaho (Clearwater, Payette, and Nez Perce National Forests in the CFO planning area, and the Idaho Panhandle National Forest outside the CFO planning area): 1,201 MMBF of timber and 76 MMBF of fuelwood collected by the public (1994-2003), which totals 12 percent of all timber harvested in North Idaho during this period. Since 1980, the three major National Forests in the CFO planning area have harvested timber as follows:
    - Clearwater National Forest lands: 1,479 MMBF (1980-2002) on 1.8 million acres (Whitehead 2005);
    - Payette National Forest lands: 1,301 MMBF (1980-2004) on 2.3 million acres (Christman 2005); and
    - Nez Perce National Forest lands: 1,387 MMBF (1980-2004) on 2.2 million acres (McGee 2005).
- Tribal lands: 102 MMBF (1994-2003), which is 0.9-percent of all timber harvested in North Idaho during this period; and
- BLM-administered lands: 48 MMBF (1994-2003), which is 0.4-percent of all timber harvested in North Idaho during this period. Between 1992 and 2004, the CFO has sold between 2 and 8 MMBF annually.

The North Idaho Timber Management Plan was completed in 1982. This 10-year timber management program encompassed BLM-administered lands in the CFO and Coeur d'Alene Field Offices.

Timber harvest on National Forest lands has declined substantially in the last 20 years. Similar declines are expected in the CFO planning area unless national direction places more emphasis on timber production from federal lands. Idaho County would suffer the greatest impact if the timber industry continues to decline. However, harvests from private timberlands have increased as a result of declining harvests from federal lands (Forest Service 2004).

Mineral development has occurred continuously in the region for over 140 years. Mining has occurred and continues to occur on BLM-administered lands, Nez Perce Reservation lands, private lands, State of Idaho lands, and Clearwater, Payette, Nez Perce, and Wallowa-Whitman National Forest lands.

- In the CFO, Clearwater, Idaho, and Latah Counties' contribution of federal mineral revenues constitute a small percentage of the state's total and, since 2001, have diminished in royalty value and, therefore, diminished returned payments, up through 2004 (Tetra Tech Inc. 2005).
- In the CFO planning area, development of various industrial minerals, including sand, gravel, and aggregate, dimension stone, and limestone, is expected to continue to expand or contract in response to urban growth and construction in Idaho (Parker 2002).

Minerals. In the CFO (on BLM-administered lands), the reasonably foreseeable development of mineral resources is as follows:

- Oil and Gas — Activity over the next 15 to 20 years would continue to be low, with the possible issuance of 1 or 2 geophysical surveys and perhaps the drilling of 1 or 2 exploratory holes. No field development is expected.
- Geothermal Resources — No geothermal resources have been identified, so the potential for developing geothermal resources is low. It is estimated that one or two exploratory wells would be plugged and abandoned.
- Solid Minerals — The potential for the occurrence of solid leasable minerals (both energy and non-energy) has been rated as low to zero. No future activity is anticipated.
- Salable Mineral Resources — It is anticipated the need for salable minerals (primarily sand, gravel, and crushed rock) will increase due to the continued urbanization of northern Idaho. Decorative stone sales to individuals are expected to increase.
- Locatable Mineral Resources — The major commodity of interest would continue to be gold. Both placer mining and the development of underground lode deposits are anticipated. There is a possibility that at least one chemical heap-leaching operation would be permitted on BLM land northwest of Elk City.

Road construction has occurred in association with timber harvesting and mining on BLM-administered lands, private lands, State of Idaho lands, and Clearwater, Payette, Nez Perce, and Wallowa-Whitman National Forest lands. The rate of road building has recently slowed due to less harvesting and mining activity on National Forest and BLM lands when compared with 20 to 30 years ago. This activity is expected to continue at a steady rate on BLM-administered and National Forest lands; the future rate is unknown on private and State of Idaho lands.

Population:

- Idaho's population has risen approximately 29 percent between 1990 and 2000, while the population of the CFO planning area has grown an average of 13 percent (Idaho Department of Commerce and Labor 2004).
- In the CFO planning area, population growth is projected to continue slowly: Between 2000 and 2020, the planning area population is anticipated to grow 11 percent, while Idaho's population is anticipated to grow 35 percent (US Census Bureau 2004).

Recreation has increased, and use patterns and motorized technology have changed.

- Recreation-related visits to Idaho are estimated to continue to increase at an annual rate of 1 to 4 percent (Tetra Tech Inc. 2005).

- Recreational activities, specifically motorized recreational activities, will continue to contribute to soil impacts.
- An increase in the use of developed recreation sites and campgrounds is likely as the population increases.

Noxious weeds have invaded the area, carried by wind, humans, machinery, and animals (pets, livestock, and wildlife). Cooperative weed management activities exist among the counties, private landowners, and government agencies. The ROD for Vegetation Treatment on BLM Lands in Thirteen Western State Decision was completed in 1991. The Coeur d'Alene District Programmatic Noxious Weed Control Decision was completed in 1994. Noxious weed invasion is increasing and will continue, potentially increasing treatment efforts.

Tribal Coordination. Coordination with the Nez Perce Tribe resource management assists in designing projects that help protect treaty rights and tribal interests.

Clean Air Act. US EPA is likely to set $PM_{2.5}$ standards under the Clean Air Act. Air quality in the planning area is seasonally affected by agricultural field burning, forested prescribed burning, and wildland fires.

Water Quality. Timber harvesting, livestock grazing, agriculture, OHV use, and mining have contributed to the impaired water quality of some streams in the CFO planning area.

The IDEQ has established TMDLs for some 303(d) water quality limited streams in the planning areas (in 2000, 2004, and 2005). The TMDLs for the remaining 303(d) water quality limited streams in the planning area will be established by 2007. The BLM has limited opportunity to significantly improve water quality because of several factors, including location and distribution of lands under its management and the amount of land managed within watersheds with impaired water quality.

Access to BLM lands has been restricted by some private landowners and is likely to be increasingly restricted. The demand for access to public lands has increased and will continue to increase with growth in population and recreational use.

Archaeological investigations, illegal activities (e.g., cultural resource site vandalism or collecting), and development and maintenance activities (e.g. grazing, mining, recreation use, OHV use) that adversely affect sites have occurred and will continue to occur.

ICBEMP. The Forest Service/BLM ICBEMP, an extensive study of the Interior Columbia Basin, was initiated in 1997 to develop a scientifically sound and ecosystem-based strategy for management of all BLM and National Forest lands in the Interior Columbia River basin. The ICBEMP was charged with developing a scientifically based broad-scale ecosystem management strategy that may potentially alter the management direction on over 60 million acres of lands administered by the Forest Service and BLM. This study determined that some ecosystems are at risk due to several past and existing impacts. To address these risks, the BLM entered into a 2003 Memorandum of Understanding to implement the ICBEMP. The implementation strategy includes direction to federal agencies to update or develop land use plans to address the following:

- Maintain and promote a healthy, productive, and diverse ecosystem and restore, through a system of prioritization, areas that are degraded;

- Develop an integrated mix of restoration activities to provide for re-patterning succession and disturbance regimes and achievement of sustainable landscape conditions, thereby contributing to the reduction of events such as uncharacteristically large and severe wildland fires;
- Restore natural disturbance patterns in watersheds and hydrologic process to help restore and maintain riparian, aquatic, and wetland habitat;
- Develop integrated weed management strategies; and
- Develop a coordinated multiscale and interagency approach to planning and decision making.

National Forest Plan Revisions. Various National Forests have completed Forest Plan Revisions that establish management guidance for future management of publicly owned lands within the National Forest System. Although they do not make site-specific decisions, the plans supply a path for all individual projects to follow. The revised forest management direction responds to new initiatives such as the National Fire Plan and Healthy Forest Initiative and to concerns about listed species, habitat restoration, and commodity production. The revised Forest Plans differ from the original plans in that they emphasize restoring or maintaining vegetation and watershed conditions and focus on the ecological condition of the forests rather than commodity production.

The Payette National Forest (2.3 million acres) Plan revision was completed in 2003. The travel management plan is expected to be completed in 2006. The Clearwater (1.8 million acres) and Nez Perce (2.2 million acres) National Forests anticipate completing their Forest Plan revisions (under the 2005 Planning Rule) in 2007. The Wallowa-Whitman National Forest (2.3 million acres) is revising its Forest Plan in conjunction with the Malheur and Umatilla National Forests and anticipates completion in 2007. These plan revisions will address access and recreation, wildlife, watersheds and aquatic species, inventoried roadless areas and proposed wilderness areas, vegetation, timber production, fire risk, and social and economic factors.

4.1.4 Incomplete or Unavailable Information

The CEQ established implementing regulations for NEPA requiring that a federal agency identify relevant information that may be incomplete or unavailable for an evaluation of reasonably foreseeable significant adverse effects in an EIS (40 CFR 1502.22). If the information is essential to a reasoned choice among alternatives, it must be included or addressed in an EIS. Knowledge and information is and will always be incomplete, particularly with infinitely complex ecosystems considered at various scales.

The best available information pertinent to the decisions to be made was used in developing the RMP. Considerable effort has been taken to acquire and convert resource data into digital format for use in the plan—both from BLM sources and from outside sources.

Certain information was unavailable for use in developing this plan, usually because inventories have either not been conducted or are not complete. Some of the major types of data that are incomplete include cultural resources (most of the CFO has not been inventoried for cultural resources), paleontological resources, vegetation, wildlife, riparian inventories, and noxious weeds (most of the CFO has not been inventoried for noxious weeds).

This RMP is based on the concept of adaptive management. Thus, it has been built to be dynamic enough to account for changes in resource conditions (e.g., large-scale wildfire), new information and science, and changes in regulation and policies. The RMP may be amended as appropriate to respond to these factors. No incomplete or unavailable information was deemed essential to a reasoned choice among the alternatives portrayed in this EIS.

4.2 RESOURCES

4.2.1 Air Quality

Goal: Comply with laws and regulations to meet public health and safety requirements.

Summary

Air quality management objectives and actions are the same for all alternatives. All prescribed fire and wildland fire use would be used in a manner to minimize degradation of airsheds and would be coordinated with the Montana/Idaho Airshed Group. All authorized public land management activities would meet federal and IDEQ air quality standards and regulations.

Impacts on air quality from forest vegetation management activities include smoke and fugitive dust from roads and equipment, which could affect human health and air quality-related values such as visibility. Because of the generally qualitative nature of the management objectives, a quantitative comparison of alternatives for their impacts on air quality is not feasible. The types of impacts on air quality from these management activities would be similar for all alternatives.

Alternative C would have the least impact on air quality due to its treatment objective (20 percent of FRCC 2 and 3 lands) for fuels which would minimize mechanical fuel treatments, associated transportation impacts and the use of prescribed fire. Alternative C prescribes the most resource protection by allowing the least amount of ground-, water-, and/or air-disturbing management activities. In the long term, the fuel-reduction activities use of wildland fire could reduce the risk of large, stand-replacing wildland fires that frequently result in substantial and uncontrollable air quality impacts. Alternatives B, C, and D all have the potential to decrease air pollutant emissions from Alternative A, current management, with Alternative C having the greatest potential decrease, followed by Alternatives B then D. **Table 4-2** identifies the indicators that were used to analyze effects on air quality under each alternative.

Table 4-2
Comparison of Air Quality Indicators by Alternative

Indicator	Alternative A	Alternative B	Alternative C	Alternative D
Changes in National Ambient Air Quality Standards (NAAQS) pollutant concentrations resulting from agency-managed or permitted activities	Short-term effects from forest products management and wildland fire management, (mechanical treatments and prescribed fire) generally are significant air impact increases			
Potential conformance of management actions with the Clean Air Act	Conforms			

Source: BLM 2004a

Methods of Analysis

Indicators

Indicators are used to identify the level of impact. For air quality management, the indicators used for impact analysis are identified in **Table 4-2**, Comparison of Air Quality Indicators by Alternative.

Methods and Assumptions

Idaho's dominant air pollutant is particulate matter from such sources as open burning, industrial and mining emissions, agricultural activities, fugitive road dust, and residential wood burning. Management activities considered most likely to create an effect on air quality include forest vegetation management, wildland fire management, forestry products, and minerals.

Potential impacts on air quality from actions proposed in each alternative were assessed quantitatively (where possible) as a percent change from current levels on the basis of the corresponding changes in proposed management activity (e.g., acreage). Where a management change could not be quantitatively determined, a qualitative assessment of impacts on air quality was provided.

Effects Common to All Alternatives

The primary air quality goal of all alternatives is to comply with all existing laws and regulations to meet health and safety requirements. Management objectives include minimizing degradation of airsheds from wildland fire use and prescribed fire use and through the coordination of these activities with the Montana/Idaho Airshed Group. All other authorized activities on public lands would meet federal and IDEQ air quality standards and regulations. These management objectives would be accomplished through specific management actions, including the use of BMPs and considerations of air quality in Wildland Fire Situation Analysis, Wildland Fire Implementation Plans, and prescribed burn plans. Impacts on air quality from wildland fire management activities include smoke and fugitive dust from roads and equipment. These effects would usually be short term and localized. One of the management objectives for air quality is the reduction of particulate emissions from uncontrolled wildland fires, primarily through suppression. Fire suppression would remain a central strategy for all alternatives; however, wildland fire use, mechanical fuels treatments, and prescribed fire treatments could also be used to varying degrees across the alternatives. Less aggressive suppression tactics, including wildland fire use, would likely result in greater short-term smoke emissions but decreased fugitive dust emissions from roads and vehicles compared to current activities.

Ongoing activities, programs, and/or management in the planning area, besides forest vegetation management, wildland fire management, forestry products, and minerals (addressed below), that have the potential to affect air quality include soils, recreation, livestock grazing, transportation and travel management, lands and realty, and AMLs and HMM activities. These activities could directly affect air quality in the short term by generating fugitive dust, hazardous pollutants, smoke, or other emissions. Due to the widely varied specific conditions, timing, and scale of these activities, reliable quantitative estimates of particulate emissions from these activities cannot be determined; however, implementation of resource protection measures, permitting requirements, and emissions-control strategies, including established BMPs, to mitigate emissions would minimize impacts on air quality.

Effects from Vegetation—Forests Management

Impacts on air quality from forest management activities include smoke and fugitive dust from roads and equipment, which could affect human health and air quality-related values, such as visibility. Smoke resulting from prescribed fire would be mitigated through burning on burn days approved by the Montana/Idaho Airshed Group. Dust caused by vehicle traffic or mechanical equipment activities would be mitigated through fugitive dust BMPs (such as road watering and application of dust palliatives) as appropriate. Impacts typically would be short term and localized. Also see Effects from Forest Products Management, below.

Effects from Wildland Fire Management

Fire management objectives and actions emphasize appropriate management response for suppression actions striving for a maximum of 30 percent of the CFO (43,148 acres) allowed to burn in a 5-year period. Impacts on air quality from wildland fire and its management activities include smoke and fugitive dust from roads and equipment, which could affect human health and visibility. The effects on air quality from smoke and dust caused by wildland fire management activities typically would be short term and localized.

Effects from Forest Products Management

Impacts on air quality from forest products management activities include fugitive dust from use of roads and equipment (e.g., skidders and CATs), road construction, and smoke from broadcast/underburning to reduce hazardous fuels or to prepare areas for reforestation and slash pile burning. The effects on air quality from smoke and dust caused by the management activities typically would be short term and localized. Smoke resulting from prescribed fire and pile burning would be mitigated through coordinating controlled burn activities through the Montana/Idaho Airshed Group.

Effects from Minerals Management

Minerals management activities have the potential to impact air quality everywhere except the Frank Church Wilderness, because mineral activities could occur everywhere but in the Wilderness. Impacts from fluid mineral activities include fugitive dust from roads and equipment and National Ambient Air Quality Standards pollutants originating from equipment (e.g., compressors). Impacts on air quality from development of solid leasable, salable, and locatable minerals activities are primarily fugitive dust from mining activities, roads, and equipment operations. Effects typically would be long term and localized.

Alternative A

Effects from Vegetation—Forests Management

General effects are described under Effects Common to All Alternatives, above. Forest management under Alternative A includes direction on harvest volume, areas treated, and strategy for each forest land classification (intensive, extensive, and custodial management) to meet management objectives, such as maximum timber production, sustained yield timber production, or no timber production (although harvesting could occur for ecological reasons). Alternative A would designate 35,757 acres (35 percent) of forested acres as commercial forest. Alternative A does not include management of forested blocks for DFCs. Also see Effects from Forest Products Management, below.

Effects from Wildland Fire Management

General effects are described under Effects Common to All Alternatives, above. Treatment areas are prioritized by FRCC. Under Alternative A, specific percentages of the CFO FRCC 2 and 3 (moderate to high risk) WUI areas would not be identified for fire risk/ fuels-reduction treatments. Given current management, an estimated 1,950 to 5,950 acres could be treated annually with mechanical treatments and prescribed fire under Alternative A (see Section 4.2.12, Wildland Fire Management).

Because of management controls employed through the Montana/Idaho Airshed Group, smoke from CFO prescribed fire is unlikely to adversely impact Class I visibility areas within the CFO boundary (Hells Canyon Wilderness Area and Selway-Bitterroot Wilderness Area) and the seven other Class I visibility areas near the CFO. Smoke from wildland fires with a wind pattern moving toward Class I visibility areas is very likely to degrade air quality for days to weeks.

Effects from Forest Products Management

General effects are described under Effects Common to All Alternatives, above. Under current management, 35,757 acres are specified as managed for timber production (commercial forest land). The current estimated annual ASQ for timber harvesting, which is 6,600 MBF on 358 acres, would continue.

Effects from Minerals Management

General effects to air quality from minerals management activities are described under Effects Common to All Alternatives, above. Impacts under Alternative A would be limited by continuation of the Wilderness designation, continuation of lands withdrawn from locatable minerals (21,869 acres), management per Alternative A, and compliance with current laws and regulations. Under Alternative A, 131,044 acres would continue to be open to fluid (oil, gas, and geothermal) minerals and solid leasable (energy and nonenergy) minerals leasing with 12,786 acres subject to nondiscretionary closures (same nondiscretionary closure acres for all alternatives). Approximately 131,044 acres would also be open to mineral (salable) materials disposal, with 12,034 acres subject to discretionary WSA closures and 750 acres subject to nondiscretionary closures. Approximately 121,961 acres would be open to locatable minerals.

Alternative B

Effects from Vegetation—Forests Management

General effects to air quality are described under Effects Common to All Alternatives, above. Alternative B designates 40,598 acres (40 percent of forested acres) as commercial forest, 13 percent more than current management. Vegetation management activities under Alternative B would emphasize management for forest health~~vigor~~ or habitat diversity in DFC blocks of 1,000 or more forested acres, which comprise 24,789 acres, which is 24 percent of forested acres and 17 percent of the CFO.

Due to the generally qualitative nature of the resource objectives, a direct comparison of alternatives with respect to impacts on air quality is not workable. However, the nature of impacts on air quality from these management activities would be similar for all alternatives. Also see Effects from Forest Products Management, below.

Effects from Wildland Fire Management

General effects to air quality are described under Effects Common to All Alternatives, above. Under Alternative B, up to 40 percent of the CFO classified as FRCC 2 or 3 (moderate to high risk) WUI areas could be treated in any 5-year period; an estimated 33,766 acres could be treated under Alternative B (see Section 4.2.12, Wildland Fire Management). Additional areas could be treated outside the WUI. Treatments would be designed to alter vegetation composition, structure, and fuels to recreate historic or maintain desired fire regime behaviors, severities, and patterns. Alternative B would include approximately 1,182 to 3,545 acres annually of mechanical treatments and prescribed fire (see Section 4.2.5, Vegetation—Forests).

In the long term, the fuel-reduction activities and use of wildland fire could reduce the risk of large, stand-replacing wildland fires that frequently result in substantial and uncontrollable air quality impacts.

Effects from Forest Products Management

General effects to air quality are described under Effects Common to All Alternatives, above. Alternative B would include 40,598 acres of commercial forest land and would decrease the current estimated annual PSQ by 53 percent (to 3,129 MBF), with an estimated 242 acres treated per year (an estimated 32-percent decrease from current management). Impacts on air quality from these activities are similar to those for Alternative A, with a potential corresponding decrease in emissions (primarily fugitive dust and smoke) from current levels.

Effects from Minerals Management

General effects to air quality from minerals management activities are described under Effects Common to All Alternatives, above. Under Alternative B, effects on air quality from minerals management would be similar to those described under Alternative A, but would be further limited by additional areas with surface use restrictions (leasables and mineral materials), which include 43,590 acres subject to NSO stipulations and 42,403 acres subject to CSU stipulations. The increase in surface use stipulations would decrease emissions, compared to current levels.

Alternative C

Effects from Vegetation—Forests Management

Impacts under Alternative C would be similar to those described under Alternative B and the general effects described under Effects Common to All Alternatives, except that vegetative treatments would emphasize achievement of DFC on timbered tracts that are 500 acres or more in size (comprising 28,087 acres of forested vegetation, or 28 percent of forested acres and 20 percent of the CFO). Also see Effects from Forest Products Management, below. Alternative C would designate 34,611 acres (34 percent) of forested acres as commercial forest, 3 percent less than current management.

Effects from Wildland Fire Management

Effects would be similar to those described under Alternative B, except that 16,833 acres of the CFO classified as FRCC 2 or 3 (moderate to high risk) WUI areas could be treated in any 5-year period under Alternative C (see Section 4.2.12, Wildland Fire Management), 50 percent less than Alternative B. Additional areas could be treated outside the WUI.

Alternative C would include approximately 1,182 to 4,390 acres annually of mechanical treatments and prescribed fire (see Section 4.2.5, Vegetation—Forests). Under Alternative C, up to 20 percent of the CFO classified as FRCC 2 or 3 (moderate to high risk) WUI areas could be treated in any 5-year period, half the percentage than under Alternative B. Treatments in areas with FRCC 2 or 3 would be similar to those described under Alternative B, except that Alternative C could use prescribed fire on an additional five percent of the FRCC 2 and 3 lands, slightly more than Alternative B.

Effects from Forest Products Management

Alternative C specifies 34,611 acres of commercial forest land and an estimated PSQ of approximately 3,101 MBF per year. Impacts on air quality from these activities are similar to current impacts (Alternative A), with a potential corresponding decrease in emissions from current levels because of the decrease in harvest volume and acres treated.

Effects from Minerals Management

Under Alternative C, effects on air quality from minerals management would be similar to those described under Alternative B, but would be further limited by additional areas with surface use restrictions (leasables and mineral materials), which include 68,854 acres subject to NSO stipulations and 59,122 acres subject to CSU stipulations. The increase in surface use stipulations would decrease emissions compared to Alternative A. Alternative C specifies the largest acreages for lease stipulations and could, therefore, result in the least amount of impacts on air quality from mining activities.

Alternative D

Effects from Vegetation—Forests Management

Effects would be similar to those described under Alternative B, except that Alternative D would not include treatments to establish DFCs. Alternative D would designate 45,190 acres (45 percent) of forested vegetation as commercial forest, 27 percent more than current management. Impacts would be similar. Also see Effects from Forest Products Management, below.

Effects from Wildland Fire Management

In addition to the effects described above under Effects Common to All Alternatives, Alternative D would allow wildland fire use if the fire would not adversely impact commercial forest land management areas or authorized livestock grazing areas (**Figure H-3**, Areas Available for Wildland Fire Use—Alternative D [see **Appendix H** in Volume II~~I~~]). Alternative D would include 45,190 acres of commercial forest land and 135,850 acres of authorized livestock grazing areas, more than under Alternatives A, B, or C. Although the commercial forest land and authorized livestock grazing areas would be larger under Alternative D than under Alternatives A, B, and C, wildland fire could still be used within them, as long as it did not adversely impact them.

Effects would be similar to those described under Alternative B, except that 50,650 acres of the CFO classified as FRCC 2 or 3 (moderate to high risk) WUI areas could be treated in any 5-year period under Alternative D (see Section 4.2.12, Wildland Fire Management), 50 percent more than Alternative B and triple that under Alternative C. Alternative D would include approximately 2,870 to 7,597 acres annually of mechanical treatments and prescribed fire (see Section 4.2.5, Vegetation—Forests). Additional areas could be treated outside the WUI.

Treatments would be designed to alter vegetation composition, structure, and fuels to recreate historic or maintain desired fire behaviors, severities, and patterns. Treatments in areas with FRCC 2 or 3 would be similar to those described under Alternative B, except that Alternative D would include 2 to 15 percent mechanical treatments.

Effects from Forest Products Management

Similar to Alternative A, impacts on air quality from forest products management activities include fugitive dust from use of roads and equipment (e.g., skidders and CATs), road construction, and smoke from broadcast/underburning to reduce hazardous fuels and to prepare areas for reforestation and slash pile burning.

Under Alternative D, 45,190 acres are classified as commercial forest land with an estimated PSQ of approximately 4,823 MBF per year. Impacts on air quality from these activities could result in a corresponding decrease in emissions from current levels because of the decrease in harvest volume and acres treated.

Effects from Minerals Management

Under Alternative D, effects on air quality from minerals management would be similar to those described under Alternative B, but would be less limited because of fewer areas with surface use restrictions (leasables and mineral materials), which include 35,045 acres subject to NSO stipulations and 32,013 acres subject to CSU stipulations. The increase in surface use stipulations could decrease emissions compared to current levels.

Cumulative Effects

Despite the increasing population base in northern Idaho, annual average concentrations have remained fairly constant over the past few years and PM_{10} data have shown an improvement over the last 10 years (Stevenson 2004). Historically, smoke has been identified as the primary source affecting air quality and the poorest air quality conditions have been reported from October through December due to biomass burning and atmospheric conditions that trap pollutants.

In the foreseeable future, state-wide implementation of the National Fire Plan and changes in the Clean Air Act could result in increased regulatory restrictions and additional requirements for conformance, as required for all of the proposed alternatives. Increased wildland fires and fuels treatments in the region are particularly likely to adversely affect air quality. As previously noted, the BLM coordinates fire management activities with the Montana-Idaho Airshed Group. A primary mission of the airshed management group is to coordinate fire management activities between participating entities (such as BLM, Forest Service, IDEQ, and others) to ensure that simultaneously occurring actions do not cumulatively result in violations of air quality standards or significant deterioration of air quality, including visibility. Under all alternatives, the BLM's continued participation and coordination with this group would manage cumulative effects on air quality due to fire management actions (including RMP and Forest Plan revisions). Per US EPA rules, the Nez Perce Tribe controls burning on all lands within the reservation boundary.

Future increases in mineral development, timber harvesting, and particularly population in the region could also affect air quality and would present a challenge to air quality management and necessitate assessment of direct and indirect effects on air quality from planned actions to avoid adverse cumulative effects.

Activities within the planning area and in adjacent areas could, when combined with the various proposed RMP alternatives, cumulatively affect air quality and could impact air quality management decisions. The potential effects would be similar for all alternatives. Alternatives B, C, and D would all contribute more to decreased air pollutant concentrations in comparison to Alternative A, with Alternative C having the greatest potential decrease due to low fuel treatment objectives and numerous management actions, mitigation measures, and restrictions, followed by Alternatives B and D. Activities include those related to the Idaho Statewide Implementation Strategy for the National Fire Plan, wildland fire, fuels treatments, timber management, minerals development, population change, the Clean Air Act, and Forest Plan revisions, including the increasing use of wildland fire use on Forest Service lands.

4.2.2 Geology

Recreational aspects of geologic features are discussed under Section 4.3.4, Recreation. Impacts to geology are not addressed because management of resources is not expected to affect geology.

4.2.3 Soils

Goal: Maintain and restore watershed health, soil productivity, and areas of fragile soils.

Summary

The alternatives vary by total potential areas where management activities could cause soil disturbances or result in soil erosion. In general, Alternative C would be most protective of soil resources, followed by Alternatives B, D, and A. However, implementing appropriate BMPs would ensure that long-term impacts on soils would be minimized or avoided under any alternative. **Table 4-3** identifies the indicators that were used to analyze effects on soils under each alternative.

Methods of Analysis

Indicators

Indicators are used to identify the level of impact. For soils, the indicators used for impact analysis are identified in **Table 4-3**, Comparison of Soils Indicators by Alternative.

Methods and Assumptions

Impact analyses and conclusions are based on interdisciplinary team knowledge of resources in the CFO, review of existing literature, and information provided by experts in the BLM or other agencies. Impacts are based on the design of the alternatives under consideration. Effects are quantified where possible. In the absence of quantitative data, best professional judgment prevailed. All alternatives must comply with the Clean Water Act and the Idaho Forest Practices Act.

Substantial disturbance of soil, including compaction of soil or changes in vegetative cover, can decrease soil productivity and contribute to increased peak flows. This may result in channel instability and increased sediment transport, thereby degrading water quality, channel structure, and overall watershed health.

The degree of impact attributed to any one disturbance or series of disturbances is influenced by several factors, including location, time and degree of disturbance, existing vegetation, and precipitation.

Table 4-3
Comparison of Soils Indicators by Alternative

Indicator	Alternative A	Alternative B	Alternative C	Alternative D
Acres of proposed management activities, including grazing, timber production, fuels reductions, and mineral development	Available for grazing: 122,732 acres	Available for grazing: 105,619 acres	Available for grazing: 101,350 acres	Available for grazing: 135,850 acres
	Timber production: Estimated annual ASQ: 6,600 MBF on 358 acres	Timber production: Estimated annual PSQ: 3,129 MBF on 242 acres	Timber production: Estimated annual PSQ: 3,101 MBF on 191 acres	Timber production: Estimated annual PSQ: 4,823 MBF on 361 acres
	Fuels treatments: 20,000-81,500 acres estimated in 5 years	Fuels treatments: 57,000 acres estimated in 5 years	Fuels treatments: 25,974 acres estimated in 5 years	Fuels treatments: 86,251 acres estimated in 5 years
	NSO constraints: case-by-case basis	NSO constraints: 43,590 acres	NSO constraints: 68,854 acres	NSO constraints: 35,045 acres
	CSU restrictions: case-by-case basis	CSU restrictions: 42,403 acres	CSU restrictions: 59,122 acres	CSU restrictions: 32,013 acres

Source: BLM 2004a

Roads contribute to soil compaction and erosion, particularly in forested areas (Gucinski et al. 2001), so higher road densities would result in more adverse impacts on soils. Roads that receive more traffic are also at greater risk for soil erosion (Smith 2005). BMPs would be implemented under all alternatives to reduce the potential impacts of road construction and maintenance.

Some management activities may involve soil compaction from animals or heavy machinery, direct soil disturbance, or soil displacement (Froelich and McNabb 1993, Forest Service 2003a, Wert and Thomas 1981). Fires that heat soils to high temperatures can volatilize organics and produce a hydrophobic layer that contributes to higher rates of runoff and more soil erosion. Vegetative treatments, including mechanical treatments and prescribed burning, may result in impacts on soils. Implementing BMPs, including soil moisture restrictions for use of heavy machinery and soil temperature limitations for prescribed burning, would reduce potential impacts under all alternatives. BMPs related to grazing, such as rotating grazing locations to avoid long-term soil compaction, would also reduce potential impacts under all alternatives. Fire risk/fuels-reduction projects, which typically involve vegetative treatments and/or low-intensity burns, may result in short-term soil disturbance, but if successful, they would prevent or reduce long-term damage to soils from high-intensity wildland fires. Earth-moving activities related to mineral development may result in long-term commitments of soil resources.

Access roads and surface-disturbing activities would follow the standards, guidelines, and BMPs in PACFISH (BLM and Forest Service 1995) and the MFP Guidelines (BLM 1981a). In addition,

Alternative A would follow the Riparian Management Guidelines (BLM 1985e). Alternatives B, C, and D would follow the guidelines in **Appendices F** (Aquatic and Riparian Management Strategy) and **B** (Best Management Practices) (see Volume II~~I~~). However, even properly designed roads would alter hillslope hydrology and concentrate overland flow in some areas. In areas with steep topography (greater than 60-percent slope), these impacts would increase.

Fine-textured soils are more susceptible to water erosion and compaction when wet.

Effects Common to All Alternatives

Effects from Soils Management

All alternatives would require implementing appropriate BMPs to protect soil and water resources. For Alternative A these would include the PACFISH standards and guidelines (BLM and Forest Service 1995), MFP Road Guidelines (BLM 1981a) and Riparian Management Guidelines (BLM 1985e). For Alternatives B, C, and D, these would include the direction listed in **Appendices F** (Aquatic and Riparian Management Strategy) and **B** (Best Management Practices) (see Volume II~~I~~). BMPs and potential impacts on soils are described below under each alternative. Similarly, management activities under any of the alternatives must comply with the Clean Water Act, which imposes penalties for water quality degradation from eroded sediments. All alternatives would comply with the Idaho Department of Lands Forest Practices Regulations, the Idaho Department of Water Resources Stream Channel Alteration Regulations, and with EPA and US Army Corps of Engineers regulations relating to the Clean Water Act. These establish additional BMPs, including road, streamside management, timber harvesting, and stream crossing measures. Implementing these BMPs would protect soil resources.

All alternatives would include actions to protect landslide-prone areas and minimize mass wasting. These actions would stabilize soil resources.

Effects from Vegetation—Rangelands Management

The Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management (BLM 1997a) (**Appendix A** in Volume II~~I~~) would minimize or mitigate potential impacts to soil resources from management of nonforested vegetation under all alternatives. In particular, several standards would limit soil erosion and compaction, including Standard 1 (watersheds), Standard 2 (riparian areas and wetlands), and Standard 3 (stream channel/floodplain), and several would ensure adequate soil crusts and nutrients, including Standard 4 (native plant communities), Standard 5 (seedings), Standard 6 (exotic plant communities, other than seedings), and Standard 8 (threatened and endangered plants and animals). Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management (BLM 1997a) (**Appendix A** in Volume II~~I~~) guidelines would reduce soil compaction and would stabilize soils.

Effects from Wildlife and Special Status Wildlife Management

All of the alternatives would include HMPs to protect wildlife. Where these plans include grazing restrictions and vehicle use restrictions, their implementation would protect soil resources.

Effects from Special Status Plant Management

Management measures to protect special status plant species would have similar soil resources impacts under all alternatives. Plant species protection could involve avoiding activities that disturb soils which would help reduce potential for soil resource impacts.

Effects from Wildland Fire Management

All of the alternatives would allow no more than 30 percent of CFO acres to burn in any 5-year period. Fires that heat soils to high temperatures can volatilize organics and produce a hydrophobic layer that contributes to higher rates of runoff and more soil erosion. Prescribed burning also may impact soils by removing the protective duff layer. Fuel-reduction treatments and wildland fire use could result in short-term soil disturbance, but if successful, it would prevent or reduce long-term damage to soils from high-intensity wildland fires.

Under all alternatives, impacts from wildland fire to soils that are not expected to recover naturally could be mitigated in a cost-effective manner through rehabilitation. Emergency Stabilization and Rehabilitation protocols (described in **Appendix H**, Wildland Fire Management [see Volume II~~I~~]) would be implemented to prevent post-fire resource damage, including severe soil erosion. Rehabilitation of disturbed areas related to fire lines, camps, and other fire suppression activities would reduce potential long-term impacts to soil resources.

Effects from Cultural Resources Management

Soil resources would be protected under all alternatives by restricting ground-disturbing activities to protect cultural resources.

Effects from Forest Products Management

All alternatives would require implementing appropriate BMPs to protect soil and water resources as discussed under effects from soil management above. All alternatives would comply with the Idaho Department of Lands Forest Practices Regulations. Implementing these BMPs would protect soil resources.

Effects from Livestock Grazing Management

The Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management (BLM 1997a) (**Appendix A** in Volume II~~I~~) would minimize or mitigate potential impacts to soil resources from management of livestock grazing under all alternatives, as described above under Effects from Vegetation—Rangelands.

Effects from Minerals Management

All alternatives would continue the withdrawals on the Lower Salmon River. In total, 21,869 acres of public land (including Wilderness, power site reserves, and Federal Energy Regulatory Commission) and 8,062 acres of federal minerals (split estates) would be withdrawn from locatable minerals. These areas would be closed to locatable mineral activities. Without surface disturbances, impacts to soil resources would not occur in these areas.

Each of the alternatives also would include 12,786 acres closed to leasable mineral activities. The remaining areas open to leasable minerals would be managed differently under each alternative, as described below by alternative.

Each of the alternatives would involve 750 acres of nondiscretionary closures to mineral material disposal. Mineral material disposal would not be allowed in these areas. In addition, discretionary closures for mineral materials would apply to 12,034 acres under each alternative. Activities could be allowed in these areas on a case-by-case basis. Like leasable minerals, mineral material activities would be managed differently under each alternative, as described below.

Effects from Transportation and Travel Management

Roads contribute to soil compaction and erosion, particularly in forested areas (Gucinski et al. 2001), so higher road densities would result in more adverse impacts on soils. Roads that receive more traffic are also at greater risk for soil erosion. BMPs would be implemented under all alternatives to reduce the potential impacts of road construction and maintenance. All of the alternatives would locate roads and trails in a manner to minimize impacts to soils.

Effects from Lands and Realty Management

All of the alternatives would consider land fragmentation in land acquisitions and disposals. (Alternative A would eliminate surface and subsurface inholdings within Management Areas. Alternatives B, C, and D would reduce the number of scattered parcels of public land.) As the CFO became less fragmented, resource management by entire watersheds would be more feasible. Soil resources may be better protected with watershed-scale management.

All alternatives would exclude mining in the withdrawals on the Lower Salmon River. In total, 21,869 acres of public land and 8,062 acres of federal minerals (split estates) would be withdrawn from locatable minerals.

Effects from ACEC/RNA Management

All of the alternatives would prohibit vegetation manipulation in the Lower and Middle Cottonwoods Islands ACEC/RNA, as stated in the HMP, which would prevent impacts to soils. Similarly, no livestock grazing would be authorized in the Captain John Creek or the Skookumchuck ACEC/RNAs, which would prevent impacts to soils.

Effects from Wild and Scenic Rivers Management

All alternatives would ~~involve efforts to renew~~ continue the withdrawal of the Salmon River from Long Tom Bar to the Snake River from mineral entry, which would protect soils from related surface disturbances.

Effects from Wilderness and Wilderness Study Areas Management

Under all alternatives, surface-disturbing activities would be excluded from the Frank Church/River of No Return Wilderness, which would protect soil resources.

Effects from Native American Tribal Uses Management

Consultation with tribes regarding treaty rights, cultural access and use of plants, animals, fish and habitats could result in identifying areas where mineral development actions may need to be modified to accommodate or maintain tribal uses or to avoid resources important to tribes. However, it is unlikely that accommodating tribal uses would impede the anticipated level of mineral development within the CFO in the long term.

Effects from Public Safety—Abandoned Mines and Hazardous Materials Management

All of the alternatives would protect soils from contamination by requiring cleanup of hazardous materials.

Alternative A

Effects from Soils Management

As described under Effects Common to All Alternatives, Alternative A would continue to implement PACFISH. The standards and guidelines in this management direction would restrict

many management activities in RHCAs, which under this alternative are larger stream buffers than the RCAs under Alternatives B or D. The MFP supplement established 39 prescription watersheds totaling 66,077 acres, which are higher priority for achieving water quality and fish objectives. Many standards and guidelines are designed to protect soil resources.

Alternative A also would implement the 1981 MFP Road Guidelines (BLM 1981a). The road-related BMPs in Alternative A are sufficiently general to allow implementation of the same detailed BMPs as in Alternatives B, C, and D (**Appendix B**, Best Management Practices [see Volume II~~I~~]).~~.~~ Several timber harvest restrictions, which also would protect sensitive soils, would be implemented under Alternative A as part of the PACFISH strategy.

Also as described under Effects Common to All Alternatives, Alternative A would implement the Riparian Management Guidelines (BLM 1985e). These guidelines establish general management objectives for riparian areas, including protecting the water body and adjacent environment to maintain wildlife and fish habitat, water quality, and aquatic resources at a high natural level. The specific management requirements and constraints and specific mitigation measures primarily apply to riparian areas.

Because Alternative A would not include specific direction on field assessments and protection zones for landslide-prone areas, it may not protect soils to the same extent as the other alternatives.

Effects from Water Resources Management

As described under Effects from Soils Management, Alternative A would protect soils to the same extent as other alternatives because activities would follow the PACFISH standards and guidelines, MFP Road Guidelines (BLM 1981a), and –Riparian Management Guidelines (BLM 1985e). While these guidelines generally state the same goals as **Appendices F** (Aquatic and Riparian Management Strategy) and **B** (Best Management Practices) (see Volume II~~I~~), they would offer less-detailed management restrictions. Although Alternative A does not specifically include implementation and effectiveness monitoring, BLM Instruction Memorandum ID-2005-065 specifies a program for PACFISH monitoring and adaptive management.

Alternative A gives direction to identify and resolve potential water quality problems (including sediment from eroded soils). Alternative A identifies prescription watersheds to prioritize these areas for active restoration activities.

Effects from Vegetation—Forests Management

Alternative A would not include vegetative treatments to achieve forest vigor and/or habitat diversity in DFC blocks. Instead, vegetation treatments would focus on timber production and are addressed in the Effects from Forest Products Management section.

Effects from Vegetation—Riparian and Wetlands Management

Under this alternative, RHCA buffers totaling 24,290 acres would be implemented to protect riparian areas and wetlands. Activities would be planned and monitored in these areas to prevent damage to riparian areas and wetlands. These restrictions and monitoring efforts, including limiting logging methods to minimize soil disturbance, would protect soil resources under Alternative A.

Effects from Wildlife and Special Status Wildlife Management

Alternative A would involve reviewing ongoing activities, and if negative impacts to federally listed species or their habitats were occurring as a result of discretionary actions, the activity would be modified to avoid or minimize adverse impacts to the species and suitable habitats. Also, lands identified for less intensive wildlife management may include controls of vehicle use or other guidelines. Where these activities would involve reducing route density or vehicle use, soil resources would be protected. Where they would involve vegetative treatments to improve range conditions (for example, under Objective 8, Action 2), they could result in short-term soil compaction and soil erosion. However, BMPs would be applied to these treatments to mitigate or minimize potential impacts on soils, especially the adverse effects from the use of roads and heavy machinery. In the long term, improved range conditions would protect soil resources.

Where grazing restrictions are employed to protect wildlife habitat, limiting use of forage in riparian areas would reduce soil compaction in those areas, which would protect soils. Measures to address grazing in riparian areas proposed under Alternative A would be less restrictive than under the other alternatives.

Effects from Aquatic Resources, Fish, and Special Status Fish Management

As described under Effects from Soils Management, Alternative A would protect soils to the same extent as other alternatives because activities would follow the PACFISH standards and guidelines and the Riparian Management Guidelines (BLM 1985e). Alternative A would not emphasize conservation or restoration watershed management. Management plans would be implemented and activities restricted in sensitive areas, and soils would be protected in PACFISH prescription watersheds (39 watersheds totaling 66,077 acres).

Effects from Wildland Fire Management

Wildland fire use would be allowed under Alternative A (**Figure H-1**, Areas Available for Wildland Fire Use—Alternatives A and C [see **Appendix H** in Volume II~~I~~]), which could result in minor short-term impacts to soils but would result in fewer long-term impacts because these treatments would reduce the risk for more damaging wildland fires.

Under Alternative A, specific percentages of the CFO FRCC 2 and 3 (moderate to high risk) WUI areas would not be identified for fire risk/ fuels-reduction treatments. Given current management, an estimated 1,950 to 5,950 acres could be treated annually with mechanical treatments and prescribed fire (see Section 4.2.12, Wildland Fire Management). If more acres were treated under Alternative A than under the other alternatives, then the short-term impacts to soils could involve more potential localized soil compaction and soil erosion, but the long-term impacts would protect soils from larger and more widespread erosion by reducing the risk of large, high-intensity wildland fires. Implementation of BMPs (such as ceasing operations during wet soil conditions) would reduce the potential for short-term impacts.

Effects from Cultural Resources Management

Where OHV limitations were employed to protect cultural resources, soil resources would be protected under Alternative A.

Effects from Visual Resources Management

Soil resources would be protected in areas with ground-disturbance restrictions, including VRM Classes I and II. Alternatives A and B would include 12,704 acres of VRM Class I and 41,195 acres of VRM Class II.

Effects from Forest Products Management

The current estimated annual ASQ is 6,600 MBF on 358 acres under Alternative A (see Section 4.3.1, Forest Products). A total of 35,757 acres of commercially viable forest would be included in the commercial timber base. The remaining commercially viable forest would be considered custodial and would not be managed for timber, although harvesting could occur for other ecological reasons. Because the most timber would be extracted under this alternative, potential impacts to soils (including soil compaction, erosion, and loss of nutrient cycling) would be greatest under Alternative A.

Treatments focused on timber production would include harvests involving log landings, skid trails, temporary roads, and vegetation removal. These treatments could result in soil compaction and soil erosion. Because BMPs are not specifically defined for timber harvests in the MFP Road Guidelines (BLM 1981a) or the Riparian Management Guidelines (BLM 1985e), potential impacts to soils, including soil compaction and soil erosion, would be more likely under this alternative than under the other alternatives. However, continued implementation of PACFISH would protect soils, particularly in RHCAs (24,290 acres) and prescription watersheds (39 watersheds totaling 66,077 acres).

Alternative A would include an estimated annual timber harvest ASQ of 6,600 acres and 1,530 to 4,800 acres of mechanical treatments and prescribed fire (see Section 4.2.5, Vegetation—Forests). These vegetation treatments could result in soil compaction and soil erosion.

Effects from Livestock Grazing Management

In addition to the Effects Common to All Alternatives, Alternative A would consist of 122,732 acres, 168 allotments with a total 7,~~204~~ 200 AUMs available for livestock authorizations. All alternatives would follow the Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management (BLM 1997a) (**Appendix A** in Volume III~~I~~), which would protect soil resources.

Effects from Minerals Management

In addition to Effects Common to All Alternatives, under Alternative A, restrictions could be applied on a case-by-case basis during review of a proposed activity to protect resources, including soil resources. These stipulations would protect soil resources beyond that of the standard lease/permit.

Effects from Recreation Management

Alternative A would include 26,682 acres of SRMAs. To the extent that these areas would limit road construction or use or other ground-disturbing management activities to provide nonmotorized and other types of recreation opportunities, soil resources would be protected. The other alternatives would include more acres of SRMAs, providing more soil protection.

Alternative A also would include 33,197 acres of nonmotorized ROS designations (including 14,381 acres Primitive and 26,206 acres Semiprimitive Nonmotorized). In Primitive and Semiprimitive

areas, soils would not be impacted by mechanized and motorized vehicle uses. Because Alternative A would include a slightly smaller area where these uses were restricted, more soils would be open to potential impacts.

Effects from Renewable Energy Management

There would be no impacts to soils from renewable energy management. This alternative would not specify that biomass be emphasized.

Effects from Transportation and Travel Management

Alternative A would include the largest area (85,308 acres) Open to yearlong, cross-country motorized travel. An additional 40,437 acres would be Limited to existing routes. The Closed areas would be very similar in all alternatives, with 18,054 acres under Alternative A and 18,069 acres under the other alternatives. Because unlimited, cross-country motorized use would be most damaging to soils, resulting in soil compaction and erosion, Alternative A would have the most adverse impacts on soil resources.

There are approximately 341 miles of routes on BLM lands, approximately 68 miles (20 percent) of which are located within Open areas but are closed to motorized vehicles yearlong. Within Limited areas, approximately 43 miles are open yearlong. However, 13 of the 43 miles do not have legal public access so likely receive little or no use. Additionally, about 40 miles are closed yearlong in Limited areas. Route restrictions and closures would protect soil conditions by reducing or eliminating traffic, which could contribute to localized erosion of the roadbed, particularly when such use occurs on native-surface roads during wet periods.

Effects from ACEC/RNA Management

Alternative A would not allow timber harvest or vegetation treatments but would allow livestock grazing in the Wapshilla Ridge ACEC/RNA. Soils would not be impacted from timber harvesting. The potential impacts to soils from livestock grazing are described above under Effects from Vegetation—Rangelands Management and under Effects from Livestock Grazing Management.

Alternative A would not allow timber harvest in the Captain John Creek ACEC/RNA except for disease and insect control. Alternative A would not allow ground-disturbing activities in the Long Gulch ACEC/RNA, which would prevent impacts to soils.

Alternative A would protect 3,956 acres of Craig Mountain as an ACEC. Timber would be removed only when necessary to protect resource values. Maximum protection to resources would be followed during any timber extraction. No new rights-of-way or road construction would be allowed. Alternative A would maintain the Elk City Dump/American Hill Lake ACEC. OHV use would be excluded, and ground-disturbing activities would not be allowed, which would protect soil resources.

Alternative A would include provisions to protect soil resources, including requiring yarding methods that would not disturb soils for timber harvests on slopes greater than 50 percent.

Effects from Wilderness and Wilderness Study Areas Management

If Congress were to release the WSAs from wilderness consideration, Alternative A would not specifically protect these WSAs from surface disturbances, and impacts to soil could occur.

Alternative B

Effects from Soils Management

The BMPs and standards and guidelines established in **Appendices F** (Aquatic and Riparian Management Strategy) and **B** (Best Management Practices) (under Alternative B) (see Volume III) would be similar to the PACFISH and 1981 MFP Road Guidelines under Alternative A. Some of the BMPs and standards and guidelines for roads have been updated in **Appendices F** (Aquatic and Riparian Management Strategy) and **B** (Best Management Practices) to reflect improved understanding of the effects of roads on soil erosion and sedimentation. The separate section of BMPs related to timber harvesting activities under Alternative B would mitigate potential impacts to soil from landings, skid trails, temporary roads, and vegetation removal. The specific mention of these activities under Alternative B would result in fewer impacts to soils from timber harvest activities than under Alternative A.

Guidelines that would be established under Alternative B would apply to both riparian and upland areas. In addition, they would include standards and guidelines related to grazing management, recreation management, mineral management, fire management, and lands, none of which would be covered specifically under Alternative A. Alternative B would prioritize management of conservation and restoration watersheds totaling 64,481 acres, 2 percent less than the prescription watersheds in Alternative A. Multiscaled assessments, including watershed analyses, are described under Alternative B. In addition, adaptive monitoring would occur under Alternative B. All of these additional measures would better protect soils (particularly upland soils) under Alternative B than under Alternative A.

In addition to BMPs, Alternative B would include reclamation efforts to mitigate adverse impacts to soils and water resources on impacted sites. Specific field assessments would be required to protect landslide-prone areas. Where these areas were identified, Alternative B would include field-verified protection zones, which would be managed to identify landslide-prone areas. Because Alternative A would not include specific direction on field assessments and protection zones for landslide-prone areas, it may not protect soils to the same extent as the other alternatives. Similarly, Alternative B would include specific directions for evaluating potential risks of mass wasting before project implementation. Management activities would be limited if the project interdisciplinary team determined that they may increase potential slope failures. These measures would provide increased protection to soil resources beyond the actions in Alternative A.

Effects from Water Resources Management

Alternative B would include implementation and effectiveness monitoring, which would reduce the potential for impacts to soils. While Alternative A gives direction to identify and resolve potential water quality problems (including sediment from eroded soils), Alternative B gives updated direction to address current regulations. Alternative A identifies prescription watersheds, and Alternative B identifies restoration watersheds to prioritize these areas for active restoration activities. Under Alternative B, plans for identifying and resolving potential water quality problems (including sediment from eroded soils) would be updated to address current regulations. Alternative B identifies and prioritizes activities in restoration watersheds. These actions would protect soil resources.

Effects from Vegetation—Forests Management

Alternative B would include vegetative treatments to achieve forest health ~~vigor~~ and/or habitat diversity in 1,000-acre DFC blocks comprising 24,789 acres, which is 24 percent of forest land and 17 percent of the CFO. Management would focus on large trees and old growth areas. These timber harvests could result in localized soil compaction and erosion. However, BMPs and standards and guidelines described in **Appendices F** (Aquatic and Riparian Management Strategy) and **B** (Best Management Practices) (see Volume II~~I~~) would be applied to these activities to mitigate or minimize potential impacts, resulting in few anticipated effects to soils.

Effects from Vegetation—Weeds Management

Invasive species affect soil stability. Many invasive broadleaves have taproots, and invasive annual bromes are shallow rooted. These plant forms replace native bunchgrass vegetation that is mainly composed of plants with fibrous root systems that root to a deeper depth. Either invasive plant type increases erosion potential. Action to control invasive species promotes and maintains native plant communities with root systems more prone to holding soil in place. Weed-control actions and rehabilitation treatments would thereby improve soil stability and nutrient cycling in the long term. There may be short-term impacts associated with projects such as soil disturbance during treatment.

Effects from Vegetation—Rangelands Management

The Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management (BLM 1997a) (**Appendix A** in Volume II~~I~~) includes standards related to weed management that would ensure adequate soil crusts and nutrients. These include Standard 4 (native plant communities), Standard 5 (seedings), and Standard 6 (exotic plant communities, other than seedings).

Effects from Vegetation—Riparian and Wetlands Management

Under this alternative, RCA stream buffers totaling 22,847 acres would be implemented to protect riparian areas and wetlands. Activities would be planned and monitored in these areas to prevent damage to riparian areas and wetlands. These restrictions and monitoring efforts, including ensuring that vegetation treatments maintain riparian management objectives at a minimum, as well as limitations related to roads, grazing, recreation, minerals, fire, and lands, would protect soil resources. In general, larger areas that are protected in buffers or RCA stream buffers provide protection to more soil resources. RCA stream buffers under Alternative B would be 14 percent smaller than the RHCA buffers under Alternative A.

Effects from Wildlife and Special Status Wildlife Management

Protecting riparian areas under Alternative B would include preventing adverse impacts to water quality. Soil erosion would be managed to achieve this goal. Measures to address grazing in riparian areas under Alternative B would be more restrictive than under Alternative A. Alternative B would go beyond grazing restrictions by implementing appropriate management and conservation measures to promote the maintenance or enhancement of habitats for rangeland. If riparian grazing limitations were implemented to protect wildlife habitat, such measures could include limiting riparian grazing by season or restricting stream bank use, less soil compaction would occur than under Alternative A.

In addition, no net increase in routes designated open for motorized use would be allowed on 101,526 acres in specific areas, which would protect soil resources.

Effects from Aquatic Resources, Fish, and Special Status Fish Management

To the extent that promoting conservation and restoration and precluding long-term degradation for special status fish under Alternative B would involve reducing sediment to streams by stabilizing soil erosion, this action would improve soil conditions. Similarly, restricting activities in RCA stream buffers under Alternative B would protect soil resources within those buffers.

Managing conservation watersheds would minimize soil erosion by performing regular maintenance on existing roads and trails. Managing restoration watersheds could include active management to restore hydrologic and biological functions. If these activities reduced soil compaction and soil erosion and increased nutrient cycling, they would impact soil resources. The greater the area that would be managed as conservation and restoration watersheds, the greater the potential improvements to soil. Alternative B would identify ~~32~~ 28 restoration and ~~1~~ 3 conservation watersheds totaling 64,481 acres, 2 percent less than the prescription watersheds in Alternative A.

Effects from Wildland Fire Management

In addition to the effects described above under Effects Common to All Alternatives, Alternative B would restrict wildland fire use in the Elk City, Clearwater, and portions of the Salmon ~~FMU~~FMAs (**Figure H-2**, Areas Available for Wildland Fire Use—Alternative B [see **Appendix H** in Volume II~~I~~]).

Under Alternative B, up to 40 percent of the CFO classified as FRCC 2 or 3 (moderate to high risk) WUI areas could be treated in any 5-year period; an estimated 3,766 acres could be treated under Alternative B (see Section 4.2.12, Wildland Fire Management). Treatments would be designed to alter vegetation composition, structure, and fuels to recreate historic or maintain desired fire behaviors, severities, and patterns. Alternative B would include approximately 1,182 to 3,545 acres annually of mechanical treatments and prescribed fire (see Section 4.2.5, Vegetation—Forests). The short-term impacts to soils could involve potential soil compaction and soil erosion, but the long-term impacts would protect soils by reducing the risk of large, high-intensity wildland fires.

Standards and guidelines and BMPs described in **Appendices F** (Aquatic and Riparian Management Strategy) and **B** (Best Management Practices) (see Volume II~~I~~) would be applied to these treatments to mitigate or minimize potential impacts on soils, especially those from the use of prescribed fire and heavy machinery. The standards and guidelines allow for avoiding wet seasons. Fuels-reduction treatments would emphasize biomass utilization. Removal of biomass could result in long-term reductions in soil nutrient cycling.

Alternative B also would not allow livestock grazing for a minimum of two growing seasons in prescribed burn areas, which would reduce the potential for soil compaction, particularly where soils are most fragile from burn activities.

Fuel treatments that would be restricted or prevented under Alternative A could occur in WUIs in VRM Class I and II areas given safety and infrastructure risks under Alternative B. These treatments could result in more short-term soil compaction and soil erosion and long-term soil protection, as described above under Effects from Wildland Fire Management.

Effects from Cultural Resources Management

Geomorphic relationships would be assessed. Conducting geomorphic analyses for cultural sites might protect soil resources by improving the understanding of soil characteristics and formation processes at these sites. The information could be used to improve management of soil resources.

Effects from Visual Resources Management

Effects would be the same as those described under Alternative A.

Effects from Forest Products Management

Effects would be similar to those described under Effects from Vegetation—Forests Management. Alternative B would include 40,598 acres of commercial forest land and would decrease the current estimated annual PSQ by 53 percent (to 3,129 MBF), with an estimated 242 acres treated per year (an estimated 32-percent decrease from current management). Because less timber would be extracted under this alternative than under Alternative A, potential impacts to soils (including soil compaction, erosion, and loss of nutrient cycling) would be less.

Effects from Livestock Grazing Management

In addition to the Effects Common to All Alternatives, Alternative B would consist of 105,619 acres, 166 allotments with a total ~~6,254~~6,263 AUMs available for livestock authorizations. In general, fewer acres of livestock grazing would result in more soil protection, including lower rates of soil erosion and compaction.

Effects from Minerals Management

In addition to Effects Common to All Alternatives, under Alternative B, NSO restrictions would apply on 43,590 acres, CSU restrictions would apply on 42,403 acres, and TLs would apply in deer and elk winter range and fawning and calving areas, and in bald eagle winter feeding areas. As a result, fewer potential adverse impacts (such as soil erosion or compaction) from mineral leasing would be likely under this alternative than under Alternative A. Mineral material disposals could be subject to the same restrictions as leasable minerals, on a case-by-case basis. In general, fewer potential adverse impacts (such as soil erosion or compaction) from mineral material disposal would be likely under this alternative than under Alternative A.

Effects from Recreation Management

Alternative B would include 55,201 acres of SRMAs. This alternative would include more acres of SRMAs than Alternative A, providing more soil protection. Alternative B also would include 42,695 acres of nonmotorized ROS designations (including 6,200 acres Primitive and 36,495 acres Semiprimitive Nonmotorized), which is more than Alternative A. In these areas, soils would not be impacted by motorized vehicle uses. Because Alternative B would include a slightly larger area where these uses were restricted, fewer soils would be open to potential impacts.

Effects from Renewable Energy Management

Alternative B would emphasize biomass. If vegetation treatments increased under these alternatives, potential impacts to soils could also increase, as described under Effects from Vegetation—Forests Management.

Effects from Transportation and Travel Management

Unlike Alternative A, Alternative B would include no areas Open to yearlong, cross-country motorized travel. A total of 125,729 acres would be Limited to designated routes. Within Limited

areas, approximately 206 miles of routes would be open yearlong. However, almost half of these (100 miles) would not have legal public access so these would receive little to no use. An additional approximately 107 miles would be restricted in Limited areas, the majority (93 percent) of these being closed yearlong to motorized use. Route restrictions and closures would protect soil conditions by reducing or eliminating traffic, which can contribute to localized erosion of the roadbed. Because cross-country motorized use would be most damaging to soils, resulting in soil compaction and erosion, Alternative B would have less adverse impacts on soil resources because there would be no Open areas.

Alternative B would involve updating route designations annually, developing outreach materials for public distribution, and enforcing restrictions. Educated recreation users would be more likely to observe closures and other limitations, particularly with increased enforcement measures. Effects of recreation, including potential soil erosion, also would be monitored. The comprehensive planning, communication, enforcement, and monitoring efforts would protect soil resources more than under Alternative A. In addition to the Effects Common to All Alternatives, Alternative B would add soil stability as a criterion for future route designation. This consideration would protect soils beyond the general guidance described under Alternative A.

In addition, unneeded roads and trails would be decommissioned with emphasis on restoration and conservation watersheds. Alternative B would identify ~~32~~ 28 restoration and ~~1~~ three conservation watersheds totaling 64,481 acres, 2 percent less than the prescription watersheds in Alternative A.

Effects from Lands and Realty Management

In addition to the effects described above under Effects Common to All Alternatives, Alternative B would use conservation easements to protect resources, including soils. This alternative also would mitigate and rehabilitate damage to soil resources from unauthorized activities on public lands.

Effects from ACEC/RNA Management

Alternative B would not protect Craig Mountain or the Elk City Dump/American Hill Lake as ACECs. Management activities in these areas could impact soils. Alternative B would allow timber harvest and vegetation treatments but no livestock grazing in the Wapshilla Ridge ACEC/RNA. Alternative B would allow timber and vegetative treatments in the Captain John Creek ACEC/RNA. Alternative B would recommend expanding the Lower Salmon River ACEC by 3 percent (from 15,702 acres to 16,199 acres). No new road construction would be allowed in this ACEC under any alternative. Alternative B would involve vegetation treatments in the Lower Salmon River ACEC. Impacts on soils from timber harvest and vegetation treatments are described under Effects from Vegetation—Forests and Effects from Forest Products Management. Alternative B would include vegetative treatments in the Lucile Caves or Skookumchuck ACEC/RNAs to support long-term improvement of ecological condition. These treatments could have localized, short-term impacts to soils, including soil compaction and erosion.

Alternative B would limit soil disturbance in the Lower and Middle Cottonwoods Islands ACEC/RNA, which would prevent impacts to soils. Vegetation treatments would be allowed that support long-term achievement of ecological goals and objectives for native vegetation and soil resources.

In the Long Gulch ACEC/RNA, Alternative B would only allow ground-disturbing activities that would not result in long-term adverse impacts to MacFarlane's' four-o'clock and suitable habitat.

These activities could result in localized soil compaction and erosion related to ground-disturbing activities.

Under Alternative B, construction of hydroelectric facilities would not be allowed in the Upper or Lower Lolo Creek ACECs, which would prevent impacts to soils. Under Alternative B, roads also would be decommissioned and new roads would not be allowed within 300 feet of Lower Lolo Creek or on slopes greater than 50 percent. Vegetative treatments would include maximum protection to protect soils.

Alternative B would create an ACEC in the East Fork American River and Upper Lolo Creek. Ground disturbance would be minimized on slopes greater than 40 percent in the East Fork American River ACEC, and vegetation treatments would incorporate soil protection measures. Alternative B also would require that timber harvest roads be decommissioned within three years of construction. No new road construction would be allowed within RCA stream buffers in the East Fork American River ACEC.

Overall, Alternative B could allow some short-term impacts to soil resources if long-term benefits would occur to ecological condition and soil resources, and would support achievement of objectives for which the ACEC or ACEC/RNA designation was made.

Effects from Wilderness and Wilderness Study Areas Management

In addition to Effects Common to All Alternatives, if Congress were to release the WSAs from wilderness consideration, Alternative B would continue to protect these areas from surface disturbances.

Alternative C

Effects from Soils Management

Effects would be the same as those described under Alternative B.

Effects from Water Resources Management

Effects would be the same as those described under Alternative B.

Effects from Vegetation—Forests Management

Effects would be similar to those described under Alternative B, except that vegetative treatments would emphasize achievement of DFC on timbered tracts that are 500 acres or more in size, comprising 28,087 acres, which is 28 percent of forested vegetation or 20 percent of the CFO) and would involve more preservation of large trees and old growth areas than under Alternative B. Treating existing contiguous forests would protect soil resources by adding nutrients, establishing contiguous duff layers, and increasing surface roughness, which would reduce soil erosion. Each of these actions would stabilize soils and contribute to nutrient cycling, resulting in long-term protection to soils.

Effects from Vegetation—Weeds Management

Effects would be the same as those described under Alternative B.

Effects from Vegetation—Riparian and Wetlands Management

Effects would be similar to those described under Alternative B, except that RCA stream buffers under Alternative C would be largest (covering 27,624 acres), which would provide the most protection to soils.

Effects from Wildlife and Special Status Wildlife Management

Protecting riparian areas under Alternative C would include reducing utilization beyond the levels that could occur under other alternatives. This reduction in riparian grazing to protect wildlife habitat would result in less soil compaction.

The areas in which no net increase in vehicle use of roads or trails would be allowed would be smaller under Alternative C (75,772 acres) than under Alternative B (101,526 acres); however, Alternative C would also decrease vehicle use on some roads and trails on 38,733 acres, which, overall, would provide protection of soil resources on 11 percent more areas (114,505 acres) than Alternative B (101,526 acres).

Effects from Aquatic Resources, Fish, and Special Status Fish Management

Effects would be similar to those described under Alternative B, except that RCA stream buffers would be larger under Alternative C, resulting in more soil protection. Also, Alternative C would include 3 conservation and ~~40~~ 37 restoration watersheds totaling 68,359 acres, 3 percent more than prescription watersheds in Alternative A.

Effects from Wildland Fire Management

In addition to the effects described above under Effects Common to All Alternatives, Alternative C would not restrict wildland fire use in any areas, unlike Alternatives B and D (**Figure H-1**, Areas Available for Wildland Fire Use—Alternatives A and C [see **Appendix H** in Volume II~~I~~]). Effects would be the similar to those described under Alternative B, except that, under Alternative C, up to 20 percent of the CFO classified as FRCC 2 or 3 (moderate to high risk) WUI areas, 16,833 acres, could be treated in any 5-year period (see Section 4.2.12, Wildland Fire Management), 50 percent less than Alternative B. Treatments in areas with FRCC 2 or 3 would be similar to those described under Alternative B, except that Alternative C would increase the use of prescribed fire for fuels reduction and include up to 20 percent prescribed burning, slightly more than Alternative B. Alternative C would include approximately 1,182 to 4,390 acres annually of mechanical treatments and prescribed fire (see Section 4.2.5, Vegetation—Forests). Alternative C proposes a higher combined level of prescribed burning and mechanical treatments than Alternative B; therefore, it would have potentially higher short-term impacts. Overall, Alternative C would also include reduced potential long-term protection of soils and greater risk of wildland fire impacts than Alternative B.

Effects from Cultural Resources Management

Effects would be the same as those described under Alternative B.

Effects from Visual Resources Management

Soil resources would be protected from impacts in areas with restricted ground-disturbing activities, including VRM Classes I and II. Alternative C would include 26,945 acres of VRM Class I and 46,753 acres of VRM Class II, the most of the alternatives.

Effects from Forest Products Management

Effects would be similar to those described under Effects from Vegetation—Forests Management. Alternative C would include 34,611 acres of commercial forest land (less than Alternative A) and would decrease the current estimated annual PSQ by 53 percent (to 3,101 MBF, less than Alternative A), with an estimated 191 acres treated per year (an estimated 47-percent decrease from current management). Fewer trees would be extracted per acre. Alternative C would involve less biomass removal than under the other alternatives, which would allow for more soil nutrient cycling in the long term.

Effects from Livestock Grazing Management

Effects would be similar to those described under Alternative B, except that a smaller area (101,350 acres in 145 allotments) would be available for livestock grazing and fewer AUMs (6,020) would be permitted under Alternative C than under the other alternatives.

Effects from Minerals Management

Effects would be similar to those described under Alternative B, except that, under Alternative C, NSO restrictions would apply on 68,854 acres (more than the other alternatives), and CSU restrictions would apply on 59,122 acres (more than the other alternatives). As a result, fewer potential adverse impacts (such as soil erosion or compaction) from mineral leasing would be likely under this alternative than under the other alternatives. Mineral material disposals could be subject to the same restrictions as leasable minerals, on a case-by-case basis. In general, fewer potential adverse impacts (such as soil erosion or compaction) from mineral material disposal would be likely under this alternative than under the other alternatives.

Effects from Recreation Management

Effects would be the same as those described under Alternative B.

Effects from Renewable Energy Management

Effects would be the same as those described under Alternative B.

Effects from Transportation and Travel Management

Effects would be similar to those described under Alternative B, except that Alternative C would include 3 conservation and ~~40~~ 37 restoration watersheds totaling 68,359 acres, 3 percent more than the prescription watersheds in Alternative A. These watersheds provide improved management opportunities for watershed restoration, particularly when cooperative management is undertaken with the Forest Service, Idaho Department of Fish and Game, and other partners.

Unneeded roads and trails would be decommissioned, with emphasis on restoration and conservation watersheds totaling 68,359 acres, 3 percent more than the prescription watersheds in Alternative A.

Effects from Lands and Realty Management

Effects would be the same as those described under Alternative B.

Effects from ACEC/RNA Management

Effects would be similar to those described under Alternative B, except for the following differences. Alternative C would protect Craig Mountain as an ACEC. In Craig Mountain ACEC, timber would be removed only when necessary to protect resource values. Timber harvest would

incorporate resource protection measures. New road construction for timber harvest would be temporary, decommissioned within three years of construction, and seeded/planted with native species. Alternative C also would exclude livestock grazing, which would prevent potential future impacts to soils.

~~Alternative C would not allow construction of hydroelectric facilities in the Upper Lolo Creek ACEC, which would protect soils from localized impacts. This alternative would also require non-ground-based yarding methods on slopes greater than 50 percent. Roads not needed for long-term management would be decommissioned. These actions would improve soil conditions.~~

Alternative C would create the ~~Upper Lolo Creek ACEC,~~ Partridge/Elkhorn~~,~~ and Little Salmon ACECs, which would minimize new road construction. Roads constructed for forest management would be decommissioned within three years of construction. Prescribed burning or vegetation treatments would be applied to achieve DFCs. The potential impacts of these activities are described under Effects from Vegetation—Forests Management and Effects from Forest Products Management.

Overall, Alternative C would create more ACECs than the other alternatives. Ground-disturbing activities would be minimized in these areas; therefore, soils would be most protected under Alternative C.

Effects from National Trails Management
Effects would be the same as those described under Alternative B.

Effects from Wilderness and Wilderness Study Areas Management
Effects would be the same as those described under Alternative B.

Alternative D

Effects from Soils Management
Effects would be the same as those described under Alternative B.

Effects from Water Resources Management
Effects would be the same as those described under Alternative B.

Effects from Vegetation—Forests Management
Effects would be similar to those described under Alternative B, except that Alternative D would not include treatments to establish DFCs.

Effects from Vegetation—Weeds Management
Effects would be the same as those described under Alternative B.

Effects from Vegetation—Riparian and Wetlands Management
Effects would be similar to those described under Alternative B, except that RCA stream buffers would be the smallest under Alternative D (20,710 acres). Smaller areas would provide the least protection to soil resources.

Effects from Aquatic Resources, Fish, and Special Status Fish Management
Effects would be similar to those described under Alternative B, except that RCA stream buffers would be the smallest under Alternative D, providing the least protection to soils. Also, Alternative

D would include ~~1~~ three conservation and ~~27~~ 24 restoration watersheds totaling 52,118 acres, 21 percent less than the prescription watersheds in Alternative A, resulting in less emphasis for restoration activities in some watersheds and less improvement of soil resources.

Effects from Wildland Fire Management

In addition to the effects described above under Effects Common to All Alternatives, Alternative D would allow wildland fire use if the fire would not adversely impact commercial forest land management areas or authorized livestock grazing areas (**Figure H-3**, Areas Available for Wildland Fire Use—Alternative D [see **Appendix H** in Volume II~~I~~]). Alternative D would include 45,190 acres of commercial forest land and 135,850 acres of authorized livestock grazing areas, more than under Alternatives A, B, or C. Although the commercial forest land management and authorized livestock grazing areas would be larger under Alternative D than under Alternatives A, B, and C, wildland fire could still be used within them, as long as it did not adversely impact them.

The types of effects would be similar to those described under Alternative B, except the overall program impacts could be greater under Alternative D. under Alternative D, up to 60 percent of the CFO classified as FRCC 2 or 3 (moderate to high risk) WUI areas (50,650 acres) could be treated in any 5-year period, 50 percent more than under Alternative B and three times more than Alternative C. Treatments would be designed to alter vegetation composition, structure, and fuels to recreate historic or maintain desired fire behaviors, severities, and patterns. Treatments in areas with FRCC 2 or 3 would be similar to those described under Alternative B, except that Alternative D would include 2 to 15 percent mechanical treatments. Alternative D would include approximately 2,870 to 7,597 acres annually of mechanical treatments and prescribed fire (see Section 4.2.5, Vegetation—Forests). Alternative D proposes a higher combined level of prescribed burning and mechanical treatments than Alternative B; therefore, it would have higher potential of resulting in short-term impacts to soil resources than Alternative B. Alternative D would also include the most potential long-term protection of soils in reduced risk of wildland fires.

Effects from Cultural Resources Management

Effects would be the same as those described under Alternative B.

Effects from Visual Resources Management

Effects would be similar to those described under Alternative B, except that Alternative D would include 7,205 acres of VRM Class I and 36,180 acres of VRM Class II, the least of the alternatives.

Effects from Forest Products Management

Alternative D would include 45,190 acres of commercial forest land and would decrease the estimated PSQ by 27 percent (to 4,823 MBF) with an estimated 361 acres treated per year (an estimated 1-percent increase from Alternative A).

Effects from Livestock Grazing Management

Effects would be similar to those described under Alternative B, except that a larger area (135,850 acres in 170 allotments) would be open to livestock grazing and more AUMs (~~8,540~~8,549) would be permitted under Alternative D than under the other alternatives.

Effects from Minerals Management

Effects would be similar to those described under Alternative B, except that, under Alternative D NSO restrictions would apply on 35,045 acres (more than Alternative A), and CSU restrictions

would apply on 32,013 acres (more than Alternative A). As a result, more potential adverse impacts (such as soil erosion or compaction) from mineral leasing would be likely under this alternative than under Alternatives B or C and fewer would be likely than under Alternative A. Mineral material disposals could be subject to the same restrictions as leasable minerals, on a case-by-case basis. In general, more potential adverse impacts (such as soil erosion or compaction) from mineral material disposal would be likely under this alternative than under Alternatives B or C and fewer would be likely than under Alternative A.

Effects from Recreation Management

Effects would be similar to those described under Alternative B, except that under Alternative D access routes would be improved in the Craig Mountain WMA, which could potentially result in impacts to soil, including soil compaction and erosion.

Effects from Renewable Energy Management

Effects would be the same as those described under Alternative B.

Effects from Transportation and Travel Management

Effects would be similar to those described under Alternative B, except that Alternative D would include 23,189 acres Open to yearlong, cross-country motorized travel, an area 25 percent the size of that under Alternative A. An additional 102,542 acres would be Limited to designated routes. Within Limited areas, approximately 179 miles of routes would be open yearlong. However, almost half of these (82 miles) would not have legal public access so these would receive little to no use. An additional approximately 107 miles would be restricted in Limited areas, the majority (93 percent) of these being closed yearlong to motorized use. Route restrictions and closures would protect soil conditions by reducing or eliminating traffic, which can contribute to localized erosion of the roadbed. Because cross-country OHV use would be most damaging to soils, resulting in soil compaction and erosion, Alternative D would have more impacts on soil resources than Alternatives B and C because Alternative D would designate Open areas. Alternative D would have less potential impacts on soils resources than Alternative A.

Alternative D would include ~~1~~ three conservation and ~~27~~ 24 restoration watersheds totaling 52,118 acres, 21 percent less than the prescription watersheds in Alternative A. These watersheds provide improved management opportunities for watershed restoration, particularly when cooperative management is undertaken with the Forest Service, Idaho Department of Fish and Game, and other partners. Unneeded roads and trails would be decommissioned, with emphasis on restoration and conservation watersheds, fewer than under Alternatives A, B, or C.

Effects from Lands and Realty Management

Effects would be the same as those described under Alternative B.

Effects from ACEC/RNA Management

Effects would be similar to those described under Alternative B, except that Alternative D would allow livestock grazing in the Wapshilla Ridge ACEC/RNA. Potential impacts to soils from livestock grazing are described under Effects from Vegetation—Rangelands Management and Effects from Livestock Grazing Management. Alternative D would not continue ACEC designation of the Lower Lolo Creek ACEC. As a result, without such restrictions, soils could be impacted by road construction, ground-based yarding, mineral entries, or other activities.

Overall, Alternative D would protect the fewest ACECs and ACEC/RNAs and would involve the most potential ground-disturbing activities, such as roads and vegetative treatments, in areas that would be restricted under the other alternatives. As a result, the potential impacts to soils would be greatest under this alternative.

Effects from National Trails Management

Effects would be the same as those described under Alternative B.

Effects from Wilderness and Wilderness Study Areas Management

Effects would be the same as those described under Alternative B.

Cumulative Effects

Limited mass movements, localized erosion (caused by roads and other concentrated uses), and soil compaction (in heavily-grazed allotments, log landings, and roads) have occurred and continue to occur in the planning area. However, the extent of adverse soil impacts has decreased since 1981 because of reduced road construction and improved road construction methods, reduced timber harvesting and improved timber management practices, and positive watershed restoration efforts, including road obliteration, undersized culvert removal or replacement, and revegetation. Improved land management as a result of federal requirements for listed fish also has contributed to reduced erosion during the past decade. As management restrictions, particularly those on federal lands, have focused more on watershed conditions, activities have been restricted and BMPs have been developed to protect soil resources. This trend would continue in the future.

Several foreseeable future actions are expected within the planning area that would impact soils. More soils under federal management would be protected if the trend of increasing public lands (7 percent since 1981) continues (Forest Service 2003b). As more fuels treatments (including areas affected by insect and disease) occur in the CFO and on adjacent lands under the National Fire Plan and other programs, short-term, localized effects to soils could occur. The long-term benefits to soils if treatments successfully prevent large, high-severity fires would outweigh these potential short-term impacts. The combination of the reduced timber harvest activities near the CFO and more environmental regulations would result in few effects to soils (particularly on public lands) in the future. Similarly, future effects to soils from road construction would decrease on federal lands because better BMPs are available to reduce effects to soils. Timber and road BMPs are less protective of soils on private and State of Idaho lands, and future activities in these areas could result in effects to soils. The long-term effects of livestock grazing would result in soil compaction and erosion in areas of concentrated use. Efforts to control noxious weeds would continue, reducing invasive plants, which can have dramatic and irreversible effects on soil productivity and erosion because of changes in soil characteristics. If commodity prices increase and mining activities increase in the future, potential effects to soils would also increase. Drilling one or two exploratory oil and gas holes or geothermal wells or increased salable mineral activities could involve localized effects to soils. Trends of increasing population in the CFO will likely result in greater demand for infrastructure, including roads, as well as for forest products, minerals, and recreation activities, all of which could result in increased effects to soils. Along with population, recreation use is increasing, resulting in greater potential effects to soils. The BLM's efforts to implement BMPs and monitor their effectiveness, combined with efforts to concentrate OHV users to established trails, could reduce potential effects to soils from recreation uses. Federal listing of fish has resulted in additional conservation and restoration measures for soil, particularly on federal lands or federally funded

projects. The BLM lands that occur in prescription (Alternative A) or conservation/restoration watersheds (Alternatives B, C, and D) that are in common with Forest Service would realize indirect effects for soil conservation measures that occur on Forest Service lands. Implementing the revised Payette National Forest Plan would protect soil resources because management standards and guidelines emphasize restoring or maintaining watershed conditions, including soil resources. Other adjacent forest plans are expected to provide similar protection for soil resources.

Alternatives A and B would be less likely to affect soil resources than Alternative D. Alternative C would be more protective of soil resources than the other alternatives. Because of the protective measures adopted on the CFO under Alternative C, when compared to the other alternatives, Alternative C would mitigate potential effects to soils from other past, present, and reasonably foreseeable future actions. Alternative D would be more likely to affect soil resources than the other alternatives, potentially resulting in measurable soil erosion and soil compaction in the CFO.

4.2.4 Water Resources

Goal: Manage water resources to protect beneficial uses and to meet or exceed state and federal water quality standards. Maintain or improve the chemical, physical, and biological integrity of water resources.

Summary

The alternatives vary in their contributions to improving or impacting water quality. As summarized in **Table 4-4**, Alternative C is most favorable for protecting beneficial uses of water and maintaining and/or improving water quality, followed by Alternatives B, A, and then D. Increased levels of fuel treatments in Alternatives B and D would result in short-term impacts to water quality while reducing the potential for stand-replacing fires and potential impacts from these fires in the long term.

The BLM's ability to influence future conditions in watersheds, including those that affect water resources, is limited because of scattered and minority land ownership in many watersheds. Therefore, impacts on water resources are highly influenced by other landowners, and particularly by the Forest Service in forested areas. The BLM, Forest Service, and other entities have coordinated and would continue to coordinate under all alternatives to identify regional objectives and approaches to restoring and protecting aquatic habitat and water quality in initiatives such as the ICBEMP and PACFISH and other more-localized planning efforts. Emphasis for water and fisheries conservation and restoration management would occur in prescription watersheds (Alternative A) and conservation and restoration watersheds (Alternatives B, C, and D). **Table 4-4** identifies the indicators that were used to analyze effects on water resources management under each alternative.

Table 4-4
Comparison of Water Resources Indicators by Alternative

Indicator	Alternative A	Alternative B	Alternative C	Alternative D
Miles of PFC[1]	Continued gradual long-term increases in riparian miles and acreage in PFC	More rapid increases in miles and acreage in PFC than Alternative A	More rapid increases in miles and acreage in PFC than Alternative B	More rapid increases in miles and acreage in PFC than Alternative A
Road density in RHCAs and RCAs (higher road density is associated with greater impacts on water resources)[1]	No decrease in road density proposed	Reduced road density relative to Alternatives A and D	Reduced road density relative to Alternative B	Slightly higher road densities relative to Alternatives A and B
Acres disturbed by proposed management activities within RHCAs and RCAs	Acreage disturbance limited by Riparian Management Guidelines, PACFISH, MFP Supplement	Acreage disturbance limited by Riparian Management Guidelines, PACFISH, MFP Supplement	Less disturbance than Alternatives A and B	Slightly more disturbance than Alternatives A and B

[1]Source: BLM 2004a

Methods of Analysis

Indicators

Indicators are used to identify the level of impact. For water resources, the indicators used for impact analysis are identified in **Table 4-4**, Comparison of Water Resources Indicators by Alternative.

Methods and Assumptions

Impacts on water resources are assessed based on both quantitative and qualitative criteria. For example, it is generally expected that alternatives that would involve ground-disturbing activity would have a potentially adverse impact on water quality because sediment could be transported from the disturbance site to a nearby waterbody. Qualitatively, impacts would be expected to be greater with more ground disturbance, or when the disturbance occurs in sensitive areas, such as areas with steep slopes, existing landslide deposits, or in RHCAs (Alternative A) or RCA stream buffers (Alternatives B, C, and D). Under all Alternatives, potential adverse impacts from land uses that could occur in sensitive riparian habitats or landslide prone areas would be avoided or minimized.

Road density, or changes in road density, is used as a quantitative indicator of the indirect impacts of erosion on water quality. Geology and slope, in addition to distance from a waterbody, influence the impacts of roads on water quality. Therefore, even if the analysis is limited to disturbed acres or road density within RHCAs or RCAs, these are only imperfect indicators of the potential for effects on water quality.

PFC is an indirect indication of the effects of current management on bank condition, which can relate to water quality via sediment and temperature attributes if bank erosion is a significant source of sediment and/or bank cover is important to providing shade.

It is assumed that water quality requirements would be achieved through the use of BMPs and by working with the IDEQ in the future development of Water Quality Restoration Plans. Additionally, reclamation actions would continue on some historically mining-impacted lands. These actions, together with implementing Water Quality Restoration Plans or the establishing of TMDLs, are expected to improve water quality.

Existing roads within the CFO would continue to erode from motorized use and natural processes, resulting in impacts to water quality in adjacent streams.

Within the planning area, it is assumed that poor bank vegetation can be a key factor in streambank and floodplain stability. Consequently, it is assumed that improved ecological condition and proper functioning riparian habitats would lead to improved floodplain, channel, and streambank stability and reduced bank erosion.

It is assumed that Alternative A would involve the most ground-disturbing activities (e.g., more acres, miles of road) compared to the other alternatives, and that Alternative C would have the least. Alternative B would have less ground-disturbing activities than Alternative D. This assumption takes into consideration RHCA/RCA widths; prescription, conservation, and restoration watersheds; timber harvest; proposed ACEC/RNAs; land use acres or miles of disturbance; BMPs; and various land use restrictions.

Effects Common to All Alternatives

Effects from Air Quality Management

Air management actions would generally consist of compliance with existing regulatory requirements. These could indirectly benefit water resources, where this compliance resulted in reductions in soil erosion (dust creation) or reductions in air emissions that could result in deposition of pollutants (such as metals or other chemical contaminants from mining operations) on soils or in waterbodies downwind of a source. No adverse impacts on water resources would occur from air management actions under any alternatives.

Effects from Soils Management

Conditions that affect soil erosion also tend to impact water resources. Soil erosion is a natural process, and all streams function to transport eroded sediments. The amount of sediment a stream can move depends on factors that vary with location and time, such as the velocity and turbulence of the stream and the abundance and size of the sediment particles. For a given stream segment and time of year, the sediment load carried by the stream tends to fall within a characteristic range, just as rainfall and runoff do. Nutrients, metals, and other chemicals in the soils can also be transported to streams and influence surface water quality.

As shown in Chapter 3, **Table 3-3** (303[d] Listed Waterbodies with BLM Lands in Watershed), sediment and temperature are two of the most common sources of stream impairment in the CFO. In many cases, the historic data for a given stream segment are not sufficient to establish the normal range of conditions.

Management under all alternatives could impact rates of soil erosion and therefore could affect water quality and the hydraulic characteristics of streams. BMPs are interventions designed to minimize the impacts of human activities on water quality caused by discharge of sediment or chemical constituents. BMPs are operating procedures designed to minimize the impacts of human activities on water quality. Since the effectiveness of BMPs vary, and since they are seldom 100 percent effective, the net impact on water quality that would result from activities that introduce chemical contaminants to soils, or that affect soil erosion rates, would depend on the type, duration, and amount of activity.

Identifying landslide prone and other sensitive land types, avoiding these areas, and prioritizing the reclamation or obliteration of existing roads in such areas would help to reduce the potential for sediment delivery to streams from these areas. These actions would not necessarily prevent slope failure, but they could benefit water quality by reducing the frequency and severity of landslides, and by preventing pollutants from being introduced in landslide-prone areas where they could have a higher potential for release. Assessing naturally occurring failures for potential stabilization and/or restoration could reduce sediment impacts on waterbodies. For some sites, such as mine or mill tailings piles on steep slopes, short-term or emergency stabilization of the tailings and the slopes on which they are deposited may be desirable as an interim measure to prevent water quality impacts until more permanent solutions can be implemented.

Effects from Water Resources Management

There are few watersheds within the planning area that are managed predominately by the BLM. However, subwatersheds where the BLM has significant management responsibility are outlined in **Appendix C**, Conservation and Restoration Watersheds (see Volume II~~I~~). Vegetative management, mineral development, and road building all affect watershed conditions and the quality of surface water and groundwater on BLM-managed lands. How these uses are managed could be affected by managing water resources to maintain nonimpairment standards and to promote conditions that enhance beneficial uses.

Implementing BMPs related to road construction and maintenance, timber harvesting activities (**Appendix D**, Desired Future Conditions for Forest Vegetation/Wildlife Habitat [see Volume II~~I~~]), fire prevention activities, noxious weed control, and other management actions would minimize or prevent soil erosion, slow runoff, and minimize discharge of chemicals or nutrients to surface and groundwater. As a result, impacts on surface water quality would be minimized, and the potential for flooding and extreme fluctuations in stream flows would be reduced. Activities that convert vegetation cover (e.g., timber harvest) or intercept and route water (e.g., roads) could affect, dependent on the level of disturbance, retention of water within watersheds. This would promote groundwater recharge and increased soil moisture, contributing to more stable stream flow regimes. BMPs are seldom 100 percent effective. Since BMPs would be implemented in response to, or in conjunction with, activities that alter watershed conditions, such as general construction and excavation activities, road construction, timber harvesting, and mining activities, the net impacts on water resources from implementing BMPs would depend not only on the appropriateness of the BMPs, and the skill with which the BMPs are applied, but on the volume and nature of the activity requiring implementation of BMPs. Therefore, while BMPs are expected to have similar effectiveness under all alternatives, per unit linear distance or land area on which they are applied, the resulting net benefit or impact on water resources would vary by alternative because of differences in the amount of land subject to alteration. Differences in the net impacts of each

alternative are discussed under effects from other resource management (e.g., Effects from Wildland Fire Management), below.

Compliance with state and federal requirements to protect groundwater would be pursued under all alternatives, even if not specifically included in them. The likelihood of success in meeting this objective could vary somewhat among the alternatives, but the impacts would be the same if successful.

Effects from Vegetation—Weeds Management

Weed-control actions could have direct or indirect impacts on water quality. Direct effects would include the use of herbicides, which could be carried by runoff to a stream or other waterbody or could infiltrate soils and percolate to groundwater. Integrated weed-control methods would be used. Indirect impacts to water quality could also occur as a result of temporary soil disturbance during treatment activities. Nonpersistent herbicides would be used in sensitive areas (e.g., near water bodies) to avoid potential impacts to water quality. Chemical applications would be conducted by trained personnel and designed to minimize the potential for impacts on water. Invasive plants can create or exacerbate conditions that reduce water quality. Reduction of total acres impacted by invasive plants would benefit water quality.

Among the potential control measures would be manual removal, which has the potential for disturbing soils. These activities would be conducted using BMPs (**Appendix B** in Volume II~~I~~) to reduce the potential for impacts on surface water. Another control measure that could be used is avoidance of ground-disturbing activity as a means of preventing the introduction of weeds. This would reduce the potential for soil erosion and for impacts on water quality.

Effects from Vegetation—Rangelands Management

Nonforested lands represent about 30 percent of the CFO. Idaho Standards for Rangeland Health (BLM 1997a) (**Appendix A** in Volume II~~I~~) would continue to be applied to management of these lands under all alternatives. These would benefit water resources because these standards are designed in part to reduce soil erosion and restore damaged soils and vegetation cover.

Effects from Vegetation—Riparian and Wetlands Management

Riparian areas would be managed to maintain them in PFC or to move them toward PFC. Alternatives B, C, and D rely on the Aquatic and Riparian Management Strategy (**Appendix F** in Volume II~~I~~) and its associated standards and guidelines to achieve PFC. A similar strategy exists under Alternative A with use of PACFISH (BLM and Forest Service 1995), Fisheries and Water Quality Objectives and Sediment Budgets (BLM 1985d), designated prescription watersheds, and identification of desired conditions for fisheries and water quality. Water resource management emphasis for all alternatives is identified in prescription, conservation, or restoration watersheds, which vary by alternative. Alternative A identifies a goal of improving one-half of the streams in poor condition within 15 years. However, there is no guarantee that the causes of current less-than-PFC conditions are within BLM-administered lands, or could be solved by BLM management actions. Nor is it necessarily feasible for BLM to ensure that surface and groundwater, which may be impacted by upstream or upgradient sources, would comply with Idaho water quality standards.

Effects from Wildlife and Special Status Wildlife Management

Many actions implement existing requirements to identify and protect special status species habitat. Habitat protection could involve restrictions on other land uses, which would help reduce potential

water resources impacts. Improvements in wildlife habitat, such as measures that increase vegetation cover density, could also reduce soil erosion potential and indirectly reduce water quality impacts.

Effects from Special Status Plants Management

Management measures to protect special status plant species would have similar water resources impacts under all alternatives. Plant species protection could involve avoiding activities that disturb soils or would otherwise adversely impact the sensitive plant species. Avoidance or limitations on soil-disturbing activities would help reduce potential for water resources impacts.

Effects from Wildland Fire Management

Wildland fire can result in substantial water resources impacts in a short time period. Fire can reduce soil infiltration rates, resulting in less retention of water and more runoff, leading to increased soil erosion and larger peak flows. Loss of vegetation also contributes to these effects. Fires create openings where snow and ice accumulate to greater depths than in forested areas. These openings can produce high runoff during short periods of rapid thawing, resulting in soil erosion and high peak flows. Excessive sediment delivery to stream channels can result in water quality impacts for long periods of time, while sediment-clogged channels can cause flooding. Similarly, chemical products of wood combustion are carried into streams with runoff.

All alternatives call for limiting the use of prescribed fire so that the combination of prescribed fire and wildfire would burn no more than 30 percent of CFO acres (about 40,000 acres) during any 5-year period. By comparison, as indicated in Section 3.2.12, Wildland Fire Ecology and Management, a total of about 26,000 acres of BLM-managed lands burned during the 20-year period from 1983 to 2002. While prescribed fire can be contained on BLM-managed land, wildland fires cannot. Large fires could affect even larger amounts of Forest Service lands or privately owned lands. For example, the 26,000 acres represented about 2 percent of the total acreage burned within the planning area during the period. Thus, the effects on water resources managed by BLM could be influenced more by fires on other lands within the watershed than by fires on BLM lands. Based on these figures, the 30-percent maximum (which is equivalent to about 8 times the recent historic rate) provides a great deal of flexibility to BLM in the use of prescribed fire to reduce fuel or as a tool in promoting a desired mix of woodland species. Prescribed fire generally has less impact on water resources than uncontrolled fire. Prescribed fire can be managed to remove excess fuel selectively, leaving desired species (for example, ~~P~~ponderosa pine) intact. The effects on water resources if prescribed fire were used to the maximum extent allowed during a given five-year period would be much less than if uncontrolled fire accounted for most of the burned acreage. By burning some of the excess fuel under controlled conditions, the more devastating effects of uncontrolled fires, and the potential for them to spread to adjacent areas, are lessened. Prescribed fire effects would be dependent on severity of burn, particularly within riparian areas and if excessive stand replacement would occur at a watershed level. Overall, under all alternatives, this is not anticipated.

Effects from Cultural Resources Management

Protection of cultural resource sites could indirectly benefit water quality to the extent that soil-disturbing activities, such as road construction and resource extraction, are limited. Such benefits would generally be negligible at a watershed level because of the small area attributed to cultural resource management restrictions.

Effects from Paleontological Resources Management

Protecting paleontological resources could indirectly benefit water quality to the extent that soil-disturbing activities, such as road construction and resource extraction, are limited. Such benefits would be discountable at a watershed level because of the small area attributed to paleontological resource management restrictions.

Effects from Forest Products Management

Timber harvest activities, including construction of permanent and temporary roads, can adversely affect water quality; vegetation cover reduction and soil disturbance can expose soils to enhanced erosion and increased sediment delivery to streams. The largest source of erosion in most harvesting operations is ground disturbance and drainage alteration that occurs from building roads to access trees.

BMPs would be implemented to mitigate or reduce impacts. Site-specific impacts and mitigation measures would be identified in the plans and documentation required prior to each timber harvest. For purposes of this RMP, assuming that all areas are similar, the combined impacts on water resources associated with each of the alternatives would be primarily a function of the number of acres to be harvested.

Effects from Livestock Grazing Management

In the CFO, season-of-use restrictions and riparian use standards decrease the impact of livestock grazing in sensitive channel types, thereby mitigating some grazing impacts. Annual monitoring of riparian area use in the CFO shows that impacts have been reduced to acceptable levels in most areas. These riparian use standards would apply under all alternatives. Grazing animals can impact water quality by altering the quantity and quality of vegetation cover, disturbing soils and vegetation in riparian areas, altering overland flow patterns by creating trails that conduct runoff, compacting soils, and contributing to nutrient and pathogen loading to surface water. As water and forage areas shrink during the summer, effects become increasingly localized and concentrated. If animals have access to streams and springs, these areas can become impacted.

Carrying capacities have been determined to minimize adverse impacts; however, it is often difficult to manage livestock use because of fragmented ownership. Generally such use is in conjunction with unfenced private lands. Overall, because of small amounts of BLM ownership in many watersheds (less than 1 to 5 percent), livestock grazing at a watershed level would typically have negligible impacts on water resources under current management (Alternative A). No additional impacts are expected under Alternatives B, C, and D, which would maintain current management or would reduce grazing lease acreage.

Effects from Minerals Management

Despite the relatively large land area available for mineral development, leasable mineral potential within the CFO is generally low. Potential for precious metals is high within limited areas. Salable mineral resources are widely distributed. Based on this, the most likely source of future impacts on water resources from mineral management would be, as in the past, from lode gold and silver mining operations in the Elk City and Marshall Mountain Mining Districts and from placer (recreational) mining in the Salmon River, Clearwater River, and American River areas.

Leasable minerals and mineral materials activities have the potential to affect water resources through soil disturbance, modification of surface drainage patterns, road construction, transmission

line construction, drilling and installation of wells, groundwater extraction, wastewater generation and management, hazardous material storage, use, and disposal, and other activities associated with fluid mineral development and production. Impacts could include degradation of surface water or groundwater quality, depletion of groundwater resources, alteration of surface drainage patterns or runoff quantity, and flooding. These impacts would occur under all alternatives, but the net impact on water resources would depend on the amount of land developed, site-specific conditions, and the type of mineral resource involved. Site-specific impacts could vary widely. The impacts of each lease would be analyzed in a site-specific NEPA documentation.

The impacts on water resources from locatable mineral exploration and development could vary greatly depending on location, type of mineral, and size of operation. Impacts can include discharge of contaminants to surface water; leaching of heavy metals, acids, or other mineral constituents from tailings piles to groundwater or surface water; impacts on groundwater levels from dewatering operations, chemical spills, air deposition of particulates, or other chemicals from ore processing operations; and more generic impacts from installation of utilities, road construction, and other ancillary activities. Modern mining operations must conform to federal and state environmental laws, such as the Clean Water Act, Resource Conservation and Recovery Act, ESA, and others. Even with these laws and their implementing regulations, large-scale locatable mineral development involves major environmental risk associated with the storage of tailings, management of water from dewatering operations, and management of chemicals used in the processing of ore. After completion of mining activities, site restoration may require many years, is likely to be costly, and may encounter problems that were not anticipated at the onset of operations. For example, it is difficult to estimate the ultimate size of the operation. Site-specific impacts would be evaluated and reviewed during the permitting process. At the programmatic level, the potential for impacts to occur would be related to the amount of land available for development and the nature of the restrictions on development. In addition to current mining exploration and development, future AML investigations may reveal possible impacts to water quality from AML sites in the Elk City or Marshall Mountain areas.

Under all alternatives, 121,961 acres would be subject to the operation of the mining laws (locatable mineral exploration and development) and 21,869 acres would be withdrawn from the mining laws. All alternatives would open 131,044 acres to the mineral laws (leasable minerals and mineral materials) and close 12,786 acres. The BLM's control over how mineral operations impact water resources can be reduced because lands managed by the BLM are scattered and discontinuous. A single mining operation may extend over lands under both private and public ownership.

Effects from Recreation Management

The impacts of recreation on water resources depend on the nature and intensity of recreational use. Some recreational activities are more likely to impact water resources than others. For example, motorized vehicle use can lead to soil erosion or drainage problems and introduce potential for fuel spills or releases. Motorized vehicles also increase accessibility of remote sites and can increase intensity of use (for example, more visitors can visit remote sites, bring more equipment and supplies, and stay longer in one place). High-intensity use concentrated on a limited area can result in adverse impacts, while low-intensity use tends to cause negligible adverse impacts. Recreational use tends to displace other uses, resulting either directly or indirectly in greater protection of water resources. Impacts of recreation management on water resources could include increased demand for potable water in areas of limited supply; water quality impacts from increased erosion from use

of trails, facilities, or construction and maintenance of roads; and introduction of contaminants to surface water or groundwater from sanitary waste disposal (pathogens and nutrients) or from boating (for example, releases of gasoline or additives such as methyl tertiary-butyl ether in surface water). Increased recreational access to remote areas can cause small adverse impacts on water resources that might not be considered significant in another context. For example, a recreational use might not result in exceedance of numerical water quality criteria but might still conflict with the state antidegradation policy.

Increased public awareness of the value of high-quality water for recreation could lead to increased demand for protection of water resources, or the protection of other resources (such as wildlife) that depend on high-quality water resources.

Under all alternatives, the BLM would attempt to acquire more lands to increase access to recreation sites and for conservation easements. Acquisition of lands could enhance the BLM's ability to manage the lands for improved recreational value. This could result in fewer competing uses and in more protection of water resources.

Effects from Transportation and Travel Management

Under all alternatives, about 100,861 acres (70 percent) would be Open to over-snow motorized use, and 24,779 acres (17 percent) within the Craig Mountain WMA would be managed for over-snow motorized travel limited to designated routes, dependent on a minimum of 18 inches of snow cover.

Effects from National Trails Management

Protection of 21 miles of National Trails could result in restrictions on some land uses that would indirectly reduce the potential for water resources impacts.

Effects from Wild and Scenic Rivers Management

The Salmon River from Long Tom Bar to the Snake River would continue to be managed to protect outstandingly remarkable values unless redirected by Congress. This would continue to provide protection of water quality on this 112-mile segment and would also support other protections of upstream segments consistent with protection of the 112-mile segment.

For all segments found suitable, the BLM is mandated by the WSR Act to maintain or enhance water quality. The majority of areas found suitable for inclusion in the NWSRS are already managed as riparian buffer zones under the Riparian Management Guidelines (BLM 1985e), Fisheries and Water Quality Objectives and Sediment Budgets (BLM 1985d), and PACFISH (BLM and Forest Service 1995). The remaining areas would be managed as such under the Aquatic and Riparian Management Strategy (**Appendix F** in Volume II~~I~~), but would receive another layer of protection by being managed to protect the outstandingly remarkable values of each suitable segment.

Effects from Wilderness and Wilderness Study Areas Management

Continued management of 750 acres under the Wilderness Act and management of 12,034 acres of WSAs under BLM's Interim Management Policy for Lands under Wilderness Review would continue to provide a high degree of protection to water resources within these areas by restricting activities that could cause impacts.

Effects from Native American Tribal Uses Management

No specific effects have been identified from management actions regarding Native American tribal uses. The BLM would continue to consult with tribes regarding treaty rights, cultural access and use of plants, animals, fish and habitats. Consultation could result in identifying areas where watershed restoration actions or timing of actions could need to be modified to accommodate tribal uses. However, it is unlikely that accommodating tribal uses would be inconsistent with water resource goals in the long term.

Effects from Public Safety—Abandoned Mines and Hazardous Materials Management

Compliance with state and federal laws and regulations relating to hazardous material management, including AML, should provide an effective minimum level of water resources protection. These regulations require reporting spills and leaks, investigating and remediating uncontrolled hazardous waste sites, reporting hazardous material use, and proper waste generation and disposal. To the extent that BLM procedures ensure compliance with these laws and regulations, water resources would be protected to the extent practicable. Remediation efforts would continue on AML and hazardous materials sites. Protective measures placed on these sites after clean-up (e.g., closing them to motorized vehicles, withdrawing them from mining laws, designating them as ACECs) would benefit water resources. Continued monitoring and maintenance of AML cleanup sites would also benefit water quality by ensuring that the measures continue to be effective.

Alternative A

Effects from Soil Resources Management

Implementing the MFP Road Guidelines (BLM 1981a), Fisheries and Water Quality Objectives (BLM 1985d), Riparian Management Guidelines (BLM 1985e), and PACFISH (BLM and Forest Service 1995) would continue to help prevent water quality impacts from soil disturbance. Although the guidelines do not reflect the most recent standards and practices, under current management, the BLM would implement necessary additional BMPs for soil-disturbing activities.

Effects from Water Resources Management

Among the federal and state requirements for water resources would be compliance with the Clean Water Act, which involves complying with federal and state numerical water quality standards, and will increasingly involve complying with state TMDL implementation plans for watersheds with impaired waterbodies. While the state is responsible for implementing provisions of the Clean Water Act, ultimate authority for enforcement is with the US EPA. The effectiveness of compliance may be influenced by the level of human activity and development that occurs under the alternatives. Alternative A would result in the highest potential for conflict with state and federal water quality regulations, because it involves the fewest restrictions on human activities in watersheds.

The objective of protecting water quality by focusing on watershed function is the same for all alternatives, but would differ in its implementation. Under Alternative A, streams would be managed to maintain or restore designated beneficial uses and to achieve delisting of impaired waterbodies. There are no specific actions identified to meet this objective other than those discussed above. However, within the scope of developing plans to alleviate watershed problems, the issue of water quality impairment and potential threats to water quality could be addressed.

In the course of attempting to meet the objective of maintaining fish habitat by pursuing water quality and watershed quality objectives, and supplementing current water quality objectives with

updated objectives and criteria, potential impacts on water quality from BLM management actions could be prevented or reduced.

Effects from Vegetation—Forests Management

Forest management can impact surface and groundwater quality and quantity by influencing soil and slope stability, runoff and infiltration rates (retention of moisture within upper watersheds), nutrient and other chemical loading to waterbodies, and channel morphology, among other factors. Dense vegetation protects soils from direct impact by raindrops and slows runoff. Roots of trees and other plants anchor soils. Organic debris that covers the forest floor also retains moisture and slows runoff. By contrast, reduction in vegetation cover, such as from fire or timber harvesting, can result in abrupt increases in soil erosion, with potentially long-lasting water quality impacts.

About 70 percent (over 100,000 acres) of the CFO is forested. About 25 percent of the forested land would be commercial forest land subject to management to maximize timber production, and about 12 percent of the forested land would be managed for sustained yield timber production. The remaining 63 percent of the forested land would be managed custodially (not for timber production, although harvesting could occur for ecological reasons). Timber harvesting is important to the socioeconomic base of north-central Idaho, so management of forested lands is an important consideration of forest management. The recent trend has been to manage forests to emphasize fire prevention and wildfire suppression, particularly within the WUI. The rural WUI comprises 94,093 acres of CFO-managed lands, and the urban WUI 33,584 acres. Lack of management has resulted in increases in stand density and fuel and resultant fire hazard.

About 90 percent of the CFO forest lands are classified as FRCC 2 and 3, while the remaining 10 percent are in FRCC 1. Lands in FRCC 2 and 3 and within the WUI would be given the highest priority for treatments under Alternative A. Under Alternative A, in order to meet National Fire Plan and MFP goals, between 4,000 and 16,300 acres per year would need to be treated using both prescribed burn and non-fire treatment methods. If these rates are achieved, the risk of severe fires would be reduced, consequently reducing the potential for water resources impacts.

Effects from Vegetation—Riparian and Wetlands Management

Establishing riparian management units and implementing Riparian Management Guidelines and BMPs in them would help to reduce the potential for water quality impacts from other actions. In addition, the Fisheries and Water Quality Objectives (BLM 1985d), identification of prescription watersheds (66,077 acres), and PACFISH (BLM and Forest Service 1995) would provide additional riparian conservation and protection measures. Among the protective actions are establishing and maintaining riparian buffers to control water temperature and to reduce sediment impacts.

The development of Aquatic Management Plans provides protection of aquatic habitat, resulting in reduction in the potential for water quality impacts.

Maintaining or improving riparian condition would help protect water quality. Riparian vegetation shades streams and helps to maintain lower temperature water. Streams that are in PFC reflect, by definition, a state of dynamic equilibrium between the channel and the range of flows carried by the channel, meaning that bank and channel erosion is minimized. Runoff and stream flow conditions within the watershed may not be entirely under BLM management, and upstream conditions can affect the condition of segments of streams or wetlands on BLM lands. Therefore, it is not necessarily feasible to achieve PFC in all riparian areas on BLM land.

Effects from Wildlife and Special Status Wildlife Management

Alternative A would identify use-restriction areas and specific actions based on wildlife habitat, and specifically calls for improving range conditions over a 20-year timeframe. Use restrictions and improving range conditions to support wildlife, as well as other actions under Alternative A that target improvements in wildlife habitat, could indirectly improve or protect water resources by reducing erosion. These effects have not been quantified by surface water monitoring and would not necessarily be observed as improvements in PFC, since rangelands and other wildlife habitat areas extend beyond riparian areas.

Alternative A identifies 13 areas for intensive wildlife management and development of HMPs. Their allocation primarily to wildlife management provides some indirect protection of water resources because it would exclude or limit incompatible uses, some of which could involve potential short-term impacts on water resources.

Effects from Aquatic Resources, Fish, and Special Status Fish Management

Imposing use restrictions in sensitive areas would help to protect water quality by limiting actions that could pollute or degrade water quality. In addition, the Fisheries and Water Quality Objectives (BLM 1985d), identification of prescription watersheds (66,077 acres), identification of DFCs for fisheries management, and PACFISH (BLM and Forest Service 1995) would provide additional riparian and aquatic conservation and protection measures. Studies to identify water quality objectives and developing and implementing aquatic HMPs to manage aquatic species habitat would indirectly improve water quality to the extent that their ultimate implementation improved aquatic habitat.

Effects from Wildland Fire Management

Under Alternative A, specific percentages of the CFO FRCC 2 and 3 (moderate to high risk) WUI areas would not be identified for fire risk/fuels-reduction treatments. Treatment areas are prioritized by FRCC (with no specific treatment acreages or percentages specified). Alternative A calls for FRCC 2 and FRCC 3 forested lands in WUI areas to be treated first, followed by FRCC 1 lands in WUI areas. FRCC 2 and 3 lands are the most prevalent; they also represent the greatest hazard to municipal/urban areas. Given current management, an estimated 1,950 to 5,950 acres could be treated annually under Alternative A (see Section 4.2.12, Wildland Fire Management).

Alternative A would seek to return vegetative communities outside the WUI to their historic fire regime and to FRCC 1 conditions. If this were accomplished, it would reduce the potential for severe or stand-replacing fires on BLM lands, with an accompanying reduction in potential water resources impacts.

Under Alternative A, fire suppression methods would be based on resource values. Fire would be used for a variety of utilitarian functions, including disposal of slash, preparing areas for reforestation, improving browse, or reducing competition among vegetation species. Management techniques would be used to meet resource objectives. Protection of water quality, either directly or indirectly, could be among the objectives for selection of a given fire management technique.

Effects from Visual Resources Management

More acreage in higher VRM classifications (VRM I or II) would limit authorized activities, resulting indirectly in protection of water resources.

Effects from Forest Products Management

Timber harvest activities, including construction of permanent and temporary roads, can adversely affect water quality, since reduction in vegetation cover and soil disturbance can expose soils to enhanced erosion and increased sediment delivery to streams. For example, implementation of PACFISH (BLM and Forest Service 1995) has provided additional measures to avoid or minimize timber harvest impacts on water resources.

The most significant source of erosion in most harvesting operations is the ground disturbance and drainage alteration that occurs as a result of building roads to access the trees. It is estimated that about 80 to 90 percent of the increased sediment yield typically results from the erosion associated with roads.

In the CFO another potential source of erosion from timber harvest is changes to timing and magnitude of peak stream flows due to increases in snow accumulation and melt rate in canopy openings. A dense forest canopy, such as on uncut (or unburned) slopes, tends to limit the amount of snow that accumulates on the ground. The streams in forested watersheds become adjusted to the annual range of variation in runoff associated with the particular pattern of vegetation coverage in the watershed. Timber harvesting, road construction, and fire alter the established pattern of vegetation cover. After harvest, snow and ice accumulate in the new openings and clearings that have been created. Depending on the intensity of tree removal and on snowfall conditions, the additional water stored in the watershed in these areas can be substantially greater than under pre-harvest conditions. When the snow melts, which tends to happen faster in clearings than in the shade of trees, the excess runoff is carried to stream channels, where most of the erosion occurs as the channels widen and deepen to accommodate the excess flow.

Alternative A would allow any harvest method to be used on northeast-, north-, or northwest-facing slopes. The maximum allowed clearcut would be 60 acres, with the average clearcut expected to be about 20 acres (based on the MFP [BLM 1981a]). Selective or partial cutting would be allowed on all other slopes. On slopes exceeding 35 percent, or on fragile sites (based on Timber Production Capability Classification), no ground-based yarding methods may be used. Post-harvest site preparation for reforestation would be done by manual, fire, or chemical methods. These specifications provide a standard level of protection for soils and water quality.

Alternative A would strive for full stocking on 90 percent of reforested areas within 5 years in intensive management areas, and within 10 years in extensive management areas. Stocking is a measure of the actual density of trees relative to the density that fully occupies the growth potential of the land, and full stocking is 100 percent or more. Full stocking density decreases as the forest matures. From a water resources perspective, stocking provides an indirect indication of the degree to which the forest canopy can be expected to intercept precipitation. Higher stocking levels for forests of comparable age, composition, and location would generally be associated with lower potential for water quality impacts from soil erosion.

Effects from Livestock Grazing Management

Under Alternative A there would continue to be 168 allotments, containing 122,732 acres in grazing leases and providing 7,~~204~~ 200 AUMs. This is less than the 7,661 AUMs called for in the 1981 MFP. In 1982, BLM identified 49 allotments that needed improvement of unsatisfactory conditions. Assessments have now been completed on 99 of the 168 allotments. These results suggest that

improvements in resource condition have occurred since 1982. Under current conditions, most riparian areas inventoried were found to be in PFC (see Chapter 3, Section 3.2.8, Vegetation—Riparian and Wetlands), also supporting the conclusion that conditions have been improving under current management, and that there have been less than significant effects on water resources from grazing in recent years in most areas. Additional data will be obtained as the remaining assessments are completed.

Effects from Minerals Management

Impacts on water resources would be reduced through application of standard lease stipulations, since Alternative A does not adopt the 1989 Uniform Format for Oil and Gas Lease Stipulations. Alternative A has the greatest potential for impacts on water resources, since it involves the fewest restrictions on mineral activity.

The impacts on water resources from salable minerals would be generally less than for locatable minerals. Most of these mineral operations are small and relatively simple. Impacts would typically include generation and discharge of contaminated surface water or water from dewatering operations, discharge of sediment, potential for spills or releases of petroleum products or other chemicals, and alteration of drainage patterns. The potential for these impacts would be reduced by complying with existing federal and state laws and regulations. The impacts on water resources from leasable mineral operations could be similar to those described for locatable minerals. However, based on the historically low level of activity involving leasable minerals in the CFO and the geologic environment that is unfavorable for the presence of leasable minerals, impacts from this resource are anticipated to be very low.

Effects from Recreation Management

Each of the alternatives establishes the same SRMAs involving the same number of acres. The alternatives differ in the management emphasis within the SRMAs and on non-SRMA lands. Alternative A prioritizes developing intensive management for Salmon River and Clearwater River SRMAs and managing the remaining SRMAs at a lower, extensive level of management until activity plans are completed.

Commercial permits in SRMAs prioritized for intensive management would be coordinated through the state licensing board for outfitters and guides. Alternative A would consider competitive use and organized group recreation permits on a case-by-case basis. While giving the BLM the opportunity to restrict activities through the permit process, Alternative A includes few actual restrictions. Such restrictions could protect water resources in sensitive areas or during periods of intensive use.

Effects from Renewable Energy Management

Among the impacts on water resources that may result from developing geothermal and other renewable energy resources are short-term impacts on water quality during construction, including soil disturbance in construction sites; road construction; and construction of transmission lines and associated structures. Potential long-term impacts on water resources could occur from: operation of geothermal power plants, depending on the type, size, and location of the plants, relating to increased consumption of surface water or groundwater; waste generation and storage; removal of vegetation cover for conversion of biomass; and extraction and injection of geothermal fluids.

Under Alternative A, only standard lease stipulations would apply. While these would provide a minimum level of protection as required by laws such as the Clean Water Act, management options to control or reduce site-specific impacts on resources would be limited.

Effects from Transportation and Travel Management

Potential impacts on water resources would continue and could increase due to motorized vehicle use, which would include use of existing roads and trails and cross-country travel within Open and Limited designation areas.

Water quality impacts could occur from soil disturbance along trails and from increased recreation use of riparian areas. The total number of miles of roads, and the road density, is an indirect indicator of the potential impacts on water resources of roads.

Vehicle use restrictions and temporary or permanent closure would help reduce impacts on water resources.

Alternative A calls for identifying unspecified mitigation measures to avoid adverse effects on water quality and fish habitat. This would help to reduce impacts on water quality.

Effects from Lands and Realty Management

Alternative A calls for identifying correctable natural and manmade hazards on public lands and for identifying unauthorized dump sites requiring rehabilitation. Rehabilitation of these lands would improve existing water quality and reduce potential for future degradation of water quality.

Non-federal land would be considered for acquisition if it contained important and/or unique resource values, provided access to public lands, eliminated inholdings in special designation areas, or consolidated ownership in areas identified for retention. Acquisitions to meet these criteria could help to improve the BLM's ability to effectively manage water resources, leading directly or indirectly to improvements in water quality or protection of water resources.

Maintaining the withdrawal of 26,594 acres adjacent to the Salmon River from mineral entry would reduce the potential impacts on water quality associated with mineral development, which can include exposure of tailings to leaching by surface water, and soil erosion of roads and tailings, both resulting in surface water quality impacts.

Effects from ACEC/RNA Management

Protecting specific blocks of land as ACECs and RNAs would restrict the types of activities that could occur within these areas, reducing the potential for impacts on water resources. Under Alternative A, 25,600 acres would be protected as ACECs and/or RNAs. The 30-acre Elk City Dump/American Hill Lake ACEC would protect the public from adverse water quality impacts that may be attributed to hazardous materials buried at an old dump and mining site. Management actions would include implementation of reclamation actions and ongoing water quality monitoring efforts.

Effects from Wilderness and Wilderness Study Areas Management

Alternative A includes no specific management in the event that WSAs are released by Congress from wilderness consideration. If released, the areas would revert to adjacent land management with

no special status, with protection of water resources afforded by the Clean Water Act and other relevant statutes.

Effects from Watchable Wildlife Viewing Sites Management

Actions to maintain or improve wildlife habitat resources would indirectly provide protection of water resources, since measures that protect habitat typically also protect water quality. Developing wildlife viewing sites could increase public access to remote areas and could indirectly encourage increased recreational use that leads to adverse impacts on water quality. Such impacts would be prevented or reduced by ensuring that any future development is consistent with the objective of improving habitat and by implementing appropriate BMPs.

Alternative B

Effects from Soils Management

Implementing BMPs for soil-disturbing activities (e.g., road construction, construction site preparation) and reclamation of existing sites where soil erosion has impacted water quality would help reduce or prevent impacts on water quality from soil erosion.

Alternative B proposes that site-specific studies would be conducted in areas of potentially unstable slopes, including all areas with slopes in excess of 55 percent, and that a minimum 100-foot protection zones would be implemented around landslides and landslide-prone areas. These actions would result in reduced soil-disturbing activity within the protection zones, with the indirect result that sediment delivery to streams would not be increased by human activity. Alternative B would not increase the potential for slope failure relative to Alternative A.

Effects from Water Resources Management

Although the implementation of BMPs to limit nonpoint source pollution would be the same under all of the alternatives, Alternative B would be more protective of water quality than Alternative A because there would be more restrictions on human activities (e.g., mineral lease stipulations) that have a potential to impact water quality than under Alternative A.

The objective to protect water quality by focusing on watershed function is the same for all alternatives, but Alternative B has greater potential than Alternative A for success in achieving the objective. Alternative A focuses on data-gathering activities to identify problems and develop plans to alleviate problems, while Alternative B identifies specific actions that focus on achieving improved water quality.

Alternative B would be similar to Alternative A in calling for managing streams to meet the objective of restoring water quality supportive of identified beneficial uses, except that Alternative B also specifies that BLM would cooperate with adjacent landowners and others in order to meet the objective. Cooperative efforts are likely to benefit water resources that are partially managed by the BLM because BLM lands are widely dispersed and because in many watersheds, the BLM manages only a small percentage of the watershed. This cooperation already occurs under Alternative A.

Identifying opportunities for removal of hazardous materials and nonessential structures from floodplains would not be precluded under Alternative A, but it is more likely to be accomplished where specifically called out in Alternative B. Removal of hazardous materials might include historical materials, such as mine or mill tailings, as well as illegally dumped materials and materials

that were inadvertently placed in the floodplain because of lack of delineation of the floodplain boundaries. To the extent that hazardous materials or nonessential structures are actually removed, water quality impacts could be reduced or prevented. Alternative B does not identify methods other than removal, such as isolating or encapsulating hazardous materials in place within the floodplain. It is not clear, therefore, whether such alternative actions might be considered if it was determined that the opportunity for removal does not exist based on cost.

Effects from Vegetation—Forests Management

Alternative B differs from Alternative A mainly in the intensity of management and the degree of specificity with which goals for DFC of forest habitat are defined. The DFC is based on the estimated range of historic variability in the distribution of tree sizes and ages. Blocks over 1,000 acres would be managed to meet the DFCs to improve forest health and vigor in **Appendix D** (Desired Future Conditions for Forest Vegetation/Wildlife Habitat [see Volume II~~I~~]); these areas account for 24,789 acres, which is 24 percent of forest land or 17 percent of the CFO (**Figure 6**, Desired Future Condition Blocks—Alternative B [see Volume IV of the Cottonwood Draft RMP/EIS]). The DFC for Alternative B includes 10 percent old forest, and a moderate percentage of large trees. Stand structure distribution in Alternative B is intended to move further toward the historic range of variation, which is absent under Alternative A. An increase in forest maturity to improve habitat would occur as a result of harvesting fewer large trees. This could indirectly reduce impacts of timber production on water quality (mainly temperature and sediment).

Old growth management goals are included for each DFC management area. Treatments that reduce fuel and reduce the frequency and severity of wildland fires would reduce the impacts of fires on water quality. Short-term impacts on water quality could occur as a result of the treatment. For example, chemical applications could impact water quality, and vegetation removal activities could increase erosion.

Although the emphasis of implementing timber harvest activities to maximize economic return in areas of high risk for stand mortality greater than 30 percent is on capturing an economic value, there would be an indirect impact from reducing the potential for accumulation of fuel and fires by reducing the potential for impacts on water resources associated with fires. There would be short-term impacts on water resources as a result of soil disturbance associated with timber harvesting activities.

Effects from Vegetation—Riparian and Wetlands Management

Appendix F (see Volume II~~I~~) describes the Aquatic and Riparian Management Strategy that would be used to achieve the objective of improving degraded riparian and wetland vegetation and habitat diversity. Under Alternative B, RCA stream buffers would total 22,847 acres, 14 percent more area than RHCAs under Alternative A.

Appendix C (Conservation and Restoration Watersheds [see Volume II~~I~~]) identifies emphasis watersheds for conservation and restoration actions and achievement of DFCs. Alternative B would include ~~1~~ three conservation and ~~32~~ 28 restoration watersheds totaling 64,481 acres, 2 percent less than prescription watersheds under Alternative A.

The RCAs would receive special management per the standards and guidelines listed in **Appendix F**, Aquatic and Riparian Management Strategy (see Volume II~~I~~). These standards and guidelines generally call for additional studies to identify the impacts of management actions on riparian habitat

within RCA stream buffers before projects are undertaken, and for certain restrictions to be implemented to protect the riparian resources. Protecting riparian resources in this way would also protect water quality and reduce hazards from flooding.

Effects from Wildlife and Special Status Wildlife Management

Alternative B would strive to improve the ecological condition status of native grassland and to support winter and spring range areas of game animals with emphasis in the Craig Mountain WMA and Rattlesnake Ridge areas. Improving grassland could help to reduce the potential for soil erosion impacts on water quality.

Alternative B targets forested contiguous areas greater than 1,000 acres as priorities for attainment of DFC. As discussed under Effects from Vegetation—Forests Management, attainment of DFC status would help reduce the potential for impacts on water resources.

Alternative B calls for development of new HMPs and other activity plans, without specifying which areas would be targeted.

Riparian areas would be protected, helping to reduce impacts on water resources (see similar actions and impacts in the discussion of Effects from Vegetation—Riparian and Wetlands Management).

Alternative B identifies 12 areas (101,526 acres) for no net increase in motorized vehicle use of roads or trails on BLM lands. This is a more specific restriction than under the corresponding action in Alternative A, and it targets some different, or more specific areas, than those identified for development of HMPs under Alternative A.

Effects from Aquatic Resources, Fish, and Special Status Fish Management

Conservation easements and land acquisitions to support special status fish could help to protect water quality through additional management actions such as limitations on use of these lands.

Alternative B would promote actions that support good quality aquatic habitat. Since good water quality is an integral element of good-quality aquatic habitat, this action would help to protect or improve water quality. Activities that promote good quality aquatic habitat are not specified in the alternative, but might include creating buffer zones, removing roads, revegetation projects, and removing hazardous materials sites, among other actions.

Alternative B calls for designing and promoting activities that maintain high-quality habitats in ~~1~~ three conservation watersheds, and that help to achieve DFCs in ~~32~~ 28 restoration watersheds totaling 64,481 acres, 2 percent less than prescription watersheds under Alternative A. Among the elements of DFCs are water quality, channel condition, and flow and hydrology. The Aquatic and Riparian Management Strategy (**Appendix F** in Volume II~~I~~) identifies default buffer widths and land use restrictions to protect water quality and fish habitat. These actions would help protect and restore water quality.

Effects from Wildland Fire Management

Many of the actions under Alternative B would be similar to those under Alternative A. However, Alternative B relies less on wildfire and prescribed fire. A total of 33,766 acres could be treated under Alternative B (see Section 4.2.12, Wildland Fire Management). However, Alternative B relies less on wildfire and prescribed fire than Alternative A. Alternative B allows treatment of 40 percent

of CFO FRCC 2 or 3 lands (moderate to high risk) WUI areas in any 5-year period, of which 5 to 15 percent can be fire. Chemical and/or biological treatments would be used on up to 36 percent of CFO lands. Chemicals would be applied under restricted conditions, by trained personnel, to minimize the potential for impacts.

In addition to emphasizing non-fire methods of reducing fuel loads, Alternative B would encourage the use of biomass generated by fuels-reduction projects as a source of fuel for energy production or other uses. Reduced use of fire as a fuel management tool would probably reduce potential for short-term impacts on water resources from soil erosion resulting from vegetation loss, although biomass collection may involve substantial potential for soil disturbance from roads and equipment use.

Alternative B allows for the potential of 2 to 6 percent of the FRCC 2 and 3 treatments to be completed with mechanical operations. Although the type of impacts from mechanical operations would be similar, the maximum application of mechanical treatments would be 50 percent less than proposed in Alternative A, resulting in consummately less potential impacts to water resources.

Effects from Visual Resources Management

Effects would be the same as those described under Alternative A.

Effects from Forest Products Management

Alternative B identifies an annual timber harvest potential of 3,129 MBF from a commercial forest land base of 40,598 acres. The commercial forest land base is larger than under Alternative A and would allow timber harvesting on 13 percent more acres that would not be managed for timber production under Alternative A. The reduction in PSQ by over 50 percent would result in less ground disturbance and, subsequently, less potential for impacts on water quality relative to Alternative A. However, timber production would be approximately 53 percent lower than under Alternative A.

Alternative B would allow any harvest method to be used on all lands. This is a more-flexible approach than Alternative A, which limits the methods that can be used based on slope and slope aspect. The greater flexibility would allow more clearcutting, for example, than under Alternative A and would allow the use of ground-based equipment on slopes greater than 35 percent. The actual treatment systems used would be determined by the BLM through evaluation of site-specific harvest plans. While this flexibility presents greater risk that soil erosion and water quality impacts would occur than under Alternative A, it also gives the BLM a greater role in identifying the site-specific conditions that need to be addressed. Thus, the BLM may also conclude that low-impact methods be used on slopes of less than 35 percent if the conditions warrant. The impacts on water resources would depend on site-specific conditions. Modeling tools would be used to predict the site-specific impacts and to identify appropriate measures to avoid impacts.

As with harvesting, Alternative B would not restrict the available methods for reforestation. All projects would be designed to achieve full stocking on 90 percent of the reforested area within 5 years. The shorter overall timeframe relative to Alternative A corresponds to the lack of distinction between lands designated for intensive versus extensive management under Alternative B. The production goal under Alternative B is 54 percent lower than under Alternative A. This could result in reduced potential for impacts on water resources than under Alternative A, but the actual impacts would depend on site-specific management decisions.

Alternative B would adopt the BMPs for road construction (**Appendix B**, Best Management Practices) and the Aquatic and Riparian Management Strategy for Alternative B (**Appendix F** [see Volume II~~I~~]). Implementing these guidelines would help prevent or reduce the impacts on water resources.

Effects from Livestock Grazing Management

Under Alternative B, three allotments currently not leased and where grazing is not compatible with other management objectives would be retired. One allotment would be added to solve an administrative issue resulting from an acquisition in an area being historically grazed by a lessee. In total, two allotments would be removed from livestock grazing, resulting in 166 allotments, ~~6,254~~6,263 AUMs (an almost 1,000-AUM reduction), and 105,619 acres (an almost 15,000-acre reduction). There would be no change in impacts on water resources compared to Alternative A.

Effects from Minerals Management

Impacts on water resources from leasable minerals and mineral materials would be lower than under Alternative A because of the identification of lands open to leasing/sale but subject to surface use restrictions (stipulations) in addition to those on the standard lease/permit form. Under Alternative B, 43,590 acres would be subject to NSO stipulations; 42,403 acres would be subject to CSU stipulations, which would restrict certain types of activities; and an unknown number of acres would be subject to TL stipulations, which would place seasonal limitations on some activities. Among other foreseeable restrictions would be NSO stipulations on land within 0.25-mile of river segments suitable for inclusion in the NWSRS. These restrictions on use, particularly the NSO stipulations, would greatly reduce the potential impacts on water resources relative to Alternative A. Some stipulations would not be defined until site-specific studies were completed prior to leasing, but many of the stipulations would be established based on existing studies and knowledge of the existing resources. The increased foreknowledge of the restrictions on any given lease would help to focus industry attention on the least-restricted areas, reducing the risks (and costs) of planning and permitting, and could result in somewhat increased interest in those areas, compared to current conditions. However, because leasable mineral potential in the CFO is low overall, the actual differences in level of impact on water resources between Alternatives A and B would also likely be small. The same may not be true for mineral materials, as the future need for this resource is anticipated to increase with population growth in the CFO.

Site-specific mitigation measures and BMPs developed during project review would be used in conjunction with the lease/permit stipulations to reduce potential impacts on water resources.

Effects from Recreation Management

Alternative B would manage the Lolo Creek SRMA for activities that would have a low impact on water resources (nonmotorized, primitive uses), with an emphasis on whitewater boating and fishing. Therefore, Alternative B would probably be more protective of water quality in the Lolo Creek SRMA than Alternative A.

Alternative B would provide additional restrictions on commercial use permits compared to Alternative A. It would close some areas to competitive use permits. It would establish parameters for organized group recreation permits in SRMAs. These actions would probably result in a small amount of additional protection of water resources compared to Alternative A.

Effects from Renewable Energy Management

Under Alternative B lease stipulations would apply to fluid mineral leases, including geothermal leases, as described above. Similar stipulations would also apply to other renewable energy leases. The stipulations would greatly reduce the potential for impacts on water resources by restricting activities or timing of activities that could impact water quality, and by limiting the area open to leasing. Many of the sensitive habitat areas would also be areas in which water resources are most sensitive to degradation.

Effects from Transportation and Travel Management

No lands would be Open to year-round cross-country motorized travel, and 125,729 acres would be managed for motorized use Limited to designated routes. The action puts more emphasis on evaluating site-specific issues when defining vehicle use restrictions. Within Limited areas, approximately 205 miles of routes would be open yearlong, which equates to an average route density of 1.05 miles per square mile in Limited areas. An additional approximately 107 miles would be restricted in Limited areas, the majority (93 percent) of these being closed yearlong to motorized use.

Obliterating roads and trails not needed for long-term management could have short-term impacts on water quality associated with soil disturbance but would result in reduced impacts over the long term, from revegetation, return to a natural drainage pattern, improved infiltration, and reduced erosion from road use and maintenance.

Environmental considerations would be included in future route designation modifications, which would help to ensure that road construction and use do not adversely impact water resources.

Alternative B calls for annual monitoring of the effects of the travel plan on resources. Among the problem areas to be monitored would be soil erosion, sediment and water quality, riparian and wetland impacts, and restoration/rehabilitation project effects. Monitoring would identify and document problems, causes, and the effectiveness of solutions. These actions would increase the detection of any impacts on water resources to occur.

Road management guidelines/BMPs (**Appendix B**, Best Management Practices [see Volume II~~I~~]) would help prevent or reduce impacts on water quality.

Effects from Lands and Realty Management

Alternative A calls for identifying correctable natural and manmade hazards on public lands and for identifying unauthorized dump sites requiring rehabilitation. Although there is no similar action specified in Alternative B, these actions are implied by compliance with existing laws and regulations. Therefore, the effects would be the same or similar to Alternative A.

A total of 30,098 acres would be outside of areas identified as management blocks and would be considered for disposal on a case-by-case basis. Alternative B calls for using land exchange or disposal to reduce scattered parcels that are difficult to manage, and to acquire lands with high public resource value. Transfers and acquisitions could be used to improve the BLM's ability to effectively manage water resources, among the other public values of interest, leading directly or indirectly to improvements in water quality or protection of water resources. Alternative B is similar to Alternative A in this respect.

Alternative B calls for using withdrawals to protect high-value resources. An example is renewing the existing withdrawal on the Lower Salmon River and expanding that withdrawal. Withdrawals from uses that conflict with maintaining water quality objectives would reduce the potential for impacts on water quality.

Effects from ACEC/RNA Management

As under Alternative A, protecting specific blocks of land as ACECs would restrict the types of activities that could occur within these areas, reducing the potential for impacts on water resources. Under Alternative B, all but one of the current ACECs under Alternative A would be maintained (Craig Mountain ACEC [3,956 acres] would not). Within these maintained ACECs, specific actions affecting water resources in each would differ, as indicated by the following:

- 401 acres of Wapshilla Ridge (would allow maintenance timber harvests, permanently exclude grazing by retiring the grazing allotment containing the ACEC [although the area is available for grazing, it has not been leased for the past eight years], and allow prescribed burning and wildland fire use). These measures would have impacts as described above for each resource;
- 43 acres of Lower and Middle Cottonwoods Islands (would prohibit any soil or vegetation disturbance that does not support long-term improvement of ecological condition). This would better protect water resources than Alternative A;
- 1,321 acres of Captain John Creek (would allow limited timber harvesting to address disease or insect control and to achieve DFC and would allow limited vegetation treatments). These actions would have impacts as described above for each resource;
- 47 acres of Long Gulch (would allow no ground-disturbing activities that would impact MacFarlane's four-o'clock). This would reduce the potential for impacts on water quality;
- 18 acres of Skookumchuck and 136 acres of Lucile Caves (would use integrated pest management to control nonnative vegetation. This is a slight departure from Alternative A, which prohibits herbicide spraying). Integrated pest management allows discretion on the part of BLM to identify the best technologies and methods to control weeds;
- 3,678 acres of Lower Lolo Creek (Alternative B would develop a strategy to restore riparian and floodplain areas in Cottonwood Flats and provide custodial management of forest lands). These measures would provide additional protection to water resources if they further restricted land uses; and
- Lower Salmon River (Alternative B would increase the acreage in the ACEC by 497 acres relative to Alternative A to 16,199 acres).

In addition to the actions under Alternative A, Alternative B would protect ~~three~~ four additional sites as ACECs: 5,759 acres on the Salmon River east of Riggins; 570 acres on the East Fork American River, including restricting ground disturbance on slopes greater than 40 percent; 1,625 acres of Upper Lolo Creek, including requiring yarding methods to be utilized for timber harvest activities on slopes over 35 percent, obliterating roads not needed for long-term management, development of a restoration strategy of riparian /flood-prone areas in Cottonwood Flats, and a recommended mineral withdrawal; and 6,356 acres on the American River for preserving historical mining sites. Implementing these additional ACECs would restrict other uses within the area, reducing potential for future impacts on water.

Effects from Wilderness and Wilderness Study Areas Management

Under Alternative B, if Congress released WSAs from wilderness consideration, specific management would be implemented. This would provide a somewhat lesser degree of protection of water resources than if areas were managed as wilderness, but it would be more protective than if WSAs were released under Alternative A.

Effects from Watchable Wildlife Viewing Sites Management

The impacts of Alternative B would be similar to those of Alternative A, except that Alternative B would provide formal documentation and identification for wildlife viewing areas, expanding public information efforts, and promoting cooperative management efforts. Such efforts could result in further indirect protection of water resources but could also increase intensity of recreational use and associated impacts on water resources.

Alternative C

Effects from Soils Management

Effects would be the same as those described under Alternative B.

Effects from Water Resources Management

All of the water resource management actions are intended to reduce or prevent impacts on water resources. The potential for the water resource management actions to have the desired result would be greater under Alternative C, because Alternative C places the most restrictions on human activities that could adversely impact water resources. For example, Alternative C identifies larger default buffers for RCA stream buffers, more restoration and conservation watersheds (68,359 acres), larger land areas subject to NSO mineral lease stipulations, the largest number of acres in ACECs, and the fewest acres for land-disturbing actions, among other restrictions on development.

Effects from Vegetation—Forests Management

Effects would be similar to those described under Alternative B, except that Alternative C identifies a DFC consisting of a higher percentage of larger trees and more old forest than Alternative B. Blocks over 500 acres would be managed for DFC and account for 28,087 acres of forested vegetation (**Figure 7**, Desired Future Condition Blocks—Alternative C [see Volume IV of the Cottonwood Draft RMP/EIS]). This could indirectly reduce impacts of timber production on water quality (mainly temperature and sediment).

Effects from Vegetation—Riparian and Wetlands Management

Effects would be similar to those described under Alternative B, except that Alternative C includes wider default widths for RCA stream buffers (covering 21 percent more area than Alternative B and 14 percent more than Alternative A) and 6 percent more conservation and restoration watersheds (totaling 68,359 acres). This would afford somewhat more protection of water quality than under Alternative B.

Effects from Wildlife and Special Status Wildlife Management

Effects would be similar to those described under Alternative B, except that Alternative C would add the Lower Salmon River to areas that emphasize management of native grassland to support winter and spring range areas of game animals. The larger area under this type of management would have a greater potential to reduce soil erosion impacts on water quality than Alternatives A and B.

Alternative C targets forested contiguous areas greater than 500 acres as priorities for attainment of DFC, totaling 28,087 acres. By targeting smaller areas than Alternative B, 3 percent more CFO lands would come under this management, resulting in greater indirect protection of water resources.

Riparian areas would be protected as described for Alternative B; however, as described in Effects from Vegetation—Riparian and Wetlands Management, Alternative C includes wider RCA stream buffers than Alternative B and wider RHCAs than Alternative A. These actions would help to protect water resources more than Alternatives A or B.

Alternative C identifies five of the areas (38,733 acres) targeted in Alternative B for no net increase in motorized vehicle use of roads or trails, for a decrease in motorized vehicle use. This would provide greater protection of water resources from erosion impacts resulting from road use.

Effects from Aquatic Resources, Fish, and Special Status Fish Management

Effects would be similar to those described under Alternative B, except that Alternative C would be applied to 6 percent more watershed acreage than Alternative B, as indicated in **Appendix C**, Conservation and Restoration Watersheds (see Volume II~~I~~), and 3 percent more than prescription watersheds under Alternative A. This would result in more opportunities for improvements in water quality than under Alternatives A or B.

Effects from Wildland Fire Management

Effects would be similar to those described under Alternative B, except that 20 percent (16,833 acres) of the CFO classified as FRCC 2 or 3 (moderate to high risk) WUI areas could be treated in any 5-year period under Alternative C (see Section 4.2.12, Wildland Fire Management), 50 percent less than Alternative B and 80 percent less than Alternative A. Alternative C would include approximately 1,182 to 4,390 acres annually of mechanical treatments and prescribed fire (see Section 4.2.5, Vegetation—Forests).

Chemical and/or biological treatments could be used on up to 20 percent of CFO lands. Chemicals would be applied under restricted conditions, by trained personnel, to minimize the potential for impacts.

Effects from Visual Resources Management

Effects would be similar to those described under Alternative B, except Alternative C would assign more acres to more-stringent VRM classes. Specifically, Alternative C would have more than twice as many acres in VRM Class I than Alternative B, slightly more in VRM Class II, and less in VRM Class III. Alternative C also would have more acres in VRM Classes I and II than Alternative A. The shift toward more-stringent VRM classes would result in more restrictions on the authorized land uses, indirectly reducing the potential for water resources impacts.

Effects from Forest Products Management

The impacts would be similar to the impacts of Alternative B. Compared to current management, the commercial forest land base would be reduced by about 3 percent, and annual estimated timber production would be about 53 percent lower, resulting in less potential for impacts on water resources.

Effects from Livestock Grazing Management

Effects would be similar to those described under Alternative B, except Alternative C would reduce the total number of allotments to 145 (from 168 in Alternative A), 101,350 acres, and 6,020 AUMs. The reduction in allotments would include removing vacant allotments that are not currently being used. There would be no change in impacts on water resources compared to Alternative A or B.

Effects from Minerals Management

Effects would be similar to those described under Alternative B, except impacts on water resources would be lower than under Alternative B because more open lands would be subject to surface use restrictions. Under Alternative C, 68,854 acres would be subject to NSO stipulations, and 59,122 acres would be subject to CSU stipulations. As indicated for Alternative B, the overall leasable mineral potential in the CFO is low, so the actual differences in level of impact on water resources between Alternatives B and C would also likely be small.

Effects from Recreation Management

Effects would be the same as those described under Alternative B.

Effects from Renewable Energy Management

Effects would be the same as those described under Alternative B.

Effects from Transportation and Travel Management

The effects of obliterating roads and trails not needed for long-term management would be similar to those described for Alternative B, except that under Alternative C, the areas where this action would occur would be expanded to include 6 percent more watershed acreage than Alternative B, as identified in **Appendix C**, Conservation and Restoration Watersheds (see Volume III~~I~~), and 3 percent more than prescription watersheds under Alternative A.

Effects from Lands and Realty Management

Effects would be the same as those described under Alternative B.

Effects from ACEC/RNA Management

Effects would be similar to those described under Alternative B, except:

- Alternative C would increase the existing Craig Mountain ACEC to 23,342 acres, an almost five-fold increase from Alternatives A and B. Custodial timber harvesting would be allowed to achieve desired size classes. New roads for timber harvesting would be decommissioned. These actions would provide additional protection of water resources compared to Alternatives A and B;
- On 570 acres on the East Fork American River, vegetation treatments would be reduced and vegetation and aquatic condition/trend monitoring would be conducted every 10 years. The impacts on water resources would be similar but slightly less than Alternative B because of the additional restrictions on timber harvesting and additional monitoring;
- ~~Alternative C would designate 1,625 acres of Upper Lolo Creek as an ACEC and restrict timber harvesting on slopes over 50 percent, recommended a mineral withdrawal, obliterate roads not needed for long-term management, and develop a restoration strategy for riparian/floodplain areas in Cottonwood Flats. These actions would help to reduce the potential for impacts on water resources;~~

- 576 acres of the Partridge/Elkhorn area would be managed to protect natural processes, old growth ~~P~~ponderosa pine stands, and Idaho BLM sensitive species. Management measures would include minimizing new road construction and removing timber roads. These actions would help to protect water resources; and
- 590 acres of the Little Salmon River would be managed for a similar purpose and in a similar way to the Partridge/Elkhorn area, above.

Effects from Wilderness and Wilderness Study Areas Management
Effects would be the same as those described under Alternative B.

Effects from Watchable Wildlife Viewing Sites Management
Effects would be the same as those described under Alternative B.

Alternative D

Effects from Soils Management
Effects would be the same as those described under Alternative B.

Effects from Water Resources Management
All of the water resource management actions in Alternative D are intended to reduce or prevent impacts on water resources. The potential for the water resource management actions to have the desired result would be less under Alternative D than under Alternative A, because Alternative D has smaller RCA widths, fewer conservation and restoration watersheds (21 percent less than prescription watersheds under Alternative A), and more potential for ground-disturbing actions.

Effects from Vegetation—Forests Management
Effects would be the same as those described under Alternative A.

Effects from Vegetation—Riparian and Wetlands Management
Effects would be similar to those described under Alternative B, except Alternative D would have a slightly higher potential for water quality impacts overall. Under Alternative D, fewer conservation and restoration watersheds would be designated (21 percent less than prescription watersheds under Alternative A).

Effects from Wildlife and Special Status Wildlife Management
Effects would be similar to those described under Alternative B, except Alternative D would be somewhat less protective overall, based on the RCA widths and priority watersheds listed in **Appendices F** (Aquatic and Riparian Management Strategy) and **C** (Conservation and Restoration Watersheds) (see Volume III).

Effects from Aquatic Resources, Fish, and Special Status Fish Management
Effects would be similar to those described under Alternative B, except Alternative D would have smaller RCA widths and fewer conservation and restoration watersheds (21 percent less than prescription watersheds under Alternative A). Alternative D would have higher potential for overall water quality impacts than the other alternatives.

Effects from Wildland Fire Management
Effects would be similar to those described under Alternative B, except that 50,650 acres of the CFO classified as FRCC 2 or 3 (moderate to high risk) WUI areas could be treated in any 5-year

period under Alternative D (see Section 4.2.12, Wildland Fire Management), 50 percent more than Alternative B and triple that under Alternative C. Additional areas could be treated outside the WUI. Alternative D would include approximately 2,870 to 7,597acres annually of mechanical treatments and prescribed fire (see Section 4.2.5, Vegetation—Forests).

Chemical and/or biological treatments would be used on up to 36 percent of CFO lands. Chemicals would be applied under restricted conditions, by trained personnel, to minimize the potential for impacts.

Effects from Visual Resources Management

Effects would be similar to those described under Alternative B, except Alternative D would shift more acres to less-stringent VRM classes. There would be about half as many acres in VRM Class I as in Alternative B, slightly fewer acres in VRM Class II, and about 10,000 more acres in VRM Class III. Alternative D also would have more acres in less-stringent VRM classes than Alternative A. Based on acreage, VRM under Alternative D would indirectly have the largest impacts on water resources among the alternatives.

Effects from Forest Products Management

Effects would be similar to those described under Alternative B. Compared to current management, the commercial forest land base would be reduced by about 26 percent, and annual estimated timber production would be about 27 percent lower, resulting in less potential for impacts on water resources.

Effects from Livestock Grazing Management

Effects would be similar to those described under Alternative B, except that under Alternative D, 135,850 acres consisting of 170 allotments and 8,54~~0~~9 AUMs would be available for livestock grazing. The increase in AUMs would result in increased potential for impacts on water resources overall because a greater number of streams would be accessed by livestock ~~(more streams would be impacted)~~. While the acres per AUM are similar for all alternatives, the carrying capacity of the land varies; because Alternative D involves more acres than the other alternatives, livestock grazing under Alternative D is likely to have the greatest impact on water resources among the alternatives.

Effects from Minerals Management

Effects would be similar to those described under Alternative B, except impacts on water resources would be slightly greater than under Alternative B, because slightly fewer lands would be subject to surface use restrictions. Under Alternative D, 35,045 acres would be subject to NSO stipulations and 32,013 acres would be subject to CSU stipulations.

Effects from Recreation Management

Effects would be the same as those described under Alternative B.

Effects from Renewable Energy Management

Effects would be the same as those described under Alternative B.

Effects from Transportation and Travel Management

Effects would be similar to those described under Alternative A, except that Alternative D would include 23,189 acres Open to yearlong, cross-country motorized travel, an area 25 percent the size of that under Alternative A. An additional 102,542 acres would be Limited to designated routes. Within

Limited areas, approximately 179 miles of routes would be open yearlong. However, almost half of these (82 miles) would not have legal public access so these would receive little to no use. An additional approximately 107 miles would be restricted in Limited areas, the majority (93 percent) of these being closed yearlong to motorized use. Route restrictions and closures would indirectly protect water resources by reducing or eliminating traffic, which can contribute to localized erosion of the roadbed and can ultimately increase sediment in water bodies. Because cross-country OHV use would be most damaging to soils, resulting in erosion that could reach water bodies, Alternative D would have more potential indirect impacts on water resources than Alternatives B and C because Alternative D would designate Open areas. Alternative D would have less potential indirect impacts on water resources than Alternative A.

Effects from Lands and Realty Management

Effects would be the same as those described under Alternative B.

Effects from ACEC/RNA Management

Effects would be similar to those described under Alternative B, except that Alternative D would not include the following:

- The Lower Lolo Creek ACEC, which is included in Alternatives A, B, and C;
- The East Fork American River ACEC, which is included in Alternatives B and C; and
- Designation of the American River Historic Sites District ACEC, which is included in Alternatives B and C.

Effects from Wilderness and Wilderness Study Areas Management

Effects would be the same as those described under Alternative B.

Effects from Watchable Wildlife Viewing Sites Management

Effects would be the same as those described under Alternative B.

Cumulative Effects

Past sediment, erosion, and associated water quality and drainage impacts have resulted from mining activities, road construction and maintenance, and to a lesser extent grazing and agricultural use. Nearly all of the projects listed in Section 4.1.3, Cumulative Impacts have in the past or would in the future contribute to a cumulative effect on water resources in the region. Many of these projects include a component intended to reduce or prevent effects on water resources or to reverse past effects.

Many of the Cottonwood RMP management actions parallel or are designed to be implemented in coordination with other projects. The cumulative effect would be the increased protection, maintenance, or restoration of water quality and the designated beneficial uses of water in the region. This general cumulative effect would occur under each of the alternatives with small variations in the magnitude of the effect, especially within the CFO, resulting from the different emphases of the alternatives. The projects that fall within this category of impact include land tenure actions, the Idaho Statewide Implementation Strategy for the National Fire Plan, wildland fire management strategies, fish and wildlife conservation measures, and implementation of the ESA, the Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management (BLM 1997a) (**Appendix A** in Volume III), the ICBEMP, and resource-protection measures in the National

Forest Plan revisions. Other projects or regional trends could impact water resources unless mitigated by implementing BMPs, complying with existing laws and regulations, or designing measures specifically to address water resources impacts.

In the foreseeable future, fuels management actions that disturb soil or remove vegetation could result in short-term effects on water quality but are expected to reduce the risk of more potential for stand-replacing fires and potential effects on water resources in the long term. These fire management actions include fuel-reduction measures such as prescribed burns, thinning, slash removal, herbicide treatments, or wildland fire use. Similarly, management that emphasizes allowing natural processes such as fire to proceed with minimal human intervention could substantially affect water resources over time but would reduce short-term effects on water resources. Fire management on National Forest and private land is an example of an area where the cumulative effects of fire management decisions (whether to suppress fire, reduce fuel, or minimize human intervention) would influence outcomes on regional water resources to a much greater extent than the individual decisions associated with BLM management, because BLM manages relatively few acres of forest in the planning area.

Timber, grazing lands, and mineral resource management actions throughout the region would have similar effects to those described above for the Cottonwood RMP alternatives. Timber-harvesting activities on Idaho Department of Lands and private lands are not as protective as on federal lands and, as such, could have greater impacts to water resources. In the case of timber management, Forest Service management actions under the National Forest Plans and revisions are much more influential on regional water resource outcomes than BLM actions, due to the vastly larger amount of land area in the National Forests. However, BLM and the Forest Service are constrained by the same set of rules and guidelines to protect water resources, wildlife habitat, and threatened and endangered species and other resources. In addition, BLM and the Forest Service increasingly coordinate their plans and management actions to achieve common objectives for any given watershed, including actions that emphasize watershed-scale planning and actions such as the ICBEMP or PACFISH that emphasize regional-scale planning. Thus, cumulative effects on regional water resources resulting from forest management practices would increase protection of water resources. This would occur by monitoring effects to allow implementation of corrective measures and by employing effective adaptive resource management. Differences in the level of emphasis on timber productivity under each of the Cottonwood RMP alternatives would result in relatively minor differences in the cumulative regional effects on water resources due to the relatively small BLM land ownership and the general consistency in management between the BLM and Forest Service.

A high potential for the occurrence of locatable minerals continues to exist in historic mining districts in the CFO. The activity level for this resource is anticipated to be relatively low but usually is dependent on commodity prices and thus hard to predict. Mineral material sites could have the greatest potential to impact water resources because the potential for increased activity related to mineral materials is higher than any of the other mineral types. Although past mining activity has resulted in moderate to substantial effects on water resources at some sites, notably in the Elk City and Marshall Mountain areas, future mining activity would result in fewer effects, because current laws and regulations provide a higher level of protection for water and other resources, and because more substantial planning of mineral development with increased financial assurances for reclamation is required.

No net increase in roads is expected on BLM lands, however, road construction and use to facilitate timber harvest, recreational access, and (to a lesser extent) mineral development will continue to occur throughout the region. In recent years this activity has slowed, techniques for road building have improved, and regulatory and planning restrictions on roads across ownerships have become more effective in reducing water resources effects. Therefore, the contribution of road construction and use to the cumulative effects on water resources would gradually decrease over time.

Population growth can put increased demand on water resources. In the CFO planning area, land uses, such as residential development, urban growth, changing land uses, vegetation treatments, and agricultural demands are having various impacts on water supply. Such impacts may affect water quality, flow regimes, peak flows, and available water supply. ~~Population growth can put increased demand on water resources. In the CFO region, high-quality water supplies are plentiful in most areas. Increased municipal demand is not expected to stress the available supply, and there is limited agricultural and industrial demand.~~ Regional demand for electric power, including hydroelectric power, is increasing, but there is intense public resistance to siting new dams in the region, and most feasible sites have already been developed. Protecting migratory fish and preserving Wild and Scenic Rivers also preclude the siting of new dams.

Grazing and agriculture are important land uses in the region, and both can contribute to water quality effects. Agriculture on BLM lands is minimal. Agricultural use contributes to soil erosion and sediment and nutrient delivery to streams. Grazing can also contribute to soil erosion and increased delivery of sediment, nutrients, and pathogens to streams.

The cumulative effects on water resources under each of the Cottonwood RMP alternatives would be similar and would generally parallel the effects each of the alternatives alone. Overall, Alternative C would contribute the greatest to protecting beneficial uses of water and maintaining and/or improving water quality, followed by Alternatives B, A, then D. Independent of BLM discretionary management, improvements in water resources are likely to continue in response to increased regulation of water resources under the Clean Water Act and other legislation.

4.2.5 Vegetation—Forests

Goal: Manage forests to maintain or improve forest health, composition, structure, diversity consistent with site potential, and Historical Range of Variability.

Summary

Forested vegetation would be affected most by fire management and forest vegetation management. Restrictions on management activities for the protection of other resources, primarily visual quality and special status species, would affect the level, location, and effectiveness of forest management actions to improve forest health.

From the standpoint of managing forest stands for maintenance or improvement of vigor, Alternative A would provide the greatest benefit, followed by Alternatives D, B, and then C. All alternatives would allow for managing forest stands for structural diversity. Alternative C would require management for structural diversity on the greatest area. The DFC blocks in the WUI would be managed for the identified structural goals. Alternatives A and D would not have required structural management areas (DFC blocks), although Alternative D would provide for the management of existing old growth stands in the WUI for presuppression old growth characteristics,

provided they would not prevent attainment of the fuels-reduction goals. **Table 4-5** identifies the indicators that were used to analyze effects on forest management under each alternative.

Table 4-5
Comparison of Vegetation—Forests Indicators by Alternative

Indicator	Alternative A	Alternative B	Alternative C	Alternative D
Acres of treatment through forest products removal in 15 years	5,700	3,129	3,101	4,823
Range of acres of mechanical and prescribed[1] fire per year	1,530 to 4,886	1,448 to 4,343	1,448 to 5,377	1,448 to 6,204
Percent change in acres of treatment[1] through fuels reduction compared to Alternative A (current management)	0%	-11.1%	+10.0%	+26.9%

Source: BLM 2004a

[1]Acres for fuel treatment include mechanical and prescribed fire. Acres of prescribed fire for Alternative A were derived from **Appendix H** (Wildland Fire Management) (see Volume II~~I~~), **Table H-2**, multiplied by 72% because approximately 72% of the acres in CFO are forested. Alternatives B, C, and D are based on 103,394 acres of forested vegetation in FRCC 2 or 3, multiplied by the percentage treated in 5 years, divided by 5 to derive annual acres. Chemical and seeding fuel-reduction activities are not typically implemented in the forested environment.

Methods of Analysis

Indicators

Indicators are used to identify the level of impact. For forested vegetation, the indicators used for impact analysis are identified in **Table 4-5**, Comparison of Vegetation—Forests Indicators by Alternative.

Methods and Assumptions

This analysis is based on the following methods and assumptions:

- Social and economic opportunities will be accomplished following vegetation management objectives and actions, and effects are included in the vegetation management discussion;
- Nondisturbance buffers for raptor nests is assumed to mean no human activity during times when nests are being used and not to mean that no vegetation or soil disturbance around a nest at other times;
- Because forested vegetation makes up 70 percent of the CFO, 70 percent of acres treated for FRCC under wildland fire management would occur in forested vegetation types. Types of treatments (mechanical, chemical, seeding, and prescribed fire) would occur in the same distribution in forested types as specified in **Appendix H**, Wildland Fire Management (see Volume II~~I~~);
- For quantitative comparison of fuel-reduction treatments, the percent compared to Alternative A was calculated assuming the maximum amount of treatment in any five-year period for all alternatives;
- For calculating change due to wildland fire management and forest products, it is assumed that goals can be achieved while meeting other management action requirements, and that budget and staffing level would be sufficient to achieve treatment goals;

- For qualitative discussions on impacts from management direction for everything except wildland fire management, actions and objectives for other resources will override fire management goals unless otherwise specified. For example, it is assumed that protecting visual quality will override improving forest health and, therefore, treatments for forest health will be modified to protect visual quality. In the WUI, exceptions will be made for wildland fire management, so this assumption does not apply to wildland fire management in the WUI; and
- Effects are predicted for 20 years from the time the RMP is initially implemented.

Effects Common to All Alternatives

Effects from Air Quality Management

In Idaho, methods used by land management agencies and private landowners to meet air quality standards have been in force since the 1980s, and the BLM's past experience is that daily restrictions on burning to protect air quality may affect the prescribed burning program by reducing opportunities to burn in any given year. However, it is not expected that they would completely prevent implementation and accomplishment over the 20-year planning period. All prescribed fire and wildland fire use would be used in a manner to minimize degradation of airsheds and would be coordinated with the Montana/Idaho Airshed Group.

Effects from Soils Management

Soil protection measures could affect where and what type of vegetation management activities can occur. Protection measures for soil stability and erosion would affect forest management by preventing implementation of treatments in areas determined to have slope instability, including a 100-foot slope distance buffer on these areas.

Effects from Water Resources Management

The effects on forested vegetation would be the same as those described under Effects from Vegetation—Riparian and Wetlands Management for each alternative.

Effects from Aquatic Resources, Fish and Special Status Fish Management

The effects on forested vegetation would be the same as those described under Effects from Vegetation—Riparian and Wetlands Management for each alternative.

Effects from Special Status Plants Management

Modifying actions to avoid impacts on listed or sensitive species or their habitat could alter vegetation management treatments. This could preclude reaching management goals, such as reducing stand density or improving forest health in specific areas (stands).

Effects from Wildland Fire Management

Reducing FRCC would indicate an improvement in forested vegetation. A reduced FRCC would mean that species composition and stand density would be corrected, and insect and disease activity would be reduced to endemic levels. A reduced FRCC represents resilience after wildland fire and resistance to insect and disease epidemics that would indicate improved forest health.

Effects from Forest Products Management

In all alternatives, forest products management actions (including precommercial thinning and timber harvesting) would be tools to improve forest health, including species composition and stand density.

Effects from Livestock Grazing Management

Grazing effects on forests are caused by livestock foraging or trampling planted trees, causing seedling mortality or growth deformity. Areas where seedlings are planted for reforestation would be closed to grazing for a minimum of two years. They could be closed longer if the seedlings are not large enough to withstand grazing use. Grazing in dry conifer types can encourage grazing encroachment by reducing grass competition.

Effects from Transportation and Travel Management

Roads that are closed to motorized travel yearlong could eventually become overgrown with vegetation or could otherwise become impassible because of cut or fill failures, culvert removal, or fallen timber; these areas may not be available for use for forest health monitoring and may increase the cost of forest vegetation management actions. Roads that are obliterated or recontoured would have the same effect.

Effects from Wild and Scenic Rivers Management

Management of the outstandingly remarkable values of river segments found suitable for inclusion in the NWSRS could increase visual quality protection, which could direct or eliminate treatments that would improve forested vegetation.

Effects from Native American Tribal Uses Management

Consulting with tribes to identify culturally significant plants, important habitats, and traditional use locations could place higher treatment priority in areas not previously identified or limit actions in planned treatment areas.

Alternative A

Effects from Vegetation—Forests Management

Alternative A would designate 35,757 acres (35 percent) of forested acres as commercial forest. Treatment acres in this area would improve forest health, desired stand structure, and vigor. This is discussed under Effects from Forest Products Management, below.

Adopting the Idaho Forest Practices Act would reduce fuel loads on treated acres and ensure adequate stocking levels are restored following regeneration harvesting. Both of these activities would improve forest health and resilience.

Treatments in FRCC 3 and FRCC 2 would improve forest health, species composition, and stand densities and would decrease insect- and disease-affected trees. Treatments that restore FRCC 1 would allow forests to be more resilient. Over time, fire would be able to play more of its natural role.

Treating dry ponderosa pine, dry conifer cover types, and whitebark pine would reduce stand densities. Reducing density in overstocked stands would reduce stress due to competition for water, light, and nutrients and would reduce the susceptibility to insect attacks, disease, and the risk of

stand-replacing fire. These vegetation types also need mineral soil and sunlight to reproduce. Reducing stand density would promote ponderosa pine and whitebark pine regeneration.

Effects from Vegetation—Riparian and Wetlands Management

RHCAs could modify the location of some forested vegetation treatments which could impact overall forested vegetation management objectives for forest health and vigor by limiting areas of treatment. In Alternative A, these account for 12,048 acres, or 12 percent of the total forested vegetation acres.

Effects from Wildlife and Special Status Wildlife Management

Modifying actions to avoid impacts on listed species or their habitat could alter forest management treatments. In some cases, this could preclude reaching management goals, such as reducing stand density or improving forest health (Graham et al. 2004).

Maintaining cover-to-forage ratios in areas identified for intensive wildlife management would reduce forest cover in some areas, but not to the extent that it would affect overall forest health or species composition.

A 100-yard nondisturbance buffer around active raptor nests results in 6.5 acres for every active nest. This could affect timber harvesting or prescribed burning activities in the spring and early summer, but it would not preclude these activities from occurring. Prohibiting disturbance in a 100-foot buffer around "active raptor nests" could and has resulted in limiting activities between February 1 and August 1, which is the spring and summer burning and timber harvesting season, making it more difficult and expensive to accomplish goals.

Effects from Wildland Fire Management

Alternative A would result in 1,530 to 4,800 acres of forest being treated by prescribed fire or mechanical fuel reduction per year (**Table 4-5**, Comparison of Vegetation—Forests Indicators by Alternative), which would improve forest health and species composition.

Wildland fire use, where it would be allowed, would reduce stand densities and, in some cases, improve species composition (**Figure H-1**, Areas Available for Wildland Fire Use—Alternatives A and C [see **Appendix H** in Volume II~~I~~]).

Effects from Visual Resources Management

Meeting VRM Class II guidelines would limit the scope of logging, thinning, or prescribed burning activities, which account for between 31 and 49 percent of the treatments proposed (based on acres). Meeting Class II guidelines also would prohibit treatments and prescriptions (e.g., clearcutting) that would change the visual character. In the dry conifer type, encroachment of Douglas-fir is the reason composition and vigor need improvement, and the only way to remove them without increasing fuel loadings would be to log, thin, and in some limited instances, use prescribed fire. Approximately 31 percent of the forested acres would be in VRM Classes I or II in Alternative A (**Table 4-6**) and could not be treated effectively to improve forest ~~vigor~~ health or species composition due to visual quality management.

Table 4-6
VRM and Forested Vegetation under Alternative A

	VRM I	VRM II	VRM III	VRM IV
Forested Vegetation Acres	8,235	23,707	47,367	21,689
Percent of Total Vegetation Acres	8%	23%	47%	21%

Source: BLM 2004a

Effects from Forest Products Management

No acreage goals are established in Alternative A, but recent treatment levels have been approximately ~~380~~ 358 acres annually, which would be approximately 5,700 to 7,600 acres over the next 15 to 20 years. This represents 6 to 8 percent of forested vegetation in the CFO.

Limitations on the size and shape of cutting units could affect forest vegetation by making forest management more costly and reducing patch sizes. Limitations in the MFP on use of silvicultural systems based on aspect could reduce the ability to implement the appropriate silvicultural system for the stand conditions present.

Effects from ACEC/RNA Management

Prohibiting timber harvest and prescribed burns could eliminate the opportunity to improve forest health, species composition, and stand densities in ACECs. These areas are small relative to the remainder of forested vegetation in the CFO; therefore, impacts would be localized. The largest ACECs would not prohibit vegetation treatments, although protecting scenic values could restrict treatments, as described under Effects from Visual Resources Management, above.

Alternative B

Effects from Soils Management

Soil management actions could indirectly impact vegetation by influencing when and how wildland fire is managed. Effects are discussed further under Effects from Soils Management under the Wildland Fire Management section (Section 4.2.12).

Effects from Vegetation—Forests Management

Alternative B designates 40,598 acres (40 percent of forested acres) as commercial forest. Treatment within these areas would improve vigor.

The DFC blocks over 1,000 acres that would be managed to improve forest health and vigor account for 24,789 acres (24 percent) of forest land in Alternative B, of which 3,718 acres (25 percent) are commercial forest land. These areas would be managed to meet the DFCs in **Appendix D** (Desired Future Conditions for Forest Vegetation/Wildlife Habitat [see Volume II~~I~~]), which specifies a minimum level of large trees that would be retained. In 15 years, management of commercial forest lands could be used on an estimated 3,718 acres (15 percent of the DFC block acres) to achieve this goal. The remaining 85 percent would be constrained by other resources values such as VRM, RCA, and wild and scenic river suitability, making achievement of DFC more difficult or even impossible. Leaving large trees would increase the large tree component and, when these trees are healthy and represent the appropriate species composition for the site, would maintain forest health. However, where the large tree component is not in the appropriate species

composition for the site, the large tree component would be retained for a while, but the health and vigor of the stands could decline. Trees growing on sites where natural disturbance historically limited their presence or in dense stands are more susceptible to insects and disease because they are under stress due to competition for resources. Eventually, this could result in increased fuel loadings in some areas.

Treatments to enhance forest vigor would improve forest health, species composition, and stand densities, and would decrease insect- and disease-affected trees. Treatments would allow forests to be more resilient after wildland fires (Graham et al. 2004). Over time, fire would be able to play more of its natural role.

Managing species composition and canopy closure of large trees to promote ponderosa pine and western larch would, over the long term (more than 50 years), increase the amount of old growth in these forest types, which is currently lacking. Treatments could increase the amount of large Douglas-fir. However, Douglas-fir old growth in northern Idaho is not particularly long lived, unlike coastal Douglas-fir. By the time it reaches 230 years, it is exceedingly susceptible to Douglas-fir bark beetles and drought (Powers et al. 1999).

Managing old growth in municipal watersheds to maintain or contribute to the restoration of pre-fire suppression characteristics could reduce fuel loads in old growth stands, making them more resilient after fire, and, in some cases, allowing them to survive fire.

Capturing the value of forest products would remove dead, dying, diseased, and stressed trees from forests. Depending on the agent, this could improve forest health in some areas by removing insects before they can attack other trees and reduce stress on remaining trees. In all forests, this would reduce forest fuels.

Effects from Vegetation—Riparian and Wetlands Management

RCAs could modify the location of some forested vegetation treatments but would not impact overall forested vegetation management objects for forest health and vigor. However, buffers on fish-bearing streams total 72 acres for every mile of stream, and permanent non-fish-bearing streams equate to 36 acres for every mile of stream. In Alternative B, these account for 11,362 acres or 11 percent of the total forested vegetation acres, compared to 12 percent in Alternative A.

Effects from Wildlife and Special Status Wildlife Management

Effects of avoiding impacts on listed species would be similar to as those described for Alternative A. In addition, specific management actions included in Alternative B for wildlife would have the following effects: maintaining bald eagle roosting and nesting habitat and snag-dependent species habitat; avoiding or minimizing adverse impacts on game and nongame species; buffering active raptor nests; and minimizing adverse impacts to wildlife travel corridors and fragmentation of habitats would all impact vegetation management actions to improve forest health, reduce FRCC, reduce fuel loadings, improve tree species composition, and reduce stand densities. These effects vary from very little, where goals and objectives could still be achieved but treatments are less extensive and cost more; to completely prohibitive, where treatments to improve forest health, FRCC, fuels and species composition could not be accomplished and forest health would continue to decline. Additionally, listed (threatened, endangered, and BLM sensitive) species change, which could substantially increase the extent of these effects, depending on the species listed and subsequent requirements for protection.

The effects of implementing **Appendix D** (Desired Future Conditions for Forest Vegetation/Wildlife Habitat [see Volume II~~I~~]) are described under Effects from Vegetation—Forests Management, above.

Effects from Aquatic Resources, Fish, and Special Status Fish Management

BMPs to avoid or minimize adverse impacts to aquatic and riparian habitats could affect where some treatments occur, what method is used, or treatments' effectiveness. Changing management direction to contribute to recovery or conservation of special status species could affect the location, method, and effectiveness of some vegetation treatments, but the extent to which this could occur is unknown.

The effects of implementing **Appendix F** (Aquatic and Riparian Management Strategy [see Volume II~~I~~]) are addressed under Effects from Vegetation—Riparian and Wetlands, above.

Effects from Wildland Fire Management

Fuels reductions are intended to reduce stand-replacing wildland fires and make fire suppression easier to accomplish. Alternative B would result in 1,448 to 4,343 acres of forest being treated by prescribed fire or mechanical fuel reduction per year compared to a maximum of 4,886 acres in Alternative A (an 11-percent decrease) (**Table 4-5**, Comparison of Vegetation—Forests Indicators by Alternative), which would result in less improvement to forest health and species composition. Details of the extent of treatment are included in the Effects from Wildland Fire Management in the Wildland Fire Management section (Section 4.2.12) for Alternative B.

Wildland fire use, where it would be allowed, would reduce stand densities. In some cases, it would improve species composition (**Figure H-2**, Areas Available for Wildland Fire Use—Alternative B [see **Appendix H** in Volume II~~I~~]).

Effects from Visual Resources Management

Effects would be the same as those described under Alternative A.

Effects from Forest Products Management

An estimated ~~233~~ 242 acres would be treated annually in this alternative, which would be approximately 3,495 to 4,660 acres over the next 15 to 20 years. This represents approximately 3 to 5 percent of forested vegetation in the CFO. Treatments would be a tool to restore appropriate species composition and stand density, improve forest health and vigor, restore desired stand structure, and achieve other vegetation management goals. However, only 3 to 5 percent would result in only a slight improvement or achievement of accomplishing the DFC through timber management.

Effects from Renewable Energy Management

Biomass projects would be designed to improve species composition, reduce density and improve vigor. Biomass removal for renewable energy could eventually affect forested vegetation by making it more feasible to treat stands of small trees by creating a market for the smaller diameter material (Forest Service 2005b).

Effects from ACEC/RNA Management

Size of ACECs and ACEC/RNAs would increase from 25,600 acres in Alternative A to ~~34,528~~36,153 acres in Alternative B, including over 1,000 acres of old growth forest that would be

protected. The larger ACECs (Lower Salmon River at 16,199 acres and American River Historic Sites District at 6,356 acres), as well as some smaller areas, would be managed to meet DFC or support long-term ecological health, which would improve forest conditions.

Alternative C

Effects from Soils Management

Effects would be the same as those described for Alternative B.

Effects from Vegetation—Forests Management

Alternative C would designate 34,611 acres (34 percent) of forested acres as commercial forest, where timber harvesting could be used to improve forest health and restore desired stand structure. Effects would be similar to those described for Alternative B, except for the following.

The DFC blocks over 500 acres that would be managed to improve structural diversity account for 28,087 acres of the 100,990 acres (28 percent) of forested vegetation, of which 2,809 acres are commercial forest land. These areas would be managed to meet the DFCs in **Appendix D** (Desired Future Conditions for Forest Vegetation/Wildlife Habitat [see Volume II~~I~~]), which specifies a minimum level of large trees that would be retained. In 15 years, management of commercial forest lands could be used on an estimated 2,809 acres (10 percent of the DFC block acres) to achieve this goal. The remaining 90 percent would be constrained by other resources values such as VRM, RCA, and wild and scenic river suitability, making achievement of DFC more difficult or even impossible.

Alternative C would maintain twice the percentage of old growth and would increase the minimum percentage of large-sized trees (greater than 20 inches diameter) by 5 to 15 percent in the dry conifer types. Where the large tree species composition is not appropriate for the sites, large tree components would still remain, but treatments would not improve the health and vigor of forested stands. Trees growing on sites where natural disturbance historically limited their presence are more susceptible to insects and disease and do not grow as well as appropriate species because they are under more stress.

Effects from Vegetation—Riparian and Wetlands Management

Effects would be similar to those described for Alternative B, except that RCA stream buffers on permanent non-fish-bearing streams would amount to 55 acres for every mile of stream. In Alternative C, these account for 13,994 acres, or 14 percent of the total forested vegetation acres, compared to 12 percent in Alternative A.

Effects from Wildlife and Special Status Wildlife Management

Effects would be the same as those described for Alternative B.

Effects from Aquatic Resources, Fish, and Special Status Fish Management

Effects would be the same as those described for Alternative B. Impacts from implementing **Appendix F** (Aquatic and Riparian Management Strategy [see Volume II~~I~~]) are described under Effects from Vegetation—Riparian and Wetlands, under Alternative B above.

Effects from Wildland Fire Management

Fuels reductions could reduce stand-replacing wildland fires and make fire suppression easier to accomplish. Alternative C would result in 1,182 to 4,390 acres of forest being treated by prescribed fire or mechanical fuel reduction per year compared to approximately 4,886 in Alternative A (a 10-

percent increase) (**Table 4-5**, Comparison of Vegetation—Forests Indicators by Alternative), which would improve forest health and species composition. Details of the extent of treatment are included in the Effects from Wildland Fire Management in the Wildland Fire Management section (Section 4.2.12) under Alternative C.

Wildland fire use could be used much more extensively as all fires would be considered for wildland fire use (**Figure H-1**, Areas Available for Wildland Fire Use—Alternatives A and C [see **Appendix H** in Volume II~~I~~]). In some cases, this could result in reduced understory and decreased stand density, which would be an overall benefit for forest vegetation. In other cases, it could result in stand-replacing fire in dry forest types, trees killed by uncharacteristically severe fire or old growth where it is not desired, which would not meet DFC goals or improve vigor.

Effects from Visual Resources Management

Effects would be similar to those described under Alternative A, except approximately 44 percent of the forested vegetation would be classified as VRM Class I or II in Alternative C (**Table 4-7**), compared to approximately 31 percent in Alternative A (a 42-percent increase), limiting effective treatments that could improve stand density and forest vigor, particularly in the dry conifer types.

Table 4-7
VRM and Forested Vegetation under Alternative C

	VRM I	VRM II	VRM III	VRM IV
Forested Vegetation Acres	14,503	29,807	34,999	21,680
Percent of Total Vegetation Acres	14%	30%	11%	21%

Source: BLM 2004a

Effects from Forest Products Management

Forest products management would treat an estimated 191 acres annually in Alternative C, which would be approximately 2,955 to 3,940 acres over the next 15 to 20 years. This represents approximately 3 to 4 percent of forested vegetation in the CFO. By removing over-represented species, dead and dying or insect-infested trees, and reducing the number of trees per acre, treatments would be tools to restore appropriate species composition and stand density, improve forest vigor, restore desired stand structure, and achieve other vegetation management goals. However, only 3 to 4 percent would result in only a slight improvement or achievement of accomplishing the DFC through timber management.

Effects from Renewable Energy Management

Effects would be the same as those described under Alternative B.

Effects from ACEC/RNA Management

Size of ACECs and ACEC/RNAs would increase from 25,600 acres in Alternative A to 60,661 acres in Alternative C. Effects would be similar to those described under Alternative B, except that more areas (including Craig Mountain at 23,342 acres) would be managed to meet DFC or support long-term ecological health, which would further improve forest conditions.

Alternative D

Effects from Soils Management

Effects would be the same as those described for Alternative B.

Effects from Vegetation—Forests Management

Alternative D would designate 45,190 acres (45 percent) of forested vegetation as commercial forest. Under Alternative D, there would be no requirements for meeting DFCs in large blocks of 1,000 acres or more. The BLM could consider the appropriate species composition of large trees on all areas, and more acres would be treated to achieve historic conditions. Alternative D would not specifically protect large trees, so the large tree component of forests could be reduced where treatments occur. All WUI projects implemented under the authority of the Healthy Forests Restoration Act would support and maintain old growth forests.

Effects from Vegetation—Riparian and Wetlands Management

Effects would be similar to as those described for Alternative B. In Alternative D, these account for 10,301 acres or 10 percent of the total forested vegetation acres, compared to 12 percent in Alternative A.

Effects from Wildlife and Special Status Wildlife Management

Effects would be similar to those described for Alternative B, except that retaining a higher percentage of large trees (as described in **Appendix D**, Desired Future Conditions for Forest Vegetation/Wildlife Habitat [see Volume II~~I~~]) would not apply to any areas in Alternative D, which would allow the BLM to consider the appropriate species composition in all treatment areas. This could result in more acres with appropriate species composition and, therefore, better forest health.

Effects from Aquatic Resources, Fish, and Special Status Fish Management

Effects would be the same as those described under Effects from Vegetation—Riparian and Wetland Management, above.

Effects from Wildland Fire Management

Fuels reduction is intended to reduce stand-replacing wildland fires and make fire suppression easier to accomplish. Alternative D would result in 2,870 to 7,597 acres of forest being treated by prescribed fire or mechanical fuel reduction per year, compared to 4,886 acres in Alternative A (**Table 4-5**, Comparison of Vegetation—Forests Indicators by Alternative), which would result in the greatest improvement to forest health and species composition. Details of the extent of treatment are included in the Effects from Wildland Fire Management in the Wildland Fire Management section (Section 4.2.12) for Alternative A.

Wildland fire use, where it would be allowed, would reduce stand densities. In some cases, it would improve species composition (**Figure H-3**, Areas Available for Wildland Fire Use—Alternative D [see **Appendix H** in Volume II~~I~~]).

Effects from Visual Resources Management

Effects would be similar to those described for Alternative A, except that approximately 21 percent of the forested vegetation would be classified as VRM Class I or II in Alternative D (**Table 4-8**), which would comprise 33 percent fewer restricted acres than currently under Alternative A.

Table 4-8
VRM and Forested Vegetation under Alternative D

	VRM I	VRM II	VRM III	VRM IV
Forested Vegetation Acres	2,856	19,546	56,907	21,679
Percent of Total Vegetation Acres	3%	18%	58%	22%

Source: BLM 2004a

Effects from Forest Products Management

Forest products management would treat ~~340~~ 361 acres annually in Alternative D, which would be approximately 5,100 to 6,800 acres over the next 15 to 20 years. This represents approximately 5 to 7 percent of forested vegetation in the CFO. Treatments would be tools to restore appropriate species composition and stand density, improve forest health and vigor, restore desired stand structure, and achieve other vegetation management and timber production goals.

Effects from Livestock Grazing Management

Effects would be similar to those described under Effects Common to All Alternatives; however, additional grazing allotments would be included in Alternative D, which would expand the effects of livestock grazing on forested vegetation.

Effects from Renewable Energy Management

Effects would be the same as those described for Alternative B.

Effects from ACEC/RNA Management

Size of ACECs and ACEC/RNAs would decrease from 25,600 acres in Alternative A to 23,924 acres in Alternative D. Effects would be similar to those described under Alternative B, except that neither the American River Historic Sites District (6,356 acres) nor the Uppoer Lolo Creek (1,625 acres) would ~~not~~ be designated and would thereby not be managed to support long-term ecological health, which would not result in improved forest conditions.

Cumulative Effects

Effects of past actions, natural events, and region-wide decisions (e.g., fire, logging, insect and disease, road construction, and ICBEMP) that have affected forests are documented in Chapter 3 (Affected Environment). In summary, forest vegetation species composition and structure have been altered and are generally outside their historic range. Logging and fire suppression have had the greatest effects, although wildland fire and insect and disease outbreaks have contributed significantly.

Cumulative effects would be similar among the alternatives. Effects on forested vegetation from any of the Cottonwood RMP alternatives would be overshadowed by reasonably foreseeable stand-replacing fire, continued fire suppression made necessary by WUI and intermingled landownership, and large-scale insect and disease outbreaks that would continue over the life of the RMP. Effects on forested vegetation from management accomplished by other landowners could affect forested vegetation on public lands. When activity fuels are not treated adequately, fuel hazard can increase on adjacent lands and affect fire intensity and severity on public lands. However, fuel treatments and

hazardous fuels are expected to increase on adjacent Forest service and State lands in response to community wildfire protection plans.

Revision of the Nez Perce, Clearwater, and Idaho Panhandle National Forests Plans could result in more or less treatment of adjacent areas; because no decisions have yet been made, the effects are not known. There has been a downward trend in treatment acres for several years. This trend is expected to continue because of endangered species protection and other regulatory restrictions. The Payette National Forest Plan reduces acres of treatment on Forest Service lands adjacent to the CFO. Wildland fire management on Forest Service lands will be determined in the Forest Plan decision, particularly areas where wildland fire use may occur. The BLM will need to coordinate with the Forest Service on all wildland fire use projects. Wildland fire use on Forest Service lands could allow stand structure and density of forests on public lands to continue to remain or move outside historic conditions.

Additionally, a Forest Service decision to increase the level of wildland fire use or prescribed fire, along with agricultural field burning, could impact the BLM's ability to use wildland fire and prescribed fire for forested vegetation management because of air quality concerns and meeting the air quality requirements. This could postpone or eliminate fuel reductions or vegetation treatments that use fire to improve forest structure and density.

Insects have and will continue to cause mortality in all conifer forests. Insect infestations can be exacerbated by inappropriate management, which could affect public lands. Additionally, a lack of appropriate treatment or lack of wildfire suppression or fuel-reduction treatments can cause more mortality on public lands when wildland fire or insects spread. These effects could affect stand structure and density.

Maintaining and protecting old growth is a growing issue for all public land managers in the region. Plans on adjacent public lands could result in more acres with large tree and old growth components over the long term. However, in some areas, a lack of treatment to protect dry conifer old growth would result in a loss of acres with large tree and old growth due to insects, disease, and wildland fire. In the past, the BLM did not specifically manage for old growth, and future management for such is precluded by logging of large tree components. In some areas, this effect would continue for the next 200 to 300 years.

Population increases are likely to expand the WUI, which in turn could alter forest management, taking the emphasis off restoring historic composition and structure and focusing more on fuel reduction. Depending on the forest type, these are sometimes the same thing. Additionally, the Idaho Statewide Implementation Strategy for the National Fire Plan could alter forest management in the WUI as more money becomes available and mitigation plans are implemented. These activities could result in stand structure changes but probably no species composition changes.

4.2.6 Vegetation—Weeds

<u>Goal: Prevent establishment of new invasive plant species and reduce infested acreage of established invasive plant species.</u>

Summary

Overall, management under Alternative D would yield the highest potential for weed introduction or spread of existing populations, and Alternative C would yield the lowest potential, followed by Alternative B then Alternative A. The factors that most differentiate one alternative from another in terms of their potential for weed infestation are the degree to which areas are open to OHV use, amount of lands available for herbicide treatments, and the amount of acreage available for ground-disturbing activities. **Table 4-9** identifies the indicators that were used to analyze effects on weeds under each alternative.

Table 4-9
Comparison of Weeds Indicators by Alternative

Indicator	Alternative A	Alternative B	Alternative C	Alternative D
Potential for increases or decreases in new weed populations and density and extent of existing populations	Potential for occurrences would increase	Potential for occurrences would stay at current levels or would decrease	Greater potential than Alternative B for occurrences to decrease	Greater potential than Alternative A for occurrences to increase

Methods of Analysis

Indicators

Indicators are used to identify the level of impact. For Vegetation—Weeds management, the indicators used for impact analysis are identified in **Table 4-9**, Comparison of Weeds Indicators by Alternative.

Methods and Assumptions

Effects are conditions that change the potential for weed infestation or spread. Effect determinations are based on reasonably predictable responses of weed species to a variety of conditions. Reasonably predictable responses include the following:

- Weeds often exploit disturbed areas and are adept at outcompeting many native species;
- Most actions that disturb soils or vegetation will increase the potential for weed infestation;
- Weed infestation will often follow transportation routes, making roadsides and trails prime habitat for weeds and making vehicles prime vectors for the spread of weeds;
- Rangelands are particularly prone to weed infestation due to disturbances from grazing livestock; and
- Weeds thrive in ecosystems that are out of balance, either from a hydrological or vegetative perspective.

Although many specific populations of weed species are known in the CFO planning area, the entire area has not been inventoried. Therefore, it is difficult to predict which species, if any, may arise in a given area, or to calculate the exact degree to which the CFO is affected. The analysis below focuses on explaining how existing or proposed management actions may contribute to the spread or management of weed populations. This analysis is based on the following assumptions:

Impacts were assessed according to the following assumptions:

- Weeds are most likely to thrive in disturbed areas, including burned areas, along road cuts or in staging areas, and where soils have been disturbed by OHV, equestrian, livestock, or hiker use;
- Current trends in plant succession/vegetation would continue;
- Vegetation communities would be maintained with a mix of species composition, cover, and age classes;
- Changes in weed potential would occur commensurate with changes in PSQ since logging activities contribute to extensive soil disturbance;
- Noxious and invasive weeds would continue to be introduced and spread as a result of ongoing vehicle traffic in and out of the CFO planning area, recreational activities, wildlife and livestock grazing and their movements, and surface-disturbing activities;
- Noxious and invasive weeds would further expand into native plant communities, and disturbances to these communities would expand opportunities for the spread of nonnative invasive plant species;
- As use of BLM lands increases over the life of this RMP, levels of funding for weed control will also increase;
- The CFO will continue to participate in Cooperative Weed Management Areas, ensuring cooperative weed control efforts with other land management agencies;
- Total control of the spread of noxious weeds is unlikely under any alternative;
- The BLM would continue to treat noxious and invasive weeds and pests on public land, as stipulated within other BLM permits and authorizations; and
- Weed and pest control would be carried out in coordination with the appropriate county, weed and pest control district, and owners of adjacent property.

Effects Common to All Alternatives

Effects from Soils Management

Management actions under which the BLM would identify, ~~map~~record, and avoid effects on sensitive land types would reduce the potential for weed infestation by reducing the potential for soil disturbance. Prioritizing existing roads and assessing naturally occurring failures for restoration would allow the BLM to build realistic weed management measures into restoration planning, reducing the potential for weed infestation.

Effects from Water Resources Management

Activities implemented as a way to maintain or increase water quality are likely focused on decreasing soil and vegetation disturbance and would generally reduce the potential for weed introduction and spread. Review of new or ongoing activities involving water resources management would allow the BLM to assess the degree to which actions contribute to or diminish weed infestations, leading to formation of appropriate weed management actions.

Effects from Wildlife and Special Status Wildlife Management

Review of new or ongoing activities for effects on wildlife habitat caused by discretionary actions would allow the BLM to assess the degree to which actions contribute to or diminish weed infestations, leading to formation of appropriate weed management actions.

Effects from Vegetation—Riparian and Wetlands Management

Establishing riparian management units consistent with Riparian Management Guidelines (BLM 1985e) and PACFISH (BLM and Forest Service 1995) (Alternative A) and the Aquatic and Riparian Management Strategy (Alternatives B, C, and D) (**Appendix F** [see Volume III]) would restrict actions within established buffer zones to those that would result in enhanced or maintained conditions. Actions that may be restricted include those that may cause a long-term increase in weed potential by disturbing vegetation or soils or by allowing for greater weed seed distribution.

Locating recreation sites in "non-critical" aquatic and terrestrial habitats would minimize disturbance in sensitive riparian areas, reducing weed potential in such areas.

Effects from Aquatic Resources, Fish and Special Status Fish Management

Developing a coordinated plan to maintain fisheries habitat, water quality, and riparian areas along the Salmon and Snake Rivers would include managing for weeds. Management measures may include treatments to reduce or control weed populations and to reduce the potential for new infestations in these areas, as well as restoration of ecological conditions that would favor native species over weeds.

Effects from Special Status Plants Management

Reviewing ongoing discretionary activities for impacts to plants that are federally listed or are listed as an Idaho BLM sensitive plant, or their habitats, and modifying actions to avoid impacts to such plant species would require identifying and minimizing those actions that may favor weed production. Such actions would include those that result in increased soil or vegetative disturbance or distribution of weed seeds, or actions that change the soil moisture regime at the expense of listed plants. Reviewing and modifying proposals for new projects to minimize effects on listed or otherwise sensitive plants would require project proponents to create weed management plans to avoid adverse impacts.

Effects from Cultural Resources Management

Management of cultural resources would have minor and short-term effects on vegetation resources. Management actions focus on avoiding and protecting cultural sites, which in turn decrease surface-disturbing activities, such as limiting OHV use, on or near such sites. Excavations of cultural resource sites disturb the soil surface, which increases the opportunity for the establishment of noxious and invasive weeds. However, the area of disturbed surface associated with cultural site excavations is minimal.

Effects from Forest Products Management

Discouraging grazing in areas that are being reforested after harvest until seedlings have reproduced may reduce weed potential in such areas by minimizing disturbance that could favor weeds and by reducing foraging of seedlings, thereby providing them with an enhanced competitive advantage over weeds.

Use of BMPs and preventative measures including contract stipulations to clean all equipment, perform post project weed inventories and, if needed, treatment of the project area, and use of some sale receipts to fund this treatment would allow BLM to control new weed infestations in areas that have been disturbed by management actions or during harvests.

Restricting timber management activities in RHCAs or RCA stream buffers to only ecological restoration or salvage activities would remove a large potential source of soil and vegetation disturbance as well as weed seed introduction throughout this habitat type, thereby lowering the weed threat throughout riparian areas.

Weed potential can be seen as a function of ~~PSQ~~site disturbance. Higher PSQ means that more harvest activities may take place under that alternative than under alternatives offering lower PSQ. Such activities include construction of access roads, yarding, slash removal, and post-operation treatments. Allowing use of any site preparation or ground-based yarding methods, including use of skidders, on areas with slopes less than 35 percent or unless specifically prohibited by site-specific direction would allow for extensive soil and vegetation disturbance, as well as high potential for weed seed transport. The effects of such high-impact methods would be spread throughout the harvest area, since skidders may need to travel on a variety of routes to bring felled timber to the landings. Weed potential in these areas is very high compared to areas where lower-impact yarding methods are used, such as areas where slopes exceed 35 percent. Soil disturbance and weed threat would be reduced if yarding occurred during the winter when ground is snow-covered or frozen, or if helicopters were used for yarding rather than skidders. Weed potential in these areas is reduced because weeds have less of a competitive advantage in forested areas compared to other cover types.

Complete or partial clearcuts are vulnerable to weed infestation due to disturbances incurred during forest products removal and the wholesale changes in amount of sunlight and moisture retention.

Effects from Livestock Grazing Management

Livestock may disturb soil and vegetation and contribute to weed infestations or may be used a tool to control them, dependent on level of grazing use and existing ecological condition of grazed areas. Weed seeds can attach to animals or be ingested. They can then be transported to other areas, where they are spread by the animal physically removing the seed or fruit or through droppings. Areas where animals concentrate and disturb the soil are particularly vulnerable to infestations of noxious and invasive weeds. ~~Minor disturbance caused by livestock also provides seed coverage for rehabilitation on steep slopes.~~Livestock grazing can be used as a tool to manipulate and improve plant community composition. Livestock can transport seeds and fruits of native and nonnative species to other areas by physically removing the seed or fruit, or through the deposition of fecal matter. Although this can increase weed potential in rangelands, it also serves as a tool for distribution of seeds of native plants into areas that are otherwise difficult to access. Grazing plans that promote healthy rangelands and vegetation create conditions resistant to the spread of noxious and invasive weeds.

Continued compliance with Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management (BLM 1997a) (**Appendix A** [see Volume III~~I~~]) would provide a framework under which the BLM would minimize effects from grazing livestock.

Effects from Minerals Management

Exploration and development operations associated with minerals typically disturb some level of vegetation. These disturbances result in increased weed potential, including import and export of weed seeds. Areas closed to the mineral laws and areas withdrawn from the mining laws would reduce the weed potential from mineral activities equally across all alternatives. Reclamation would be necessary for reestablishing desired vegetation on disturbed areas.

Effects from Recreation Management

Recreational activities can introduce and spread noxious and invasive weed seeds from vehicles, shoes, clothing, and recreational equipment. As recreation use increases, people from outside the area could bring in noxious and invasive weeds, including new invasive species. Recreation activities that occur in undisturbed and remote areas have the potential to distribute weed seeds into weed-free areas. Education activities implemented as part of an integrated weed management program may assist the BLM in locating new invasive plant populations found by the recreating public.

Effects from Renewable Energy Management

All alternatives propose to allow some development of renewable energy projects, which could introduce weed seeds or produce soil disturbance that favors weeds. Development of such projects may include construction of staging areas for chippers or other heavy equipment, construction of access roads, and timber harvest practices that could disturb soils and vegetation.

Effects from Transportation and Travel Management

OHV use would result in impacts on vegetation, such as loss of vegetation cover and density and composition changes. OHV users would introduce and spread noxious and invasive weed seeds from their vehicles, shoes, clothing, and recreational equipment. As OHV use increases, people from outside the area could bring in noxious and invasive weeds, including new invasive species. OHV activities in undisturbed and remote areas have the potential to distribute weed seeds into weed-free areas.

Other types of travel, including by foot, horse, or bike, cause fewer impacts, although all have the potential to disturb soils or allow for weed seed transport. Horses in particular have a high capacity for introducing weed seeds from manure into previously unaffected areas. Groups of horses may also create significant soil and vegetation disturbance in areas where they are tethered overnight, increasing the weed potential in confined areas.

Implementation of a travel plan and management of vehicles and other travel methods may restrict disturbance to known routes. Focused monitoring and control of new weed locations along active travel corridors would be more effective in reducing the establishment and spread of new weeds.

Effects from Lands and Realty Management

Lands and realty management actions, such as construction of rights-of-way or leasing actions, often result in surface disturbance, which increases the lands' susceptibility to weed invasion or spreads existing weed patches. Incorporation of requirements for weed control and rehabilitation into rights-of-way and other realty management actions would reduce the incidence of new weed introductions due to this program. Timely reclamation of disturbed areas diminishes the probability of weed proliferation in these areas. Failure to comply with existing weed control stipulations would increase weed abundance and proliferation. Right-of-way exclusion areas would reduce weed potential over ~~totaling~~ 11,622 acres. ~~would reduce weed potential over that amount of land.~~

Effects from Wild and Scenic Rivers Management

Managing the Salmon River to protect its outstandingly remarkable values and free-flowing conditions would ensure that BLM lands within the river corridor would remain closed to activities that would affect the visual or functional landscape of this waterway. This would minimize activities that commonly increase weed potential, including mining, timber harvest, OHV use, and livestock grazing, thus lowering the weed potential in this area.

Management of the outstandingly remarkable values of river segments found suitable for inclusion in the NWSRS could reduce weed potential because the chance of disturbing activities would be reduced. Activities that commonly increase weed potential, including mining, timber harvest, OHV use, and intensive livestock grazing, would be minimized, lowering the weed potential in this area.

Effects from Wilderness and Wilderness Study Areas Management

Managing 750 acres of the Frank Church/River of No Return Wilderness and 12,034 acres of WSAs would minimize activities that would normally increase weed potential. By continuing to restrict mining, timber extraction, and OHV use, weed potential would be maintained at current levels, assuming management occurs for weeds from sources such as hikers and equestrians.

Effects from Native American Tribal Uses Management

No effects have been identified from management pertaining to Native American tribal uses. The BLM would continue to consult with tribes before starting actions that could affect tribal values, including the possibility for an action to increase weed potential in areas that could contain resources significant to tribes in the area. The use of chemical treatments could be prohibited in some areas determined to be plant collection areas through Native American consultation. Similarly, consultation could provide locations where weeds control should be focused so Native Americans can have more access to desirable plants.

Alternative A

Effects from Soils Management

Implementing MFP Road Guidelines (BLM 1981a) and 1985 Riparian Management Guidelines (BLM 1985e), restoring abandoned roads, and restoring naturally occurring failures would reduce weed potential from road construction and other soil disturbing activities.

Effects from Water Resources Management

Managing 42 sixth-code HUC watersheds as prescription watersheds would involve controlling invasive species that may affect habitat quality or water quality, leading to increased management of such species.

Effects from Vegetation—Forests Management

Potential for weeds increases as the level of disturbance increases, although weeds have less of a competitive advantage in a forested environment than in other cover types and rarely result in total site occupancy. Although forest management actions would generally employ a weed management plan for affected areas, any increase in disturbance would increase the BLM's burden for future weed management. Due to this concern, contract stipulations implementing preventative measures are a part of harvest actions and a portion of the sale receipts are held for weed monitoring and control. Rehabilitation of the disturbed site is also implemented, further reducing the disturbance impacts and potential for weed introduction and spread. Intensive management means more management than in areas managed extensively or custodially, translating to greater vehicular traffic and more soil disturbance. This increases the weed threat on 24,257 intensively managed acres, relative to the weed threat on 11,500 acres of extensively managed land, and 37,549 acres of land managed on a custodial basis (not be managed for timber, although harvesting could occur for ecological reasons). Actions to treat FRCC 2 and FRCC 3 forested lands in WUI lands would partially focus on weed control to reduce the fire threat. A short-term effect would occur in the form of increased weed potential in treated areas due to increased soil disturbance and increased use

of vehicles that could introduce or spread weed seeds. A long-term impact would occur in the form of decreased weed potential in WUIs due to less frequent or less intense fires and a healthier forest community.

Effects from Vegetation—Weeds Management

Continued participation with Cooperative Weed Management Areas and following BLM guidance would allow the BLM to contain new weed outbreaks and maintain current conditions within designated weed control focus areas. However, greater use of BLM lands is expected over time, which would increase potential for weed introduction and spread, and also increase the potential for soil and vegetative disturbance, thereby increasing the weed threat. Identifying areas where rehabilitation or restoration would be cost effective and successful would allow the BLM to prioritize weed management strategies given the weed control resources at hand.

Use of biological controls may assist BLM ecologists in controlling select weed species on a limited basis. Grazing livestock such as goats and sheep, as well as released insects, have been used successfully to control leafy spurge *(Euphorbia esula)* and may be used to reduce or control existing weed populations.

Effects from Vegetation—Rangelands Management

Current management is consistent with Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management (BLM 1997a) (**Appendix A** [see Volume II~~I~~]), which amended the MFP (BLM 1981a) in 1997 and are designed to maintain rangeland health. Because of lack of grazing management control on many small allotments, current conditions and trends would probably continue for weed infestations and weed control would be dependent on adjacent land owners. These conditions would apply to 122,732 acres of grazed rangelands.

Effects from Vegetation—Riparian and Wetlands Management

Implementing BMPs and riparian management guidelines would lead to lower rates of disturbance in areas that would be protected as riparian management units. Although designating RHCAs totaling 24,290 acres would not completely protect riparian zones from disturbance, such designation would require that activities in riparian buffers would be minimally disruptive to soils and vegetation, thus lowering the potential for weed establishment. Restricting timber harvest along Class I streams would remove a significant amount of potential disturbance in such areas, lowering the possibility of weed infestation in these areas. Weed infestation can be sufficient by itself to cause poor function in riparian zones by reducing vegetative diversity, canopy diversity and structure, and causing altered fire regimes and water retention rates. Therefore, improving 7.75 miles of streams in poor condition to fair or better condition would necessitate weed management plans in affected areas, leading to greater management control over weeds in these areas.

Effects from Wildlife and Special Status Wildlife Management

Reviewing ongoing discretionary actions to assess impacts on listed species habitat would include assessing changes in the potential for weed infestation, leading to the opportunity for greater management control over weed populations. Environmental review of new federal actions proposed within listed species habitat would include assessment of potential for weed increase and would include measures to mitigate for such increases, if found.

Improving range conditions over 8,803 acres and developing HMPs for 13 specific areas would require implementing measures to restore or enhance native or desirable plant communities. Doing

so would require controlling weeds, which would be accomplished by extending current management measures to these areas. Over time, this would lead to a reduction in both the number and extent of weed populations.

Effects from Aquatic Resources, Fish, and Special Status Fish Management

Identifying actions that may occur in areas identified for various levels of aquatic management would include assessment of increased potential for weed infestation arising from those actions. This would allow the BLM to create or require actions to reduce the weed threat arising from those actions, or to eliminate actions that may increase weed populations.

Effects from Special Status Plants Management

Protecting the Long Gulch and Skookumchuck populations of MacFarlane's four-o'clock would require the BLM to create a weed management plan for these populations. Such a plan would include measures to minimize disturbance, possibly limiting access by hikers and grazing livestock, and restricting use of OHVs. If the population were threatened by existing weed populations, the plan would include weed-eradication measures for these management areas.

Effects from Wildland Fire Management

Under Alternative A, specific percentages of the CFO FRCC 2 and 3 (moderate to high risk) WUI areas would not be identified for fire risk/fuels-reduction treatments. Given current management, an estimated 1,950 to 5,950 acres could be treated annually with mechanical treatments and prescribed fire under Alternative A (see Section 4.2.12, Wildland Fire Management). Under any wildfire control scenario, suppression activities and fuels treatment actions have the potential to spread weed seeds or create conditions that favor weeds. Striving for control status in one operational period would require an aggressive suppression response that may result in greater soil disturbance or use of vehicles than other, less-aggressive methods. This higher level of disturbance and higher number of vehicles would lead to greater weed potential. Rehabilitating effects of fire would include a revegetation/weed management plan to ensure that burned areas respond with a majority of native or desirable plant species and a minimum of noxious weed species. Therefore, in some areas, short-term weed potential may increase, but long-term weed potential may decrease as a result of better habitat quality. Areas that are already affected by species that thrive in post-burn conditions, such as cheatgrass, may experience long-term increase in weed potential as a result of wildland fire use.

Implementation of hazardous fuels-reduction projects that are consistent with fuels treatment priorities would use inventories, post-burn treatments, and native species where they would meet revegetation goals for greater management control of weeds throughout burned areas.

Use of nonfire fuel-management strategies to help maintain or improve range conditions would necessitate weed removal, using herbicides, biocontrols, or other methods. Under Alternative A, 1,700 to 10,680 acres could be treated annually to reduce weeds and reduce hazardous fuel conditions. This would ultimately reduce the weed threat while causing little disturbance that would increase the weed threat.

Effects from Visual Resources Management

Weed potential can be seen partially as a function of the amount of acreage in various VRM categories. In general, alternatives that have more acres in VRM Classes I and II have lower weed potential than those that have more acres in VRM Classes III and IV since disturbance potential is minimized in Class I and II areas. Exceptions to this are in VRM Class I and II areas along CFO

rivers, where climate and ecosystem changes have allowed for weed infestations. This alternative has a moderate weed potential due to the number of acres in VRM Classes I and II.

Effects from Forest Products Management

Possible effects of forest products management are summarized under Effects Common to all Alternatives, above. Such actions would be restricted in 24,290 acres of riparian buffers under this alternative. At 6,600 MBF per year, the estimated annual ASQ would be highest under this alternative.

Effects from Livestock Grazing Management

The Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management (BLM 1997a) (**Appendix A** [see Volume II~~I~~]) contain standards that, if met, would allow for greater control of invasive weeds. These standards stipulate that a measure of proper range health is that invasive weed species are not increasing and that grazing measures must be designed to assist in containing weed species. Because of lack of grazing management control on many small allotments, current conditions and trends would probably continue for weed infestations and weed control would be partially dependent on adjacent landowners' management actions. Under this alternative, improvements planned for grazed rangelands include implementing noxious weed control on 1,900 acres, which would lower weed potential in these areas.

Effects from Minerals Management

Keeping public lands within 0.25-mile of the Salmon River withdrawn from mineral entry would reduce ~~mineral~~mining ~~-~~related weed potential on approximately 18,532 acres of land by reducing the potential for soil and vegetation disturbance and changed drainage and erosion patterns and by reducing potential for weed introduction from vehicles. Although all alternatives would designate 131,044 acres of CFO lands as being open to leasing, this alternative is not subject to mineral lease stipulations that include NSOs. Lack of NSOs can increase the weed potential. Requiring that all mineral actions remain subject to site-specific mitigation measures developed during environmental review would require mining operators to prepare site-specific weed control plans.

Effects from Recreation Management

Under Alternative A, the CFO would continue to manage the Lower Salmon River—Scenic, the Lower Salmon River—Recreational, and the Clearwater River SRMAs (totaling approximately 26,682 acres). Management actions pertaining to SRMAs may result in greater recreational use of these areas, thus increasing weed potential by increasing soil and vegetation disturbance and increasing potential weed seed vectors. Increases in management of such areas would offset these effects by ensuring that SRMA management plans address weed potential and include measures to minimize such risk. Measures may include steering users away from areas that have high weed potential or closing sensitive areas.

A Special Recreation Permit process used to accommodate commercial, competitive, or organized group activities allows the BLM to monitor activities that may contribute to increased weed potential, thereby having greater opportunity to prepare specific weed control and revegetation plans, if needed.

Activities occurring in areas designated as ROS classes Primitive or Semiprimitive Nonmotorized are more likely to be low impact and lead to less soil and vegetation disturbance than activities occurring

under other ROS classes. Activities in these areas include hiking, backpacking, and kayaking. Under current management, 33,197 acres are managed according to these ROS guidelines.

Effects from Transportation and Travel Management

Under this alternative, the BLM would manage 85,335 acres as Open to cross-country motorized vehicle travel. Open designations greatly increase the potential for soil and vegetation disturbance and for weed seed introduction, thereby greatly increasing weed threat. This alternative would also manage 40,437 acres designated as Limited to existing routes. The weed potential in Limited areas would be lower than under the Open designation, since effects on soil and vegetation beyond existing conditions would be relatively minimal. Areas designated as Closed further lower the opportunity for weed potential because most motorized travel is prohibited except for specific routes that have been grandfathered in for. Controls on vehicle use on lands identified for less intensive use would give the BLM greater control over potential weed vectors.

Effects from Lands and Realty Management

Acquiring road easements may change weed potential if acquired roads need to be modified for BLM purposes. Any alterations that would occur outside of the established roadbed would increase soil disturbance, thereby increasing weed potential. All roads acquired through easements are assumed to be compatible with BLM road design requirements.

Effects from ACEC/RNA Management

Keeping public lands within 0.25-mile of the Lower Salmon River withdrawn from mineral entry would reduce ~~mineral~~ mining related weed threats on 15,072 acres by minimizing the potential for soil and vegetation disturbances and for changes in soil moisture retention.

Protecting particular areas as ACEC/RNAs by the following actions would reduce or maintain the weed potential in a number of ways: prohibiting timber harvest in some areas, water development, road construction, rights-of-way, or salt placement; initiating intensive allotment management plans for certain areas; conducting intensive vegetation and botanical inventories and recording~~mapping~~ specific habitat types; and restricting timber harvest methods on areas with over 50-percent slopes.

BLM control over weed infestation would increase by minimizing soil and vegetation disturbance, by managing livestock, and by giving the BLM a better overall picture of existing conditions from which to base monitoring. The area affected by these actions would total 25,600 acres and would include Wapshilla Ridge, Lower and Middle Cottonwoods Islands, Captain John Creek, Long Gulch, Lucile Caves, Skookumchuck, and Craig Mountain.

Restricting herbicide use in Long Gulch, Skookumchuck, and in the vicinity of Lucile Caves would impede weed-control efforts over a minimum of 513 acres and lead to increased weed potential in areas where herbicide applications would normally be used to control weeds.

Effects from Watchable Wildlife Viewing Sites Management

Actions designed to maintain or improve wildlife habitat along 235 miles of the Salmon and Snake Rivers and on 24,200 acres of Craig Mountain WMA would require creation of an HMP, a component of which would be a weed management plan. This could lead to actions that would assist in the control of weeds.

Effects from Public Safety—Abandoned Mines and Hazardous Materials Management

Restoring AMLs and streams that have been degraded by past mining practices would include revegetation, restricted site access, and improved soil conditions. All of these measures would diminish the potential for weed infestation and spread.

Alternative B

Effects from Geology Management

Increasing public access to and recreational use of unique geological features would increase the potential for weed seed transport and for soil disturbance that favors the establishment of weeds over Alternative A. At the same time, increasing public awareness of geological features offers an opportunity to educate the public about the effects of weeds and the methods by which they are spread and established.

Effects from Soils Management

Effects would be similar to those described under Alternative A. Also, although increased soil disturbance control measures under this alternative would help to prevent weed infestation, BMPs as written are not sufficient to prevent the spread or establishment of weeds. BMPs for soil disturbance do not directly address measures to reduce the possibility of weed infestation, such as frequent monitoring of disturbed areas. The BLM would combine these measures with project-specific weed control measures to reduce the potential for weed infestation to a manageable level.

Effects from Water Resources Management

Effects would be similar to those described under Alternative A. Also, promoting activities that help achieve DFCs in 3~~2~~28 restoration watersheds would include controlling weeds and reducing occurrences of actions that promote their spread and establishment. Over time, these measures would result in greater control of weeds in restoration watersheds.

Effects from Vegetation—Forests Management

In general, treatments may involve thinning, tree extraction, revegetation with desirable species, use of fire, use of chemicals to control undesirable species, or some combination of these actions. Many of these actions result in disturbance during application of the treatment, leading to such conditions as disturbed soils and vegetation that favor weeds. Although this could cause a short-term impact by increasing weed potential in treated areas, treatments are also designed to increase forest health and restore the balance of species and resources found in a normal healthy forest. Achieving this goal would lead to lower weed potential in treated areas in the long term.

Effects from Vegetation—Weeds Management

Under Alternative B, the BLM would increase cooperative efforts in Cooperative Weed Management Areas to develop and implement annual treatment strategies. Implementing prevention activities as part of field activities would reduce the extent to which weed seeds are spread to other areas. Rehabilitating treated areas, combined with monitoring such areas, would decrease weed potential. Supporting education and awareness efforts would help to diminish the weed threat by enlisting the public's help in avoiding activities that disturb soils or vegetation or that contribute to weed seed spread.

Outside of Cooperative Weed Management Areas, management focus would emphasize implementing weed control goals into other resource goals. For example, a large component of

watershed restoration planning would be weed control planning within the watershed. Travel management planning would continue to implement measures to reduce weed infestation. Although rehabilitation of treated areas would continue in selected areas outside of Cooperative Weed Management Areas, monitoring rehabilitated areas would not necessarily be a component of the rehabilitation. Under both scenarios, the BLM would gain greater control over weed introductions and establishment than it would have under Alternative A.

Under all action alternatives, the BLM would implement BMPs designed specifically to reduce the weed threat associated with project actions. Implementing these BMPs before, during and after projects would reduce weed potential relative to current management by repairing disturbed soils and revegetating where needed, and by taking measures to reduce weed seed spread through vehicle transportation.

Effects from Vegetation—Rangelands Management

Yearly monitoring and the assessment of rangelands would allow the BLM to determine the extent to which noxious and invasive weeds are present in CFO rangelands. Data gathered during monitoring would be used to develop weed management strategies and goals in cooperation with Cooperative Weed Management Areas, leading to greater control over weeds in the CFO.

Implementing actions to convert nonnative plant communities to desired plant communities would result in more acres of native grasslands, contributing to a more stable ecosystem over time in localized areas. This condition could lead to a more natural fire regime, decreased or stabilized soil erosion rates, and more natural moisture retention.

Effects from Vegetation—Riparian and Wetlands Management

Improving riparian conditions would involve, in part, controlling weeds, restoring native plant communities, and restricting activities that contribute to soil or vegetation disturbance. Under this alternative, buffer areas would be reduced by 6 percent compared to Alternative A, leading to reduced protection and therefore greater weed potential.

Effects from Wildlife and Special Status Wildlife Management

Effects would be similar to those described under Alternative A. Additionally, efforts to maintain or improve ecological conditions in native grassland plant communities for wildlife habitat benefits would necessitate controlling invasive species in such areas, particularly on Craig Mountain and Rattlesnake Ridge.

Implementing appropriate riparian management strategies to prevent adverse impacts on riparian areas, fish habitat, and water quality, may include specific riparian grazing season of use and stream bank use criteria. Such management would ensure that riparian areas are not overgrazed or grazed during sensitive times of the year or during vulnerable seral stages, contributing to more stable riparian areas and thus lower weed potential.

Effects from Aquatic Resources, Fish, and Special Status Fish Management

Effects would be the same as those described under Effects from Wildlife and Special Status Wildlife Management.

Effects from Special Status Plant Management

New management plans or updates to existing plans to properly manage MacFarlane's four-o'clock and Spalding's silene *(Silene spaldingii)* would identify and ameliorate threats to these populations, including threats from invasive weeds. Implementing control measures for invasive weeds in the vicinity of populations of these species would result in greater chances of survival of these populations and result in increased control of noxious weeds.

Effects from Wildland Fire Management

Treating CFO lands to move them into a lower FRCC (for example, FRCC 3 to FRCC 2) would result in lower potential for stand-replacing wildfire, thus lowering weed potential in these areas in the long term. However, short-term effects, in the form of increased weed potential, could arise from the treatments themselves, assuming that they would increase soil disturbance and vehicular traffic.

Under Alternative B, up to 40 percent of the CFO classified as FRCC 2 or 3 (moderate to high risk) WUI areas could be treated in any 5-year period; an estimated 33,766 acres could be treated under Alternative B (see Section 4.2.12, Wildland Fire Management). Use of prescribed fire would increase short-term, disturbance-related weed potential but, combined with suspension of livestock grazing until objectives are met, would decrease long-term weed potential due to enhanced conditions favoring native species in areas that are in relatively good ecological health. Alternative B would include approximately 1,182 to 3,545 acres annually of mechanical treatments and prescribed fire Use of mechanical treatments would have similar effects as use of prescribed fire.

Use of chemical and or biological controls would reduce the potential for short-term, disturbance-related effects compared to prescribed fire and mechanical treatments, while having similar effects on long-term weed potential. Chemical and/or biological treatments would be used on up to 36 percent of CFO lands with the annual treatment range of 844 to 6,078 acres. This is 44 percent less than Alternative A. Under Alternative A, specific percentages of the CFO FRCC 2 and 3 (moderate to high risk) WUI areas would not be identified for fire risk/fuels-reduction treatments; however, current management emphasis and budget is focusing on the WUI. Chemicals would be applied under restricted conditions, by trained personnel, to minimize the potential for impacts.

Effects from Visual Resources Management

Effects would be the same as those described under Alternative A.

Effects from Forest Products Management

Estimated PSQ under this alternative would be 3,129 MBF, as opposed to an estimated annual ASQ of 6,600 MBF under Alternative A. Therefore, weed potential would be lower than under Alternative A. Vegetation treatments in RCA stream buffers would be allowed, but only if they result in restored or enhanced ecological conditions, resulting in lowering of weed potential.

Allowing all harvest systems on the commercial land base of 40,598 acres could increase weed potential compared to Alternative A, where certain restrictions would decrease or maintain weed potential.

Effects from Livestock Grazing Management

Reducing AUMs by approximately 15 percent and allotments by approximately 12 percent compared to Alternative A would not reduce overall weed potential since reductions would occur on lands that

are not currently grazed. Overall, existing trends and conditions are expected to continue on these allotments.

Ensuring that Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management (BLM 1997a) (**Appendix A** [see Volume III]) are being met would require that weeds are not compromising value and function of rangelands and that grazing levels are such that they do not contribute to an increase in weed potential.

Effects from Minerals Management

Lands designated as NSO would not allow most of the mineral operations that include a permanent presence of equipment or structures, and operations would be limited in areas designated as CSU. Therefore, weed potential is decreased in these areas due to lower potential for soil and vegetation disturbance, as well as less chance of weed seed introduction due to vehicle traffic.

Approximately 43,590 acres open to leasable and salable minerals activities would be subject to NSO stipulations, and 42,403 acres would be subject to CSU stipulations, decreasing the weed threat relative to Alternative A on that amount of land since there are no similar restrictions under Alternative A.

Reduction in weed potential from use of appropriate site-specific mitigation measures would result in the same effects as Alternative A.

Effects from Recreation Management

The acreage of SRMAs managed under this alternative would increase to 55,201 acres, a 28,519 acres increase in comparison to Alternative A. SRMA designations would account for 38 percent of the planning area and would be subject to intensive recreation management. Overall, effects would be the same from SRMA management as described under Alternative A.

Providing developed recreation facilities only when necessary to protect resources may include such development for weed control. However, increases in recreational uses such as camping that are not accompanied by increases in developed facilities may contribute to greater weed spread by forcing users into casual camping or other use arrangements. This could allow for greater weed potential than under current management since it could create soil and vegetative disturbances in areas that are not managed and may be spread over a larger area than if developed facilities were available.

Under this alternative, an additional 9,498 acres would be managed as Primitive or Semiprimitive Nonmotorized. As a result, the weed threat, as discussed under Alternative A, would further decrease.

Effects from Renewable Energy Management

Consideration of suitable sites for renewable energy projects would include appropriate NEPA analysis, including potential for weed infestation from any proposed project. All renewable energy projects would include use of BMPs designed to reduce soil disturbance or weed seed introduction. Affected areas would be revegetated at the completion of the project, and BLM would conduct follow-on weed monitoring as appropriate.

Effects from Transportation and Travel Management

Reclassifying 85,308 acres as Limited to designated routes rather than Open to cross-country motorized vehicle use would drastically reduce the potential for weed infestation relative to Alternative A by reducing soil disturbance and diminishing the possible extent of weed seed spread. The area designated as Closed to OHVs is approximately the same throughout all alternatives, so weed potential in these areas is the same. Efforts to decommission or obliterate roads and trails that are no longer needed would reduce these important weed vectors, thereby reducing the threat of weed seed transport and also vehicular disturbance of soils and vegetation, thereby reducing disturbance-related weed potential.

Allowing for future route modifications would allow the BLM to close certain travel routes if it became clear that resources were being damaged beyond an acceptable level. One indicator of such damage would be if weed infestations increased significantly. Considering the possibility of effects on resources, including changes in weed potential, would affect the BLM's decision making process in terms of designating new travel routes in the future and would include effects of increasing weed potential on actions that could affect soils, vegetation, watersheds, and other resources. Also, establishing kiosks at primary trailheads and posting signs at other main access points would help to reduce weed potential by giving the BLM opportunity to educate the public about the effects of weeds and the role of their actions in either contributing to or reducing weed potential.

Annual monitoring of travel routes would allow the BLM to assess weed infestation before new populations became uncontrollable or before disturbances had a chance to contribute significantly to the spread of established populations. If needed, measures would be taken as a result of monitoring to reduce weed potential. All of these factors contribute to decreased weed potential relative to Alternative A.

Effects from Lands and Realty Management

Effects on weed potential from land exchanges cannot be determined since it is not known if current management on lands that could be acquired is superior or inferior to BLM management in terms of controlling factors that affect weed potential.

Avoidance zones would occur in areas that are already given a fairly high level of protection from activities that cause soil and vegetation disturbance and would not affect weed potential. However, weed potential could be lowered by consolidating rights-of-way and encouraging applicants to co-locate rights-of-way with other rights-of-way. Overall, this would reduce the amount of land that is disturbed, lowering the weed potential.

Effects on lands not designated as exclusion or avoidance areas would be those described under Alternative A.

Effects from ACEC/RNA Management

Keeping public lands within 0.25-mile of the Salmon River withdrawn from mineral entry would reduce mining-related weed threats on 6,785 acres by minimizing the potential for soil and vegetation disturbances, and changes in soil moisture retention.

Protecting particular areas as ACEC/RNAs by such actions as authorizing timber harvest only to support maintenance of timber stand health and achievement of management objectives would increase the weed potential in harvested areas due to increased soil and vegetation disturbance and

changes to soil moisture retention. Instituting vegetation treatments in grasslands and forests, including prescribed burns and use of wildland fire, would lead to a short-term increase in weed potential as a result of creating hot dry conditions that favor weeds. However, long-term effects on weed potential would result if treatments resulted in healthier grasslands and forests with more native species that would be more resistant to weed infestations.

In all areas, using integrated pest management measures would create lower weed potential by giving the BLM numerous options for weed control, allowing it to adapt its weed-control approach to a variety of conditions and instituting a speedier response to new weed outbreaks.

Effects from measures to preserve MacFarlane's four o'clock and Spalding's silene would be similar to those described under Alternative A.

This alternative does not rule out allowing new rights-of-way or road construction at Craig Mountain. The effect from either of these actions would be increased weed potential.

Under this alternative, minimizing ground disturbance on slopes greater than 40 percent in the East Fork American River ACEC would decrease weed potential from soil disturbances in these areas. Weed potential would further decrease as a result of vegetation treatments performed to enhance resource values on 570 acres. Decommissioning roads within three years after construction would decrease weed potential in this area, although constructing them in the first place would increase weed potential.

Effects from Watchable Wildlife Viewing Sites Management

Effects would be similar to those described under Alternative A. Also, supporting efforts that designate new high-value wildlife viewing areas would require the BLM to maintain this habitat to a high degree, which would include developing and instituting a weed management plan. Also, supporting efforts that provide information and educational material regarding wildlife viewing would allow the BLM to incorporate educational information about weeds, which would increase public awareness of this problem.

Effects from Public Safety—Abandoned Mines and Hazardous Materials Management

Effects would be similar to those described under Alternative A. Also, restricting all closed and remediated sites as NSOs would reduce the future weed potential from mining or other uses.

Alternative C

Effects from Geology Management

Effects would be the same as those described under Alternative B.

Effects from Soils Management

Effects would be the same as those described under Alternative B.

Effects from Water Resources Management

Effects would be the same as those described under Alternative B.

Effects from Vegetation—Forests Management

Effects would be similar to those described under Alternative B, except that DFC blocks under Alternative C would be 500 acres (totaling 20 percent of the CFO) rather than 1,000 acres (17 percent of the CFO).

Effects from Vegetation—Weeds Management

Effects would be the same as those described under Alternative B.

Effects from Vegetation—Rangelands Management

Effects would be similar to those described under Alternative B, except the extent of actions to promote native plant community health would expand to include Salmon River and canyon grasslands, increasing the area where the weed potential would decrease.

Effects from Vegetation—Riparian and Wetlands Management

Effects would be similar to those described under Alternative B, except RCA areas would increase by 21 percent over Alternative B (and 14 percent over Alternative A), decreasing the weed potential in these areas.

Effects from Wildlife and Special Status Wildlife Management

Effects would be the same as those described under Alternative B.

Effects from Aquatic Resources, Fish, and Special Status Fish Management

Effects would be similar to those described under Alternative B, except that acres of conservation and restoration watersheds would increase by 6 percent over Alternative B and by 3 percent over prescription watersheds in Alternative A. Restoration and conservation of these areas would include reducing the possibility of actions that contribute to weed spread, including actions that disturb soil and vegetation, increase erosion, or allow for greater potential for import of weed seeds. Therefore, weed potential would decrease in these areas.

Effects from Special Status Plant Management

Effects would be the same as those described under Alternative B.

Effects from Wildland Fire Management

Effects would be similar to those described under Alternative B, except that each unplanned fire would be evaluated for its potential for wildland fire use (**Figure H-1**, Areas Available for Wildland Fire Use—Alternatives A and C [see **Appendix H** in Volume II~~I~~]). This differs from Alternatives B in that it increases the potential to use wildland fire for resource objectives throughout the CFO, potentially increasing resource benefits, including long-term weed control efforts. Also, use of prescribed fire to treat various FRCC classes would potentially increase by 5 percent, resulting in an increase in weed potential in the short-term in these areas but followed by a long-term decrease in weed potential due to a healthier ecosystem. Up to 16,883 acres of the CFO classified as FRCC 2 or 3 (moderate to high risk) WUI areas could be treated in any 5-year period under Alternative C (see Section 4.2.12, Wildland Fire Management), 50 percent less than Alternative B. Treated FRCC 2 and 3 areas, including those treated for weeds by biological or chemical methods, would decrease by 16 percent relative to Alternative B, reducing the chances of reaching long-term weed management goals.

Alternative C would include approximately 1,182 to 4,390 acres annually of mechanical treatments and prescribed fire. This is a 24-percent increase compared to Alternative B.

Effects from Visual Resources Management

Disturbance potential under this alternative would be lowest compared to other alternatives, due to there being the highest number of acres in VRM Classes I and II. Therefore, weed potential due to this type of management is lowest among all alternatives.

Effects from Forest Products Management

Effects would be similar to those described under Alternative B, however, weed potential under this alternative would be lowest compared to other alternatives, due to it offering the lowest PSQ (3,101 MBF) on the smallest commercial land base (34,611 acres).

Effects from Livestock Grazing Management

Effects would be similar to those described under Alternative B. However, there could be a reduction in weed potential by reducing AUMs by a further 3 percent and grazed lands by a further 4 percent compared to Alternative B. Alternative C would reduce overall weed potential due to grazing impacts to the greatest degree of any alternative.

Effects from Minerals Management

Effects would be the same as those described under Alternative B, except NSO areas would increase by 25,264 acres (58 percent), and CSU areas would increase by 16,719 acres (39 percent), decreasing the weed potential from mining ~~mineral~~ related disturbances to the greatest degree of any of the alternatives.

Effects from Recreation Management

Effects would be the same as those described under Alternative B.

Effects from Renewable Energy Management

Effects would be the same as those described under Alternative B.

Effects from Transportation and Travel Management

Effects would be the similar to those described under Alternative B. Also, striving for a decrease in motorized vehicle use on BLM-controlled lands, roads or trails in Sheep Creek, Hat Creek, Denny Creek, and other specified areas would increase the area where weed potential from OHV-related disturbances would decrease.

Effects from Lands and Realty Management

Effects would be the same as those described under Alternative B.

Effects from ACEC/RNA Management

Increasing the Craig Mountain ACEC by 19,386 acres would increase management and decrease certain types of disturbing uses, including mining, over this amount of land relative to Alternative A.

Similar to Alternative A, allowing lands within the ACEC to be classified for custodial management would increase the short-term weed potential but would decrease the long-term weed potential.

Minimizing new road construction and obliterating old roads and assigning high priority for control of undesirable nonnative vegetation using integrated pest management methods would decrease the

weed potential in this area and in others where similar management is applied, to the lowest of any alternative.

Effects from Watchable Wildlife Viewing Sites Management
Effects would be the same as those described under Alternative B.

Effects from Public Safety—Abandoned Mines and Hazardous Materials Management
Effects would be the same as those described under Alternative B.

Alternative D

Effects from Geology Management
Effects would be the same as those described under Alternative B.

Effects from Soils Management
Effects would be the same as those described under Alternative B.

Effects from Water Resources Management
Effects would be the same as those described under Alternative B.

Effects from Vegetation—Forests Management
Weed control measures that would occur under forest management or enhancement actions described under Alternatives A, B, and C would not occur under this alternative; therefore, weed potential would increase relative to the other alternatives.

Effects from Vegetation—Weeds Management
Effects would be the same as those described under Alternative B.

Effects from Vegetation—Rangelands Management
Effects would be the same as those described under Alternative B.

Effects from Vegetation—Riparian and Wetlands Management
Effects would be similar to those described under Alternative B, except RCA areas would decrease by 9 percent from Alternative B (and 15 percent from Alternative A), lowering management levels and increasing weed potential.

Effects from Wildlife and Special Status Wildlife Management
Effects would be the same as those described under Alternative B.

Effects from Aquatic Resources, Fish, and Special Status Fish Management
Types of effects would be similar to those described under Alternative B, except that acres of restoration and conservation watersheds would decrease by 19 percent from Alternative B and by 21 percent from prescription watersheds under Alternative A. Restoration and conservation of these areas would include reducing the possibility of actions that contribute to weed spread, including actions that disturb soil and vegetation, increase erosion, or allow for greater potential for import of weed seeds. Therefore, weed potential would decrease in these areas relative to Alternative A, but to a lesser degree than Alternatives B and C.

Effects from Special Status Plant Management
Effects would be the same as those described under Alternative B.

Effects from Wildland Fire Management

This alternative would treat the greatest amount of acreage. Effects would be similar to those described under Alternative B, except that 50,650 acres of the CFO classified as FRCC 2 or 3 (moderate to high risk) WUI areas could be treated in any 5-year period under Alternative D (see Section 4.2.12, Wildland Fire Management), 50 percent more than Alternative B and triple that under Alternative C. Alternative D would include approximately 2,870 to 7,597 acres of mechanical treatments and prescribed fire and 844 to 6,078 acres of biological or chemical treatments annually.

Much of this chemical treatment intended to reduce weed populations and to move FRCC 3 lands into FRCC 2, or FRCC 2 lands into FRCC 1. This alternative would allow for chemical or biological weed treatments on 80 percent more land area than under Alternative C and the same area as Alternative B, lowering the weed potential from this type of action the most of any alternative.

Effects from Visual Resources Management

Disturbance potential under this alternative would be highest compared to other alternatives, due to there being the lowest number of acres in VRM Classes I and II. Therefore, weed potential due to this type of management is highest among all alternatives.

Effects from Forest Products Management

Effects would be similar to those described under Alternative B; however, weed potential under this alternative would be highest compared to other alternatives because it would offer the highest PSQ (4,823 MBF).

Effects from Livestock Grazing Management

This alternative would offer a 16-percent increase in AUMs and increase the grazed area by 13,118 acres relative to Alternative A. Although grazing density would not be greater, possible effects, including soil disturbance, defoliation and crushed banks in riparian areas, and weed seed transport, would be spread over a wider area. Weed potential from grazing-related effects would be highest under this alternative. However, existing range trends and conditions would probably continue, because these allotments have been vacant and have not been grazed for over a decade. A large amount of these areas identified for grazing are intermingled with The Nature Conservancy and Idaho Department of Fish and Game lands, which at present do not have plans to graze lands they administer.

Effects from Minerals Management

Effects would be similar to those described under Alternative B, except that weed potential would increase as NSO areas decrease by 8,545 acres (20 percent) and CSU lands decrease by 10,390 acres (25 percent). Alternative D would be more restrictive than Alternative A because of NSOs and CSUs, which would not apply under Alternative A where weeds are managed case by case. Alternative D has the second-highest weed potential from mining-related effects, second to Alternative A.

Effects from Recreation Management

Effects would be the same as those described under Alternative B.

Effects from Renewable Energy Management

Effects would be the same as those described under Alternative B.

Effects from Transportation and Travel Management

Effects would be similar to those described under Alternative B. Under this alternative the BLM would continue managing 23,189 acres as Open to cross-country motorized travel yearlong, which would increase weed potential relative to Alternatives B and C, and to a lesser degree than under Alternative A. Increased weed potential would occur as a result of increased soil and vegetation disturbance and higher possibility of weed seed transport from OHVs.

Effects from Lands and Realty Management

Effects would be the same as those described under Alternative B.

Effects from ACEC/RNA Management

Effects would be similar to those described under Alternative B, except that use of livestock grazing to accomplish management goals in ACEC/RNAs could allow for increased introduction of weed seeds.

Effects from Watchable Wildlife Viewing Sites Management

Effects would be the same as those described under Alternative B.

Effects from Public Safety—Abandoned Mines and Hazardous Materials Management

Effects would be the same as those described under Alternative B.

Cumulative Effects

Past, present, and reasonably foreseeable actions that are relevant to weed management in the cumulative impact area include land tenure changes, wildland fire use and suppression, fuel and vegetation treatments, minerals management, population growth, urban development, recreational use, OHV use, stream and watershed restoration activities, regional planning efforts, weed management efforts, and grazing. The types of impacts that have occurred and would continue to occur from weed infestations include loss of plant diversity, loss of wildlife habitat, loss of soil integrity, changes in fire intensity and water retention rates, and reduced ecosystem function.

Several proposed actions in the Cottonwood RMP would address FRCC classes and work to move FRCC 3 areas into FRCC 2 or 1. Many areas that are in FRCC 3 are degraded primarily because of weed infestations, and chemical weed treatments are proposed that would reduce this effect. Such measures are proposed in other land management plans, and are helping to create a regional approach to weed control, limited resources in all areas mean that, at best, these measures would slow the rate of weed infestation, or reduce weed threat in particular areas of concern. Consistent with other regional plans, areas where open OHV use would be allowed would be further restricted under all Cottonwood RMP alternatives, except Alternative A. Although increasingly more OHVs are used throughout the cumulative impact area, the trend towards concentrating them into designated areas would enhance weed management efforts in most habitat types by reducing the extent of disturbance and seed spread.

Cumulative effects would be similar among the alternatives. Alternative A would contribute to more regional cumulative effects resulting from land tenure adjustments, open OHV use, and wildland fire suppression. In general, Alternatives B, C, and D would provide more management measures than Alternative A that would directly or indirectly reduce the potential for cumulative impacts.

4.2.7 Vegetation—Rangelands

Goal: Maintain or improve rangeland plant community health (diversity, composition, function, and vigor) relative to site potential.

Summary

Actions under most resource categories have the potential to affect rangeland vegetation. In general, actions under Alternative C would have the greatest potential to maintain or improve rangeland plant community health, followed by Alternative B, and then Alternative A. Actions under Alternative D would have the greatest potential to negatively affect rangeland vegetation. **Table 4-10** identifies the indicators that were used to analyze effects on rangeland vegetation management under each alternative.

Table 4-10
Comparison of Vegetation—Rangelands Indicators by Alternative

Indicator	Alternative A	Alternative B	Alternative C	Alternative D
Change in acres of mid-elevation shrub, mountain shrub, perennial grasslands, and grazed forested areas	Acres of these cover types are not projected to change	Changes may occur as a result of treatments, but those changes would affect various cover types differently	Changes may occur as a result of treatments, but to the least degree of any alternative	Changes may occur as a result of treatments, to the greatest degree of any alternative
Change in composition and structure	No change	May increase amount of native vegetation	May increase amount of native vegetation and decrease tree encroachment into grasslands	No change
Potential for increases in weed infestation	Potential for occurrences would increase	Potential for occurrences would stay at current levels or would decrease	Greater potential than Alternative B for occurrences to decrease	Greater potential than Alternative A for occurrences to increase

Methods of Analysis

Indicators

Indicators are used to identify the level of impact. For nonforested vegetation, the indicators used for impact analysis are identified in **Table 4-10**, Comparison of Vegetation—Rangelands Indicators by Alternative.

Methods and Assumptions

Impacts are determined by assessing which actions, if any, would change vegetation structure or composition, decrease the extent of rangeland vegetation, allow for increased dominance of invasive weeds, affect habitat value for wildlife species, or decrease grazing potential.

Impact analysis and conclusions are based on interdisciplinary team knowledge of the planning area and of interaction among different management activities, and on scientific literature. The effects of each action on vegetation resources are quantified when possible; however, many impacts must be qualitatively assessed when suitable data are not available. The following assumptions were made for the purpose of this analysis:

- Seeding on rangeland habitat for restoration purposes would use a native seed mix, or a mix of native seeds and approved nonnative species;
- Current trends in plant succession/vegetation would continue;
- Noxious and invasive weeds would continue to be introduced and spread as a result of ongoing vehicle traffic in and out of the CFO planning area, recreational activities, wildlife and livestock grazing and their movements, and surface-disturbing activities;
- Biocontrol would continue and potentially expand;
- Noxious and invasive weeds would further expand into native plant communities, and disturbances to these communities would expand opportunities for the spread of nonnative invasive plant species; and
- Many actions that would occur within the CFO would be subject to BMPs. Although BMPs are designed to minimize the effects of projects, they generally cannot eliminate all impacts. This impact analysis assumes that BMPs will minimize but not eliminate possible effects.

Effects Common to All Alternatives

Effects from Soils Management

Canyon grasslands are considered a sensitive land type since they are relatively scarce in the CFO. Identifying and recording~~mapping~~ such areas, designing projects to avoid or minimize the potential for adverse effects on sensitive land types, and restoring or obliterating unneeded roads would minimize potential for effects on this cover type, including mass wasting and erosion.

Effects from Water Resources Management

Effective watershed management would result in healthy and diverse plant communities, including rangelands. The restriction of surface disturbance around wetland/riparian areas, perennial surface waters, identified floodplains, and ephemeral channels would further protect vegetation from disturbance. Considering water quality standards and watershed guidelines during construction of other program projects would assist in achieving the desired plant and litter cover objectives.

Effects from Vegetation—Forests Management

Impacts to nonforested areas from forest and woodlands management would be indirect and would relate to treatments and the need to access treatment areas through rangelands. Fire treatments that reduce the chances of stand-replacing wildfire in forested areas would reduce the chances of such fires in rangelands as well. Fire treatments that occur at edges between rangelands and forested areas could decrease the occurrence of forest encroachment into rangelands. Treatments that require constructing access roads, fire breaks, or staging areas in rangeland areas would affect this habitat by allowing for greater weed dispersal, soil disturbance, loss of vegetation, and habitat fragmentation.

Effects from Vegetation—Weeds Management

Rangelands are particularly prone to weed infestation due to disturbances from grazing livestock. Livestock can also transport weed seeds in their feces or by having them attached to their coat.

Weed management under all alternatives would affect nonforested vegetation areas equally by reducing or controlling the degree to which desirable plants would have to compete with weeds.

Effects from Vegetation—Rangelands Management

Meeting the Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management (BLM 1997a) (**Appendix A** [see Volume II~~I~~]) would require, in part, that existing native plant communities were maintained and that nonnative plant communities were appropriate for the site. Other parameters to ensure that vegetative health and proper function of rangelands are being maintained are included in the standards and guidelines. The BLM is currently meeting the goals stated in these standards and guidelines.

Effects from Vegetation—Riparian and Wetlands

Riparian areas/wetlands cover only a small amount (approximately 2 percent) of rangelands in the CFO. Livestock are likely to be found in these areas much of the time, because, the riparian vegetation is most likely to be green and lush even during the summer months; these areas are where livestock's water supply is located; and riparian zones are cooler than associated uplands. Management of these areas would affect rangelands by requiring range management practices, primarily livestock grazing, do not cause degradation of these riparian areas. The BLM would monitor livestock use of such areas and adjust livestock use as necessary to comply with Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management (BLM 1997a) (**Appendix A** [see Volume II~~I~~]). This would ensure that no adverse effects occur to riparian areas from grazing livestock.

Effects from Wildlife and Special Status Wildlife

Striving to maintain or improve ecological condition status of native grassland communities or rangelands to benefit wildlife would affect rangelands by increasing management efforts to maintain appropriate native vegetation cover and diversity, weed control, and effects from grazing.

Effects from Aquatic Resources, Fish and Special Status Fish Management

Developing a Salmon and Snake Rivers coordinated plan to maintain fisheries habitat, water quality, and riparian areas would require management of sediment from upland sources. Such management would affect rangelands by requiring that range management practices, including livestock grazing, fire management, road construction, or weed management, would not increase the potential for erosion. Measures to control erosion would require maintenance of adequate range conditions including plant cover and density, as well as proper species composition.

Effects from Special Status Plants Management

Protection of certain special status plant species would indirectly affect rangelands. Populations of special status plant species found in grasslands, including MacFarlane's four-o'clock and Spalding's silene, Tolmie's onion *(Allium tolmiei var. persimile)*, Jessica's aster *(~~Asteraceae~~ Aster jessicae)*, green-band mariposa lily *(Calochortus macrocarpus var. maculosus)*, broad-fruit mariposa lily *(Calochortus nitidus)*, and Palouse goldenweed *(Haplopappus liatriformis)*, would be preserved by such measures as grazing restrictions, increased weed management efforts, increased monitoring, travel restrictions, and creation of specific management plans. To the degree that populations of these species occur in rangelands of the CFO, this increased management would result in healthier grassland communities and increased preservation of such areas.

Effects from Cultural Resources Management

Excavations of cultural resource sites disturb the soil surface, which increases the opportunity for noxious and invasive weeds to become established. However, the amount of disturbed surface associated with cultural site excavations is minimal, and these sites are reclaimed immediately.

Effects from Livestock Grazing Management

Direct effects on rangeland vegetation from livestock grazing management actions include the removal of forage by livestock, which could alter the amount, condition, and vigor of vegetation in grazed areas. Impacts from livestock grazing usually occur over a long duration of use during the growing season, resulting in lower vigor of desired species and a change in species composition. Salting areas and bed grounds often have disturbed soil and a loss of plant cover, which results in localized areas dominated by invasive plants. Such effects are most likely to occur in areas where management is inadequate. The BLM range management program is consistent with Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management (BLM 1997a) (**Appendix A** [see Volume II~~I~~]) and allows BLM land managers to adjust grazing levels as needed to meet resource goals. The BLM monitors range conditions as needed to establish appropriate grazing levels to meet the standards and guidelines. This level of management is adequate to ensure proper range conditions.

Livestock grazing can be used as a tool to manipulate and improve plant community composition. Livestock can transport seeds and fruits of native and nonnative species to other areas by physically removing the seed or fruit, or through the deposition of fecal matter. Although this can increase weed potential in rangelands, it also serves as a tool for distribution of seeds of native plants into areas that are otherwise difficult to access. Grazing plans that promote healthy rangelands and vegetation create conditions resistant to the spread of noxious and invasive weeds.

Grazing management strategies, such as rotation, deferment, rest from use, and the manipulation of season of use and grazing intensity, would be implemented to manage composition, cover, and the vigor of vegetation. These provide rest periods for plant growth and seed production to maintain plant vigor. The objective of these strategies is to maintain or reach rangeland standards for upland plant communities.

Effects from Minerals Management

Minerals management actions would result in the localized removal of vegetation during both exploration and development work. Mineral development actions would also ~~fracture~~ fragment continuous vegetation communities, change plant community structure and diversity, and alter vegetation landscapes. Long-term impacts would mostly be associated with the location and design of roads. Increased erosion and decreased vegetation cover would occur from soils compaction and the channelization of surface runoff in ruts and road ditches. Areas below mid-slope roads become drier, which reduces plant productivity and can potentially change species composition. Similar impacts would occur for leasable, locatable, or mineral materials.

Effects from Recreation Management

Although occurrence of recreational activities may be increased in SRMAs compared to Extensive Recreation Management Areas, management of these areas is intensified to reduce potential effects. This effect is common to all alternatives, although under current management, fewer acres would be managed as SRMAs than under other alternatives.

Actions occurring in areas designated as Primitive and Semiprimitive Nonmotorized generally have the lowest impact and the least potential to affect rangeland vegetation. Actions occurring in areas that allow motorized recreation have a higher potential to affect rangeland vegetation.

Effects from Renewable Energy Management

Renewable energy development actions could fracture continuous vegetation communities, change plant community structure and diversity, and alter vegetation landscapes. Long-term impacts would mostly be associated with the location and design of roads. Increased erosion and decreased vegetation cover would occur from soils compaction and the channelization of surface runoff in ruts and road ditches. Effects to rangeland vegetation could arise from actions such as geothermal or wind energy projects.

Effects from Transportation and Travel Management

OHV use and road construction would result in impacts on vegetation such as loss of vegetation cover, change in density, and composition changes. OHV users would introduce and spread noxious and invasive weed seeds from their vehicles, shoes, clothing, and recreational equipment. As OHV use increases, people from outside the area would bring in noxious and invasive weeds, including new invasive species. OHV activities in undisturbed and remote areas have the potential to distribute weed seeds into weed-free areas, to disturb soil, and to fragment habitat. Such effects can diminish the value of rangeland forage and increase the degree to which the BLM must manage the lands. **Table 4-11** shows the acres of nonforested and rangeland vegetation that would be Closed, Limited, and Open to motorized travel under each alternative. Potential for effects is greatest in areas designated as Open; and therefore greatest under current management and lowest under Alternatives B and C.

Table 4-11
Acres of Rangeland Vegetation Affected by Travel Designations

Travel Area	Alternative A	Alternative B	Alternative C	Alternative D
Open	11,171	0	0	3,159
Limited	11,461	22,638	22,638	0
Closed	3,895	3,895	3,895	3,895

Source: BLM 2004a

Under all alternatives, approximately 340 miles of roads exist. The existence of roads leads to direct effects including loss of rangeland vegetation and also serve as vectors for weeds. Under all alternatives, the effect of the presence of roads is equal.

The greatest amount of unrestricted road access would be allowed under current management, with fewer miles of unrestricted roads available under the action alternatives. Therefore, potential for effects from use of roads, including introduction of weed seeds, is least under the action alternatives.

Effects from Lands and Realty Management

Installing utility systems and other rights-of-way actions would result in short-term vegetation removal until the area has been reclaimed. Native grasses and forbs may dominate reclaimed sites initially, assuming both that healthy conditions existed prior to disturbance and that revegetation seed mixes contained only native species. Areas where weeds populations were established prior to disturbance, where weed seeds may have been introduced by equipment, or areas adjacent to weed-

infested areas, may be more prone to initial colonization by weeds. In all cases, areas that have been disturbed for rights-of-way or other lease actions would be more prone to weed infestation and would require greater monitoring than nondisturbed areas. Long-term impacts would mostly be associated with constructing access routes.

Effects from Native American Tribal Uses Management

Tribal interests include treaty rights, tribal sovereignty, freedom of religion, protection of sacred and archaeological sites, and contemporary political and social rights, including economic viability. Coordinating with the Tribe on these tribal interests may affect the extent, timing, and type of vegetation management.

It is unlikely that such interests would affect the long-term objective to improve range vegetation, because the BLM has a long-standing practice of consulting with tribes on projects affecting public lands. The BLM would continue to solicit input from tribes on future projects, which would reduce, if not eliminate, the effect on vegetation resources.

Alternative A

Effects from Soils Management

Alternative A would prioritize restoration of existing roads on sensitive land types; this would result in improved habitat conditions in any habitat where this type of action occurred. Road closures would minimize potential for soil compaction, weed distribution, and vegetation disturbance.

Designing projects to avoid or minimize adverse effects on sensitive land types may help to protect rangelands, since canyon grasslands may be considered sensitive.

Effects from Water Resources Management

Effective watershed management would result in healthy and diverse plant communities. Considering water quality standards and watershed guidelines during construction of other program projects would assist in achieving the desired plant and litter cover objectives. Managing 39 sixth-code HUC watersheds (66,077 acres) as prescription watersheds would focus management actions on factors such as those that cause erosion or invasive weed species infestation, indirectly allowing for enhanced rangeland vegetation conditions.

Effects from Vegetation—Weeds Management

Weed treatment and prevention would affect native plant communities in rangelands by reducing competition, particularly for grasslands that are especially susceptible to weed infestation. Maintaining Cooperative Weed Management Areas throughout the planning area would allow the BLM to coordinate weed control efforts on a scale that includes surrounding lands, lowering the potential for weed infestation occurring as a result of weeds imported from other areas. Measures proposed under Cooperative Weed Management Areas may include restrictions on grazing in rangelands where it is clear that grazing is contributing to weed spread. Therefore, maintaining Cooperative Weed Management Areas may result in lowered weed potential in rangelands that lie within these areas.

Although identifying weed-affected areas that may be successfully restored would help the BLM prioritize funding that is available for such actions, this action itself prescribes no activities that would have a direct effect on rangeland health.

Effects from Vegetation—Rangelands Management

Managing lands to meet the Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management (BLM 1997a) (**Appendix A** [see Volume II~~I~~]) helps to maintain plant community composition and can be used to increase the health and diversity of natural vegetative systems. Meeting standards and guidelines would ensure that BLM rangelands are maintained in or restored to target ecological health in regards to plant diversity and degree of weed infestation.

Effects from Vegetation—Riparian and Wetlands

This alternative offers 2,128 acres of riparian areas to grazing livestock (out of 122,732 acres of rangelands). The riparian/wetlands acres would be 1.73 percent of the total rangeland acres.

Effects from Wildlife and Special Status Wildlife Management

Some listed species, including several birds, and other wildlife such as deer rely on rangelands throughout all or part of their lifecycle; these species may be affected by loss or degradation of habitat. Periodic review of ongoing activities would reveal the extent to which these activities may be affecting listed species' habitat in rangelands, allowing the BLM to prioritize management actions to preserve such habitat. This action in itself would not constitute a direct effect but would allow more direct approaches to rangeland management to occur. Modifying actions that occur as a result of reviewing rangeland habitat conditions would result in direct effects, including lower rates of soil and vegetation disturbance and loss.

Effects from Aquatic Resources, Fish, and Special Status Fish Management

Identifying actions that may occur in areas targeted for intensive or less intensive aquatic management may reveal range activities that contribute to erosion or sedimentation. Because erosion and sedimentation occur in areas where range conditions have been degraded, identifying such actions may precipitate management actions that would improve range conditions.

Effects from Special Status Plants Management

Potential effects are listed under Effects Common to all Alternatives. In addition, this alternative would designate the Long Gulch and Skookumchuck populations of MacFarlane's four-o'clock as areas to be protected, indirectly protecting the rangelands in which they are found.

Effects from Wildland Fire Management

Limiting burned acres to 30 percent of the CFO over a given 5-year period may result in reduced use of prescribed fire during periods when wildfires burn large amounts of land. While use of prescribed fire has potential use for management in rangelands that are in good or excellent ecological conditions, burning in poor or fair condition rangelands may result in increased nonnative species infestations. This could reduce the potential benefits produced by prescribed fires, including more diverse grassland conditions and reversal of woodland encroachment into grasslands or shrublands. Suppressing wildfires within one operational period would require an aggressive response that may increase disturbance of rangeland soils and vegetation.

Use of non-fire fuel management strategies would include chemical applications, biological treatments, and/or seedings of between 1,700 and 11,200 acres annually. Since these treatments are designed for weed control, such actions would improve conditions where they were applied by reducing competition between range species and weeds and lowering wildfire potential.

Effects from Visual Resources Management

Under Alternatives A, 53,899 acres would be protected under VRM Classes I and II. Activities in VRM Class I and II areas would be restricted to those that do not result in significant disturbance, which would provide protection to rangelands in these categories by limiting the degree of mining, timber extraction, or road construction that could occur there. Effects would include less fragmentation of habitat, less direct loss of rangeland, and less disturbance than could occur in VRM Class III and IV areas.

Effects from Livestock Grazing Management

Under current management, 122,732 acres are allotted for grazing. Possible effects of livestock grazing are listed under Effects Common to All Alternatives.

Implementing improvements, including constructing additional fences, spring developments, cattle guards, and noxious weed control, would affect 52,854 acres of rangeland vegetation by allowing the BLM greater control over grazing livestock. These improvements would allow the BLM more opportunities for rangeland rest and rotation, increasing the possibility of keeping livestock out of sensitive areas. Vegetation improvements would result from lowered competition from noxious weed infestation.

Lowering AUMs by 12 percent over 5 years would be commensurate with reductions in grazed areas, and allow for improved rangeland vegetation conditions. However, these benefits would be negated by raising AUMs by 13 percent later in the life of the RMP.

Implementing appropriate actions that would result in maintenance of conditions according to standards identified in the Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management (BLM 1997a) (**Appendix A** [see Volume II~~I~~]) would improve rangeland health. Effects would include lowered grazing pressure, improved native plant communities, and a vegetation matrix appropriate to its situation.

Effects from Minerals Management

Under this alternative, 131,044 acres of the CFO would remain open to leasing subject to the standard lease form. Potential effects are described under Effects Common to All Alternatives. Effects of mineral activity in rangeland areas may be reduced in ACECs due to NSO stipulations, depending on proposed management of each area.

Effects from Recreation Management

This alternative would designate 33,197 acres as Primitive or Semiprimitive Nonmotorized. Areas under these designations have the lowest potential for effects of any ROS class. This alternative would designate 26,682 acres as SRMAs, under which recreational activities would be more heavily monitored. Potential effects of recreational activities include habitat fragmentation, introduction of weeds, and increased unauthorized road and trail construction. Effects would increase from increased OHV use over time. These effects are described under Effects from Transportation and Travel Management.

Considering competitive or organized group recreation permit applications on a case-by-case basis would allow the BLM to reduce effects on sensitive rangeland vegetation, including canyon grasslands or other vegetation types, by not permitting such activities or by inserting stipulations that would cause such events to avoid sensitive range types.

Effects from Transportation and Travel Management

Under this alternative, 85,308 acres would remain Open to cross-country motorized travel. Therefore, current effects described under Effects Common to All Alternatives would continue or increase over time.

Considering temporary or permanent closure of all dead-end roads or roads with an expected duration of use of five years or less would allow the BLM to prioritize closures but would have no effects on its own since it proposes no direct actions. Under this alternative, approximately 39 miles of roads would be subject to restrictions on motor vehicle use. This relatively low amount of restricted access would lead to increased potential for the types of impacts listed under Effects Common to All Alternatives.

Road easement acquisition occurring after development of activity plans may allow better access to BLM-administered land for rangeland management, which could improve rangeland conditions.

Effects from Lands and Realty Management

Outside of rights-of-way exclusion areas, rangeland vegetation could be affected by lands and realty actions. Impacts could occur if rights-of-way, leases, or permits ran through rangeland areas, resulting in fragmentation, loss of vegetation from access roads or maintenance of the rights-of-way, and introduction of weeds.

Effects from ACEC/RNA Management

Protecting canyon grasslands of Wapshilla Ridge would minimize actions that could disturb rangeland and nonforested vegetation on 401 acres. Salt licks or water supplies would be placed outside of the area and new rights-of-way and roads would be restricted, resulting in less soil and vegetation disturbance, less direct loss of rangeland, and less potential for weed distribution.

Similar effects would occur by protecting Palouse prairie of the Lower and Middle Cottonwood Islands as an ACEC/RNA (43 acres), canyon grasslands and associated habitat types in Captain John Creek (1,321 acres), and habitat for MacFarlane's four-o'clock in Long Gulch (47 acres), Lucile Caves (404 acres) and Skookumchuck (18 acres).

NSO-1 stipulates that no surface occupancy would occur within ACECs or RNAs. This would reduce the potential for impacts described under Effects Common to All Alternatives, to the degree that rangelands are found within ACEC/RNAs.

Effects from Public Safety—Abandoned Mines and Hazardous Materials Management

AMLs contain severely degraded vegetative communities due to the high level of disturbance they have experienced from past mining practices. Rehabilitating AMLs in rangeland areas would include restoration of soils and vegetation, resulting in better quality habitat.

Alternative B

Effects from Soils Management

Effects would be the same under this alternative as described under Alternative A. In addition, implementing BMPs for soil-disturbing activities would reduce potential for future effects by minimizing road building and retention to only those roads that are necessary. Doing so would minimize existing effects such as erosion and weed seed introduction by eliminating and restoring unnecessary roads or by improving design of existing or planned roads.

Effects from Water Resources Management

Effects would be similar to those described under Alternative A. In addition, restoring watersheds and subwatersheds may improve rangeland conditions by requiring actions that would reduce erosion, weed potential, or deforestation.

Effects from Vegetation—Weeds Management

Under Alternative B, the BLM would increase cooperative efforts in Cooperative Weed Management Areas to develop and implement annual treatment strategies. This alternative increases management of weeds in rangeland and other areas over Alternative A. Implementing prevention activities as part of field activities would reduce the extent to which weed seeds are spread to other areas. Rehabilitating treated areas, combined with monitoring of such areas, would decrease weed potential. Supporting education and awareness efforts would help to diminish the weed threat by enlisting public help in avoiding activities that disturb soils or vegetation or that contribute to weed seed spread in rangeland areas.

Outside of Cooperative Weed Management Areas, management focus would emphasize implementing weed control goals into other resource goals. For example, a large component of watershed restoration planning would be weed control planning within the watershed. Travel management planning in rangeland areas would continue to implement measures to reduce weed infestation. Although rehabilitation of treated areas would continue in selected areas outside of Cooperative Weed Management Areas, monitoring of rehabilitated areas would not necessarily be a component of the rehabilitation. Under both scenarios, the BLM would gain greater control over weed introductions and establishment than under Alternative A.

Effects from Vegetation—Rangelands Management

Yearly monitoring and assessment of rangelands would allow BLM to determine if they are meeting standards and to adjust management as needed to maintain range conditions. Adjustments may include changes in grazing practices or increased weed management.

Effects from Vegetation—Riparian and Wetlands

Livestock grazing would be permitted on 1,880 aces of riparian areas (out of 105,619 acres of rangelands) under Alternative B. The riparian/wetland acres would be 1.78 percent of the total rangeland acres and would be 11.65 percent less than offered for grazing under Alternative A. Therefore, potential grazing related effects are lower under this alternative than under Alternative A.

Effects from Wildlife and Special Status Wildlife Management

Promoting sensitive species conservation through land tenure adjustments, conservation easements, restoration projects, and cooperative planning may result in more or improved rangeland in the CFO if targeted species rely on rangeland habitat.

Maintaining or improving ecological condition of native grassland communities in important winter and spring range areas may result in greater diversity of native plants and a reduction in weeds and disturbed areas.

Effects from Aquatic Resources, Fish, and Special Status Fish Management

Implementing BMPs to avoid or minimize adverse effects to aquatic and riparian habitats may require altering practices that contribute to erosion in rangeland areas within the same watershed. These practices may pertain to grazing, timber extraction or treatment, or vehicle use. Effects of

altering practices in rangeland areas may include enhanced health or preservation of rangeland areas. Under this alternative, ~~32~~ 28 watersheds would be considered restoration watersheds and ~~1~~ three would be designated~~—a~~ conservation watersheds (totaling 64,481 acres), 2 percent less than prescription watersheds under Alternative A. Increased management of weeds, erosion, and other land disturbances in these watersheds would lead to increased rangeland health to the extent that rangelands occur in these watersheds. A total of 22,847 acres would be protected as RCA stream buffers, meaning that 1,443 fewer acres would be protected as such compared to Alternative A.

Effects from Special Status Plants Management

Protecting listed and BLM sensitive plant populations would protect rangelands to the extent that they occur there. Species such as Spalding's silene, Tolmie's onion, Jessica's aster, green-band mariposa lily, broad-fruit mariposa lily, and MacFarlane's four-o'clock are found within rangeland and may require special management actions, including cessation of grazing, increased weed control measures, and restrictions on travel in areas where they are found. This would indirectly lead to preservation of range habitat.

Land acquisitions, exchanges, or conservation easements to support listed species populations may increase the amount of rangeland within the CFO.

Effects from Wildland Fire Management

Under Alternative B, up to 40 percent of the CFO classified as FRCC 2 or 3 (moderate to high risk) WUI areas could be treated in any 5-year period; an estimated 33,766 acres could be treated under Alternative B (see Section 4.2.12, Wildland Fire Management). Alternative B would include approximately 1,182 to 3,545 acres annually of mechanical treatments and prescribed fire.

Short-term effects would include increased weed potential due to soil and vegetation disturbances associated with fire control, as well as loss of forage in burned areas, although some of these effects would be offset by use of BMPs and implementation of a weed management plan to minimize soil and vegetation disturbance.

Using mechanical and prescribed fire treatments on 1,182 to 3,545 acres of FRCC 2 and 3 lands annually would improve rangeland conditions in terms of weed control to the degree that such treatment occurred in rangeland cover types. Long-term effects would be lower weed potential and greater diversity of native plant species. Although short-term effects would include greater weed potential due to soil and vegetation disturbance associated with the treatments themselves, these effects would be offset by use of BMPs to minimize disturbance.

Chemical and biological treatments could be used on 844 to 6,078 acres annually would improve rangeland conditions in terms of weed control to the degree that these treatments occurred in rangeland areas. Using these treatments for weed control instead of mechanical methods or fire minimizes disturbance of soils and other vegetation, thereby eliminating the ground disturbing factors.

Effects from Visual Resources Management

Effects would be the same as those described under Alternative A.

Effects from Livestock Grazing Management

This alternative allows for a relatively low number of AUMs (~~6,254~~6,263) and allotment acres (105,619), and therefore has a relatively low potential for direct effects relative to current management. Possible effects are listed under Effects Common to All Alternatives. Under this alternative, the vacant Craig Mountain, vacant Wapshilla Ridge, and vacant Corral Creek allotments would be eliminated; and spring grazing on the Lyon Bar allotment would be discontinued. Because AUMs would decrease commensurate with reductions in total allotments, effects would result from having fewer acres grazed compared to Alternative A. Effects of assigning management levels (high or low) to other allotments would be that the BLM would have greater control over factors that affect rangeland vegetation, including number of AUMs and specific areas that should be closed to grazing to achieve resource goals.

Continuing to implement measures to ensure that Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management (BLM 1997a) (**Appendix A** [see Volume II~~I~~]) are being met would maintain rangeland health relative to other alternatives.

Effects from Minerals Management

This alternative offers the same amount of land open to locatable minerals (121,961 acres) and leasable minerals (131,044 acres) but has more rangeland (11,516 acres) covered by NSO or CSU stipulations than under current management. Therefore, potential effects as described under Effects Common to All Alternatives, above, would be lower than under Alternative A.

Effects from Recreation Management

All action alternatives would have the same number of acres (55,201) in SRMAs; therefore, effects from recreational activities would be the same on these lands across all action alternatives.

This alternative has more acres in areas classified as Primitive or Semiprimitive Nonmotorized than under current management; therefore, the potential for effects on rangeland vegetation from motorized or other high-impact recreational activities would be lower under this alternative than under current management.

Effects from Renewable Energy Management

Supporting development of electrical generating capabilities from biomass may lead to more development in rangeland areas. Development may be in the form of facilities or roads, both of which could increase the types of effects described under Effects Common to All Alternatives.

Effects from Transportation and Travel Management

Under this alternative there would be no areas designated as Open so no rangeland would be open to cross-country motorized travel. Motorized travel would be Limited to designated routes, which would lead to lower potential for disturbing rangeland vegetation and soils, lowering the potential for weeds to become established and for weed seed transport. Under this alternative, approximately 107 miles of roads would be subject to restrictions on motor vehicle use. Effects would include lower weed potential, which would lead to more stable vegetation communities, greater species diversity, and more normal fire potential and vegetation response. Assuming that the rate of new road construction does not increase, decommissioning, restoring, and obliterating obsolete roads would reduce road density, resulting in more rangeland vegetation, less weed potential, and less disturbance from vehicle use.

Use of signage, kiosks, press releases, and other public outreach materials to explain reasons for OHV closures and limited designation areas would increase public awareness of the effects of travel in sensitive areas, potentially lowering the effects to rangeland from this use.

Developing and implementing monitoring schedules and protocols to use on chosen trails would allow the BLM to determine effects from OHV use and to make adjustments as necessary. This would allow for greater control over travel practices that affect rangeland vegetation, as described under Effects Common to All Alternatives, above. Results would be lowered potential for effects on rangeland vegetation, including lower weed potential and lower direct loss of vegetation.

Implementing Road Management Guidelines would manage variables that cause erosion, changes in drainage patterns, and weed potential. Although many of these variables are addressed under current management, road guidelines codify the management practices so that they can be used on each project. Results of implementing these guidelines would be lower erosion and weed potential.

Effects from Lands and Realty Management

Consolidating landholdings through exchanges or disposal would allow for more efficient rangeland management. Management practices such as preparation of weed management strategies, prescribed burning, and grazing plans would be more efficiently planned for contiguous lands.

Consolidating linear rights-of-way and communication sites would reduce the amount of rangeland and other cover types that are dedicated to rights-of-way. This would reduce potential for direct loss of rangeland and other effects described under Effects Common to All Alternatives, above, relative to current management.

Effects from ACEC/RNA Management

Using integrated pest management to eliminate nondesirable vegetation would improve rangelands in areas where that practice occurred.

Protection measures for MacFarlane's four-o'clock would have the same effects as those proposed under Alternative A, although management of rangelands would be reduced slightly by reducing the Lucile Caves ACEC/RNA by 268 acres. Designating the Salmon River and Upper Lolo Creek ACECs may increase the number of acres of rangeland managed with ACEC restrictions, resulting in a higher level of management than under current management and less potential for effects.

Effects from Public Safety—Abandoned Mines and Hazardous Materials Management

Effects would be similar to those described under Alternative A, except some rangelands may be designated as NSOs due to contamination, which would result in decreased potential for disturbances to soils or vegetation in these areas.

Alternative C

Effects from Soils Management

Effects would be the same as those described under Alternative B.

Effects from Water Resources Management

Effects would be similar to those described under Alternative B, except that acres of conservation and restoration watersheds would increase by 6 percent over Alternative B and by 3 percent over

prescription watersheds under Alternative A. This would potentially increase the amount of rangelands receiving additional restrictions on disturbance factors.

Effects from Vegetation—Weeds Management

Effects would be the same as those described under Alternative B.

Effects from Vegetation—Rangelands Management

Effects would be similar to those described under Alternative B, except increased management of canyon grasslands may result in enhanced or maintained sensitive rangeland communities. Increased management may include greater weed control efforts, greater restrictions on grazing, and restrictions on travel in such areas.

Effects from Vegetation—Riparian and Wetlands

Livestock grazing would be permitted on 1,765 aces of riparian areas (out of 101,350 acres of rangelands) under Alternative C. The riparian/wetland acres would be 1.74 percent of the total rangeland acres and would be 17.06 percent less than offered for grazing under Alternative A and would be less than under any other alternative. Therefore, potential grazing-related effects would be least under this alternative.

Effects from Wildlife and Special Status Wildlife Management

Effects would be similar to those described under Alternative B. In addition, increased management of grasslands in the Lower Salmon River area for big game species could result in better rangeland conditions, including higher diversity of native plant species and reduced or maintained levels of weeds.

Effects from Aquatic Resources, Fish, and Special Status Fish Management

Effects would be similar to those described under Alternative B, except that acres of conservation and restoration watersheds would increase by 6 percent over Alternative B and by 3 percent over prescription watersheds under Alternative A. To the extent that these watersheds contain rangeland vegetation, conditions in rangelands would improve relative to current management and to a greater degree than under Alternative B. Improvements could include less erosion, better water retention, less soil compaction if grazing was reduced, and lower or maintained levels of weeds.

Effects from Special Status Plants Management

Effects would be the same as those described under Alternative B.

Effects from Wildland Fire Management

Effects would be similar to those described under Alternative B, except that 16,883 acres of the CFO classified as FRCC 2 or 3 (moderate to high risk) WUI areas could be treated in any 5-year period under Alternative C (see Section 4.2.12, Wildland Fire Management), 50 percent less than Alternative B. Alternative C would include approximately 1,182 to 4,390 acres annually of mechanical treatments and prescribed fire. This could result in reduced long-term rangeland health by reducing the area treated, but it could also possibly reduce the chances for short-term weed infestation by reducing disturbance related to fire control. Rangeland health may be affected by using prescribed fire to treat up to 100 percent of the CFO FRCC 2 and 3 (moderate to high risk) WUI areas over a 20-year period; however, this is the least of all alternatives. Therefore, potential for increased rangeland health in the long term in the form of diminished weed potential, increased native plant diversity, and reversal of tree encroachment into rangelands would be lower than all

other alternatives. Potential to increase rangeland health through prescribed fire treatments is greatest in rangelands that are in good condition and are attaining the standards specified in the Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management (BLM 1997a) (**Appendix A** [see Volume II~~I~~]). Rangelands that are already weed infested or otherwise disturbed may not benefit from such treatments, and such treatments may favor weeds in those cases.

Effects from Visual Resources Management

Effects would be similar to those described under Alternative B, except that the amount of VRM Classes I and II would increase by approximately 30 percent. Acres in VRM Classes I and II would increase about 37 percent from current management, decreasing potential for disturbance of rangelands over this amount of land.

Effects from Livestock Grazing Management

This alternative allows for the lowest number of AUMs (6,020) and allotment acres (101,350), and therefore has lower potential for direct effects relative to Alternative A. Possible effects are listed under Effects Common to All Alternatives, above.

Effects from Minerals Management

Effects would be similar to those described under Alternative B, except that NSOs in nonforested rangeland areas would increase to 18,058 acres, an increase of approximately 28 percent over Alternative B. This would decrease the potential for mining ~~mineral~~ related effects relative to Alternatives A and B.

Effects from Recreation Management

Effects would be the same as those described under Alternative B.

Effects from Renewable Energy Management

Effects would be the same as those described under Alternative B.

Effects from Transportation and Travel Management

Effects would be the same under this alternative as described under Alternative B, except that this alternative would include Craig Mountain and American Hills Lake ACECs. In addition, the BLM's efforts to decrease motor vehicle use of roads and trails on 38,733 acres would reduce potential for direct loss of vegetation and weed seed introduction in these areas.

Effects from Lands and Realty Management

Effects would be the same as those described under Alternative B.

Effects from ACEC/RNA Management

Effects would be similar to those described under Alternative B, except that rangeland in ACEC/RNAs would increase by 1,630 acres.

Effects from Public Safety—Abandoned Mines and Hazardous Materials Management

Effects would be the same as those described under Alternative B.

Alternative D

Effects from Soils Management

Effects would be the same as those described under Alternative B.

Effects from Water Resources Management

Effects would be similar to those described under Alternative B, except that acres of conservation and restoration watersheds would decrease by 19 percent from those in Alternative B and by 21 percent from prescription watersheds under Alternative A, potentially reducing the amount of rangeland restored as a result of this program.

Effects from Vegetation—Weeds Management

Effects would be the same as those described under Alternative B.

Effects from Vegetation—Rangelands Management

Effects would be the same as those described under Alternative B.

Effects from Vegetation—Riparian and Wetlands

Livestock grazing would be permitted on 2,324 aces of riparian areas (out of a total of 135,850 acres of rangelands) under Alternative D. The riparian/wetland acres would be 1.71 percent of the total acres and would be 9.21 percent more than offered for grazing under Alternative A and would be more than any other alternative. Therefore, potential for grazing-related effects is highest under this alternative.

Effects from Wildlife and Special Status Wildlife Management

Effects would be the same as those described under Alternative B.

Effects from Aquatic Resources, Fish, and Special Status Fish Management

Effects would be the same under this alternative as described under Alternative B, except that acres of conservation and restoration watersheds would decrease by 19 percent from those in Alternative B and by 21 percent from prescription watersheds under Alternative A, potentially reducing the amount of rangeland restored as a result of this program.

Effects from Special Status Plants Management

Effects would be the same as those described under Alternative B.

Effects from Wildland Fire Management

Effects would be the same under this alternative as described under Alternative B, except that use of wildland fire for resource benefits would decrease. This could affect rangeland restoration efforts and may allow for greater encroachment of tree species into grasslands.

Effects would be similar to those described under Alternative B, except that 50,650 acres of the CFO classified as FRCC 2 or 3 (moderate to high risk) WUI areas could be treated in any 5-year period under Alternative D (see Section 4.2.12, Wildland Fire Management), 50 percent more than Alternative B and triple that under Alternative C. Alternative D would include approximately 2,870 to 7,597 acres annually of mechanical treatments and prescribed fire. With chemical treatments proposed on up to 36 percent of these areas as well, many of the treatments would be geared towards weed control. Such increased treatments may decrease the amount and density of weed

populations in rangelands of the CFO to a greater degree than Alternative C (80 percent more), the same as Alternative B, and less than Alternative A (57 percent less).

Effects from Visual Resources Management

Effects would be similar to those described under Alternative B, except that the amount of VRM Classes I and II would decrease by approximately 6 percent. Acres in VRM Classes I and II would decrease about 20 percent from current management, increasing potential for disturbance of rangelands over this amount of land. Because the amount of rangeland in VRM Classes I and II would be lowest under this alternative, the potential for disturbance-related effects is highest.

Effects from Livestock Grazing Management

Effects would be similar to those described under Alternative B, except that AUMs (8,54~~0~~9) and acres within allotments (135,850) would increase to the highest amount of any alternative. Therefore, the potential for grazing-related effects is highest under this alternative, although the majority of acres proposed for grazing is intermingled with Idaho Department of Fish and Game and The Nature Conservancy lands and currently are vacant.

Effects from Minerals Management

Effects would be similar to those described under Alternative B, except that NSOs in rangeland areas would increase to 11,782 acres, slightly reducing the potential for effects relative to Alternative B but to a much lesser degree than Alternative C. The least amount of area would be subject to CSU stipulations, which could reduce the amount of protection of rangelands.

Effects from Recreation Management

Effects would be the same as those described under Alternative B.

Effects from Renewable Energy Management

Effects would be the same as those described under Alternative B.

Effects from Transportation and Travel Management

Under this alternative, 23,189 acres would be Open to cross-country motorized travel, which would create the highest potential for disturbance-related effects, including increased erosion and weed potential, to rangeland of any alternative except for Alternative A.

Effects from Lands and Realty Management

Effects would be the same as those described under Alternative B.

Effects from ACEC/RNA Management

Effects would be similar to those described under Alternative B, except that rangeland areas in ACEC/RNAs would increase by 1,630 acres. In addition, potential use of livestock to achieve resource objectives in Wapshilla Ridge may lead to an increase in grazing-related effects on rangeland to the degree that it exists there. Effects may include short-term increases in weed potential followed by long-term decreases as ecological health of such areas increases.

Effects from Public Safety—Abandoned Mines and Hazardous Materials Management

Effects would be the same as those described under Alternative B.

Cumulative Effects

Rangeland vegetation types are of increasing importance because much of what was historically grassland and shrubland of the cumulative impact assessment area has been converted to other cover types or has been heavily grazed. For example, much of the Palouse prairie has been converted to farmland.

Much of the range vegetation of the CFO is noncontiguous, meaning that it is heavily affected by management actions aimed at other resources. Past, present, and reasonably foreseeable actions that are relevant to range management include land tenure changes, wildland fire and wildland fire use and suppression, fuel and vegetation treatments, timber harvest, minerals management, population growth, recreational use, OHV use, watershed restoration activities, regional planning efforts, weed management efforts, and grazing. The types of impacts that have occurred and would continue to occur include loss of plant diversity, loss of soil integrity, changes in seral stage, reduction of forage for livestock and wildlife, changes in fire regime, and reduced ecosystem function.

Consistent with other regional plans, areas where cross-country OHV use is allowed would be further restricted or eliminated under all of the Cottonwood RMP alternatives, except Alternative A. Closures directly affect rangeland vegetation by reducing disturbance and weed seed introduction. Although increasingly more OHVs are in use throughout the cumulative impact area, the trend towards concentrating them into designated areas would enhance range management efforts in most habitat types by reducing the extent of disturbance and fragmentation. Several proposed actions in the Cottonwood RMP would address FRCC classes and work to move Class 3 areas into Classes 2 or 1. Since many rangelands are infested with weeds, this cumulative effect could be substantial throughout the cumulative impact area. Alternative D would offer the greatest amount of treatments, with Alternative C offering the least.

Cumulative effects would be similar among the alternatives. Alternative A would contribute to more regional cumulative effects resulting from land tenure adjustments, open OHV use, and wildland fire suppression. In general, Alternatives B, C, and D would provide more management measures than Alternative A that would directly or indirectly reduce the potential for cumulative impacts. The emphasis in Alternative C on actions that value resource conservation, protection, and minimal human intervention would have the least impact or risk of impacts on rangeland management and would contribute the least to cumulative impacts.

4.2.8 Vegetation—Riparian and Wetlands

Goal: Maintain or improve riparian and wetland areas to achieve proper functioning condition. Manage for riparian plant community types appropriate for the site.

Summary

Measures would be implemented to protect riparian areas under all alternatives. Under Alternative A, riparian and wetlands management for the CFO includes Riparian Management Guidelines (BLM 1985e), PACFISH (BLM and Forest Service 1995), and MFP Supplement for Fisheries and Water Quality Objectives (BLM 1985d). Under Alternatives B, C, and D, an Aquatic and Riparian Management Strategy (**Appendix F** [see Volume II~~I~~]) was developed, and is somewhat similar to Alternative A for providing conservation and restoration measures for fisheries and water resources. The Aquatic and Riparian Management Strategy (**Appendix F**) provides more flexibility for adaptive

management, which is also specific to the incorporation of the aquatic and riparian habitat component of ICBEMP into BLM land use plans.

The default buffer zones sizes for streams and water bodies would vary for these four alternatives; however, Alternative C would provide the most protection, followed by Alternative A, B, and D (least protective). Alternative A identifies prescription watersheds, and Alternatives B, C, and D designate conservation and restoration watersheds to focus management efforts for the maintenance or improvement of riparian areas and aquatic habitats. **Table 4-12** identifies the indicators that were used to analyze effects on riparian and wetlands resources under each alternative.

Table 4-12
Comparison of Vegetation—Riparian and Wetlands Indicators by Alternative

Indicator	Alternative A	Alternative B	Alternative C	Alternative D
Number of miles of streams in PFC flowing across BLM lands	537 miles	537 miles	537 miles	537 miles
Riparian and wetland general management direction.	Management emphasis on riparian guidelines and BMPs	Inventory and prioritize streams, riparian areas, and wetlands for maintenance of PFC or strive to achieve PFC	Inventory and prioritize streams, riparian areas, and wetlands for maintenance of PFC or strive to achieve PFC	Inventory and prioritize streams, riparian areas, and wetlands for maintenance of PFC or strive to achieve PFC
Number of acres of riparian buffer areas in RHCAs (Alternative A) and RCAs (Alternatives B, C, D)	24,290 acres	22,847 acres	27,624 acres	20,710 acres
Total miles of stream flowing across BLM lands within prescription watersheds (Alternative A) and within conservation and restoration watersheds (Alternatives B, C, D)	69 miles	80 miles	81 miles	65 miles

Source: BLM 2004a

Methods of Analysis

Indicators

Indicators are used to identify the level of impact. For riparian and wetlands, the indicators used for impact analysis are identified in **Table 4-12**, Comparison of Vegetation—Riparian and Wetlands Indicators by Alternative.

Methods and Assumptions

Impacts were identified using best professional judgment and were assessed according to the following methods and assumptions:

- The RCA stream buffers under the Aquatic and Riparian Management Strategy (**Appendix F** [see Volume III~~I~~]), extend to all riparian zones in the CFO and restrict most activities to those that would benefit or restore the quality of habitat within these areas;

- Different program actions are assessed for their effects on vegetation resources;
- Activities generally affect vegetation by changing plant composition, seral condition, structure, production, ground/canopy cover, and soil resources;
- Restoring riparian and wetland vegetation is assumed to include a correction in the species composition and structure, including stand density and age, where appropriate;
- Livestock type and stocking rates would remain the same over the planning period;
- Current trends in plant succession/vegetation would continue;
- Vegetation communities would be maintained with a mix of species composition, cover, and age classes;
- Noxious and invasive weeds would continue to be introduced and spread as a result of ongoing vehicle traffic in and out of the CFO planning area, recreational activities, wildlife and livestock grazing and their movements, and surface-disturbing activities;
- Noxious and invasive weeds would further expand into native plant communities, and disturbances to these communities would expand opportunities for the spread of nonnative invasive plant species;
- The BLM would continue to treat noxious and invasive weeds and pests on public land and grazing allotments, and livestock permit holders, right-of-way holders, mineral lease claim, and permit holders would continue to treat noxious and invasive weeds and pests on public land, as stipulated within their permits and authorizations;
- Weed and pest control would be carried out in coordination with the appropriate county weed and pest control district and with owners of adjacent property; and
- Because snowmobiles do not disturb soils to a significant degree, effects to riparian vegetation from snowmobile use would be minimal and confined to occasional damage to shrubs that emerge from the snow in the path of snowmobiles.

Effects Common to All Alternatives

Effects from Soils Management

Designing projects to avoid or minimize the potential for adverse effects in sensitive land types would help to maintain vegetation quality in riparian zones by reducing erosion.

Effects from Water Resources Management

Since riparian zones are an integral part of floodplains, restricting actions that would cause definable adverse effects to the natural and beneficial functions of floodplains would, by necessity, require that riparian zones are not adversely affected.

Effects from Vegetation—Forests Management

Riparian vegetation would be protected from direct effects from timber harvest and other forest practices by implementing RHCAs according to the Riparian Management Guidelines (BLM 1985e) and PACFISH (BLM and Forest Service 1995) or as RCA stream buffers under the Aquatic and Riparian Management Strategy (**Appendix F** [see Volume III]) (see **Table 4-12**, Comparison of Vegetation—Riparian and Wetlands Indicators by Alternative). Although some timber harvest may still be allowed in buffer zones, it would be subject to guidelines that would ensure that soils and vegetation were preserved or enhanced. These plans allow short-term adverse effects for long-term beneficial effects or no net change actions.

Potential for effects can be seen as directly related to PSQ, since higher PSQ means that either a larger area would be subjected to logging or the same amount of area would be logged more intensively. Therefore, alternatives with higher PSQ are more likely to indirectly or directly affect riparian resources.

Effects from Vegetation—Weeds Management

Weed management strategies would reduce competition between riparian vegetation and invasive species, leading to healthier riparian zones. Some strategies may actively restore riparian areas that have been impaired by weed infestation, increasing riparian health. Strategies may require cessation of, or restrictions on, activities occurring in riparian zones that could increase weed potential, including grazing, OHV use, or logging. Potential for such effects is the same across all alternatives.

Working with partners at other land management agencies would increase the scope of weed control efforts and reduce the potential for weed seed introduction from outside the CFO. Partnering would give the BLM greater resources to draw from in terms of local weed knowledge and it could give the BLM a greater labor pool to draw from, creating a regional approach to weed control.

~~*Effects from Vegetation—Riparian and Wetlands*~~

~~Implementing RHCAs as described in the Riparian Management Guidelines (BLM 1985e) and PACFISH (BLM and Forest Service 1995) or RCA stream buffers according to the Aquatic and Riparian Management Strategy (Appendix F [see Volume III]) would improve or maintain riparian habitat by limiting actions within riparian zones to those that would preserve or improve such habitat. Activities most likely to be restricted in such areas are those associated with mining, timber management, grazing, and transportation. Soil erosion, loss of vegetation, and diminished bank stability would decrease as a result of establishing buffers as described.~~

Effects from Special Status Plants Management

Management measures that would protect sensitive riparian plant species would indirectly protect aquatic habitats by maintaining healthy riparian areas where sensitive plant species occur.

Effects from Wildland Fire Management

Suppressing wildfires within one operational period, using Appropriate Management Response, would protect riparian areas from destructive wildfire and would allow for flexibility for using wildfire to achieve resource management goals. Although riparian areas generally do not burn as frequently as grasslands or dry forests, some effects, including maintenance of plant diversity and canopy structure, may be better achieved by use of occasional fires.

Riparian resources could be affected if fire equipment needed to enter these zones for suppression tactics. These effects could include soil disturbance, which could facilitate weed growth and loss of vegetation.

Implementing measures to stabilize burned areas would affect riparian areas by ensuring that proper conditions for vegetative regeneration would be present.

Effects from Forest Products Management

Indirect effects could occur if forest management practices in adjacent areas resulted in clearcuts, significant soil disturbance, or changes in vegetation type or structure. Potential effects such as greater weed potential, changes in water retention, or changes in riparian vegetation resulting from

changes in the amount of sunlight reaching lower levels of riparian vegetation are unlikely to occur since RCA buffer widths are generally much wider than the riparian zone that they protect. Additional effects occur when timber harvest changes the forest canopy cover to result in changes to Equivalent Clearcut Acres, which may affect the flow regimes (high and low) and base flow conditions. Such hydrologic effects may affect stream channels/streambanks, floodplains, and riparian areas.

Effects from Visual Resources Management

VRM Classes I and II contain restrictions that may limit the amount of timber harvest or mineral resource extraction that may occur within riparian buffer areas. Although these restrictions are not intended specifically to protect riparian biological resources, they would protect such resources if proposed activities would affect the visual landscape. VRM Classes III and IV contain few restrictions limiting land uses. The increased restrictions associated with Classes I and II could indirectly protect aquatic and riparian habitats from impacts associated with other land uses.

Effects from Livestock Grazing Management

Although riparian zones may cover only a small amount of a given planning area, grazing cattle are most likely to be found in such areas during the summer. This is due to the fact that riparian vegetation is most likely to be green and lush even during the dry summer months, and also because riparian zones are cooler than associated uplands. The BLM would monitor livestock use of such areas and adjust livestock use as necessary to comply with Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management (BLM 1997a) (**Appendix A** [see Volume II~~I~~]). This would ensure that no adverse effects occur to riparian areas from grazing livestock.

Effects from Minerals Management

Minerals management actions would result in the localized removal of vegetation during both exploration and development work. Mineral development actions would also fracture continuous vegetation communities, change plant community structure and diversity, and alter vegetation landscapes. Long-term impacts would mostly be associated with the location and design of roads. Increased erosion and decreased vegetation cover would occur from soils compaction and the channelization of surface runoff in ruts and road ditches. Areas below mid-slope roads become drier, which reduces plant productivity and can potentially change species composition.

Designation of 131,044 acres as open to leasing subject to terms and conditions of the standard lease form, without assigning significant stipulations in those areas, could result in an increased impact on riparian vegetation in these areas. The standard lease stipulations include complying with established acts, laws, and regulations governing BLM land management, including the Riparian Management Guidelines (BLM 1985e) and the Aquatic and Riparian Management Strategy (**Appendix F** [see Volume II~~I~~]). Because of these guidelines, very little mineral activity would be allowed in riparian areas, and most effects would be indirect.

Effects from Recreation Management

Increased recreation use and demand require an increased management response to minimize potential effects, leading to SRMA designation. Potential impacts to riparian areas from increased recreational use may include direct loss of vegetation, fragmentation of habitat from construction of social trails, and increased weed potential. Increased visitor use without increased management and SRMA designation would be expected to result in greater impacts.

Lands in ROS classes Primitive or Semiprimitive Nonmotorized would be subject to the least potential disturbance from recreational activities. Greater amounts of motorized or high-impact recreational activities could occur under the other ROS classes, increasing the potential for direct vegetation disturbance, soil disturbance, or weed seed introduction in riparian areas.

Effects from Transportation and Travel Management

OHV use and road construction would result in effects such as loss of vegetation cover and density, fragmentation of habitat, and composition changes. OHV users would introduce and spread noxious and invasive weed seeds from their vehicles, shoes, clothing, and recreational equipment and would cause soil disturbances that result in increased weed potential and erosion. Potential effects are greatest in areas designated as Open to OHV use and are least in areas designated as Closed to OHV use. The amount of allowable OHV use varies by alternative. In most cases, snowmobiles have minimal impact on riparian vegetation or soils.

Effects from Renewable Energy Management

Potential effects from geothermal, wind, and solar energy development are predominantly associated with the construction, use, and maintenance of roads and facilities. Road-related activities could result in increased fragmentation of riparian habitat and increased weed potential from soil disturbances and increased vehicle traffic. Renewable energy development actions could also change plant community structure and diversity, and alter vegetation landscapes. Long-term impacts would mostly be associated with the location and design of roads. Increased erosion and decreased vegetation cover would occur from soils compaction and the channelization of surface runoff in ruts and road ditches. Areas below mid-slope roads become drier, which reduces plant productivity and can potentially change species composition. Right-of-way avoidance and exclusion areas would protect against these potential impacts.

Renewable energy projects would be unlikely to occur in riparian areas. Those that may occur include biomass projects as part of a salvage operation. Effects on riparian zones could include soil compaction, loss of vegetative cover, and loss of habitat diversity in riparian zones as woody debris was removed. This effect would be minimized by implementing RHCAs under Alternative A or RCA stream buffers under Alternatives B, C, and D, in which guidelines would allow only those activities that resulted in enhanced or maintained riparian conditions.

Effects from ACEC/RNA Management

Protection of the riparian habitat at the Clearwater River Islands Goose Nesting Area would indirectly protect aquatic habitats and fisheries in this section of the Clearwater River. Similar protection would occur at the Lower and Middle Creek Cottonwoods Islands, Captain John Creek, Lower Salmon River, and Lucile Caves ACEC/RNAs.

Timber harvest restrictions and prohibition of livestock grazing would protect riparian and aquatic habitats in the Craig Mountain WMA from impacts associated with these land uses.

Protection of resource values including the riparian habitat along Lower Lolo Creek would result in direct effects on riparian resources, resulting in improved riparian vegetation and maintained soil and bank integrity.

Effects from Wild and Scenic Rivers Management

The majority of areas found suitable for inclusion in the NWSRS are already managed as riparian buffer zones under the Riparian Management Guidelines (BLM 1985e), Fisheries and Water Quality Objectives and Sediment Budgets (BLM 1985d), and PACFISH (BLM and Forest Service 1995). The remaining areas would be managed as such under the Aquatic and Riparian Management Strategy (**Appendix F** [see Volume III]), but would receive another layer of protection by being managed to protect the outstandingly remarkable values of each suitable segment.

Effects from Wilderness and Wilderness Study Areas Management

Managing 750 acres of the Frank Church/River of No Return Wilderness per the Wilderness Act would remove potential for effects from mining, forestry practices, or motorized transportation. Similar effects would occur by managing 5,571 acres at Marshall Mountain WSA and 6,463 acres at Snowhole Rapids WSA under the BLM's Interim Management Policy for Lands under Wilderness Review. These types of management would protect vegetation and soils in riparian areas from effects related to these types of activities.

Effects from Public Safety—Abandoned Mines and Hazardous Materials Management

Restoring AMLs would increase health of riparian areas to the degree that cleanups occurred in this habitat type, since part of the cleanup of such areas includes revegetation and grading to conditions similar to those of surrounding areas.

Under all alternatives, AML remediation would include restoration of vegetation. This would benefit riparian vegetation to the extent that such remediation occurred in riparian areas.

Alternative A

Effects from Soils Management

Maintaining buffers of riparian vegetation between streams and roads as described in the Road Guidelines (**Appendix B**, Best Management Practices [see Volume III]), the Riparian Management Guidelines (BLM 1985e), and PACFISH (BLM and Forest Service 1995) would minimize effects on riparian vegetation from vehicle use or roadway erosion. Federal listing of salmon, steelhead, and bull trout, provides for increased riparian protection in watersheds with listed fish. All sixth-code HUCs within the planning area provide habitat for one or more listed fish.

Implementing riparian management guidelines would create buffer zones in which actions must protect or improve riparian-dependent resources, ensuring that there would be no adverse effects on vegetation or other riparian resources.

Designing projects to avoid potential for mass wasting could protect riparian vegetation by reducing potential for disturbance from landslides. Such disturbance could increase the weed potential or allow for localized vegetation changes. The PACFISH (BLM and Forest Service 1995) provides measures to restrict land uses on landslide-prone areas.

Effects from Water Resources Management

Implementing road guidelines and riparian management guidelines would have similar effects, as described under Effects from Soils Management.

Wetland and riparian vegetation plays an integral part in ensuring that watersheds capture, retain, and release water appropriately. Therefore, developing plans to alleviate watershed problems would by necessity require maintaining or restoring such vegetation.

Maintaining thermal water quality would require maintaining sufficient riparian vegetation to provide thermal regulation of fish-bearing streams. This would require maintaining normal canopy height, composition, density, and structure in riparian areas. Federal listing of salmon, steelhead, and bull trout provides for increased riparian protection in watersheds with listed fish. All sixth-code HUCs within the planning area provide habitat for one or more listed fish. Riparian Management Guidelines (BLM 1985e) and PACFISH (BLM and Forest Service 1995) provide for various land use restrictions within default buffer areas.

Effects from Vegetation—Forests Management

Riparian vegetation would be protected from direct effects from timber harvest and other forest practices by implementing buffers according to the riparian management guidelines. Although some timber harvest may still be allowed in buffer zones, it would be subject to guidelines that would ensure that soils and vegetation were preserved or enhanced. Riparian Management Guidelines (BLM 1985e) and PACFISH (BLM and Forest Service 1995) provide for timber harvest restrictions within default buffer areas. Under Alternative A, these buffers amount to 24,290 acres.

Effects from Vegetation—Weeds Management

Possible restrictions on use of herbicides in riparian and aquatic areas may reduce the efficiency of BLM weed control efforts.

Inventorying and mapping weed populations would allow the BLM to prioritize treatment areas and minimize infestation of riparian and wetland areas. Instituting weed control measures for particular actions would help to fund and expand the BLM's weed control program.

Incorporating weed-control measures into contracts would diminish the possibility of new infestations in riparian and wetland areas, provided that the measures included such requirements as vehicle pre- and post-washing and restoration actions for disturbed soils/vegetation.

Effects from Vegetation—Riparian and Wetlands Management

A total of 24,290 acres of riparian habitat would be protected as RHCAs under this alternative. Effects are described under Effects Common to All Alternatives, above.

Improving 7.25 miles of streams from poor to fair or better condition would require restoration of riparian zones in these particular areas to the extent that degraded riparian areas could be restored by changed BLM management actions or other site specific restoration actions.

Effects from Wildlife and Special Status Wildlife Management

Measures to protect sensitive animal species, including the yellow-billed cuckoo and willow flycatcher, that depend on riparian areas for all or part of their lifecycle would require preservation or enhancement of riparian conditions. However, few special status animal species in the CFO are riparian-dependent, so wildlife management actions under this alternative would have little effect on riparian areas.

Improving conditions on 8,803 acres of ~~range~~ rangeland for wildlife benefit would involve improvements to riparian habitat to the extent that riparian habitat occurs in this rangeland. Improvements may occur from reduced grazing, prescribed burning, vehicle restrictions, and manipulation of cover/forage ratios.

Development of new or continuation of existing wildlife HMPs would often have direct and indirect beneficial effects for riparian habitats.

Effects from Aquatic Resources, Fish, and Special Status Fish Management

Developing aquatic HMPs to maintain fisheries habitat and riparian areas would result in increased management of vegetation in riparian zones along these waterways. Few actions beyond current management are proposed that would affect riparian areas.

Effects from Special Status Plants Management

Measures to protect sensitive plant species, including Case's corydalis *(Corydalis caseana ssp hastata)*, chatterbox orchid *(Epipactis ~~gigantcum~~gigantea),* Douglas' clover *(Trifolium douglasii)*, western ladies tresses *(Spiranthes porrifolia)*, spacious monkey flower *(Mimulus ampliatus)*, and Idaho barren strawberry *(Waldsteinia idahoensis)*, that depend on riparian areas for all or part of their lifecycle would require preservation or enhancement of riparian conditions. Actions required to accomplish this may require restrictions on soil and vegetation treatments in riparian areas. Such affected land uses may include road construction, timber harvest, and grazing management, leading to direct effects on riparian vegetation and reducing the potential for weed infestation, soil compaction, and erosion.

Effects from Wildland Fire Management

Most effects on riparian vegetation from wildfire management are described under Effects Common to All Alternatives. In general, management measures under this alternative are less proactive than under the action alternatives.

Effects from Visual Resources Management

Under Alternative A, 12,704 acres would be designated as VRM Class I, and 41,195 acres would be designated as Class II. Effects are described under Effects Common to All Alternatives, above.

Effects from Forest Products Management

Under this alternative, logging would only be allowed in riparian areas for salvage operations or to attain PFC goals, assuming that such practices did not affect attainment of riparian management objectives. Some treatments would be allowed but only those that would result in maintenance or enhancement of riparian resources. Therefore, riparian areas would be minimally affected by logging practices. Potential indirect effects are listed under Effects Common to All Alternatives. Such effects are most likely to occur where riparian areas are very wide and are adjacent to the 24,257 acres classified for intensive forest practices and are least likely to occur in areas adjacent to the 37,549 acres classified for custodial forest management.

Effects from Livestock Grazing Management

Despite measures to minimize impacts, grazing has the potential to cause extensive effects on riparian resources as described under Effects Common to All Alternatives. This alternative offers 2,128 acres of riparian areas to grazing livestock (out of 122,732 acres). The riparian/wetlands acres would be 1.94 percent of the total acres. The BLM has consulted with the National Marine Fisheries Service and USFWS in relation to listed species and has implemented riparian use criteria and

monitoring in order to assure grazing use in critical habitat is compatible with listed species, minimizing the potential for adverse effects in critical habitat areas. Other areas not considered critical habitat for listed species must meet the Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management (BLM 1997a) (**Appendix A** [see Volume III]), which contain criteria for riparian habitat quality. Meeting such criteria would help to minimize effects on riparian habitat from livestock grazing.

Effects from Minerals Management

Managing ACECs as NSO would keep 23,219 acres off limits to surface occupancy associated with leasable mineral activities, and in most cases, mineral material activities. Although this would protect riparian zones within those lands from effects associated with these activities, the protected amount is the least of any alternative; therefore, the potential for effects is greatest under this alternative.

Effects from Recreation Management

Under this alternative, 33,197 acres would be designated as ROS classes Primitive or Semiprimitive Nonmotorized. These areas could be subject to disturbance under the other ROS classes.

Developing SRMA activity plans for Salmon River Scenic, Salmon River Recreational, and Clearwater River SRMAs would take into account potential effects on riparian ecosystems, potentially lowering the possibility of effects to such areas.

Under this alternative, 26,682 acres would be designated as SRMAs. Projected increases in recreation would occur but would be matched by commensurate increases in management on less land. Cross-country motorized vehicle travel can impact riparian vegetation and soils and accelerate spread of weeds.

Effects from Renewable Energy Management

Potential effects from renewable energy projects are similar to those that could occur from minerals management, forest vegetation management, and forest products management (see those sections under Effects Common to All Alternatives).

Effects from Transportation and Travel Management

Potential for the types of effects listed under Effects Common to All Alternatives is greatest under Alternative A. This is because 85,308 acres are Open to OHV use. Also, because there are fewer restrictions and possibly less area covered under riparian management units than under RCA stream buffers, potential effects on riparian areas from OHV use and road construction is generally greater.

Effects from Lands and Realty Management

Initiating road easement acquisition only after development of activity plans would require assessment of potential effects on riparian resources. Such effects would be considered on a project-level basis.

Continued withdrawal of public lands located within 0.25-mile of the Salmon River would provide protection of riparian areas along the Salmon River from potential impacts associated with mining. Although this would affect 18,532 acres, this area is already heavily impacted by weeds, minimizing one of the main benefits of withdrawal.

Effects from ACEC/RNA Management

Prohibiting livestock grazing and logging in the Captain John Creek area would reduce defoliation and promote soil and bank integrity on 1,321 acres, some of which are in riparian areas. Permitting no new rights-of-way or roads within 300 feet of Lolo Creek would protect riparian resources within that buffer strip from direct loss of vegetation or loss of soil and bank integrity. Maintenance and protection of resource values identified for designation of ACEC/RNAs would have direct and indirect benefits to riparian habitats found in Craig Mountain, Lower Salmon, and Lucile Cave ACECs, including bank and soil stabilization and increased protection of vegetation.

Alternative B

Effects from Geology Management

Increasing public awareness of unique geological features would create opportunities for increasing awareness of the value of other unique features, including riparian areas and wetlands.

Increased public access to unique geological sites could affect riparian areas and wetlands if such access brought more people to or through these areas. Potential effects would include creation of social trails, loss of vegetation, fragmentation of habitat, and increased chances of weed introduction; these potential effects would be minimized by proper trail maintenance, placing educational signs, and routing access ways away from sensitive features.

Effects from Soils Management

Implementing BMPs for soil-disturbing activities would minimize soil erosion and protect riparian habitats to a greater degree than the MFP Road Guidelines (BLM 1981a) or the Riparian Management Guidelines (BLM 1985e). This would require the BLM to maintain or increase PFC of riparian habitats.

Measures to protect landslide-prone areas and minimize potential for mass wasting would protect riparian habitat to the extent that it occurs in landslide-prone areas. Measures implemented under all alternatives are similar in regards to actions allowed within riparian habitats and landslide-prone areas, which may impact soils and vegetation.

Effects from Water Resources Management

Promoting activities to achieve DFCs in restoration watersheds would help increase the amount of PFC riparian habitat and indirectly benefit aquatic resources. ~~Thirty-two~~Twenty-eight watersheds would be managed as restoration watersheds and ~~1~~ three would be managed as~~ a~~ conservation watersheds, totaling 64,481 acres, which is 2 percent less than the prescription watersheds in Alternative A (66,077 acres).

Effects from Vegetation—Forests Management

Riparian vegetation would be protected from direct effects from timber harvest and other forest practices by placing 22,847 acres into RCA stream buffers according to the Aquatic and Riparian Management Strategy (**Appendix F** [see Volume II~~I~~]), 1,443 acres less than Alternative A. Although some timber extraction may still be allowed in buffer zones, it would be done only to enhance or preserve riparian conditions.

Effects from Vegetation—Weeds Management

Although there are no weed management actions specifically for riparian areas, actions to prevent the introduction of weeds or prevent the spread of existing ones would benefit habitat in riparian areas, similar to Alternative A. Measures to increase public awareness are increased under this alternative, as are measures to restore weed-affected areas and remove weed infestations. Weed potential in riparian areas would decrease under this alternative due to these increased measures.

Effects from Vegetation—Riparian and Wetlands Management

This alternative would place 22,847 acres into RCA stream buffers, which is 6 percent less than Alternative A. Most effects are described under Effects Common to All Alternatives. Overall efforts to restore degraded riparian resources or to decrease potential effects, including land use restrictions and active recontouring and reseeding, would be increased under this alternative and would lead to improved riparian health over current conditions. These efforts would be part of the BLM's strategy of moving sites toward PFC.

Effects from Wildlife and Special Status Wildlife Management

Actions to restore, protect, or maintain habitat for listed species would require maintaining adequate roost trees for bald eagles and cover for the yellow-billed cuckoo. Protecting both of these species would require maintaining adequate canopy structure and understory complexity, both of which are measures of PFC. Restoring unnecessary roads and trails would decrease habitat fragmentation and reduce disturbances that could increase weed potential.

Designing projects to preserve wildlife travel corridors would require preservation of adequate vegetation along riparian corridors, as these areas are frequently used for migration and travel by wildlife due to the density of vegetation found there.

Implementing grazing season of use would protect riparian habitat during sensitive periods in the lifecycle of aquatic species, indirectly leading to short-term effects on riparian vegetation. Development of new or continuation of existing wildlife HMPs would often have direct and indirect beneficial effects for riparian habitats and dependent wildlife.

Effects from Aquatic Resources, Fish, and Special Status Fish Management

Implementing specific standards and guidelines according to the Aquatic and Riparian Management Strategy (**Appendix F** [see Volume II~~I~~]) would allow only those activities that would minimize effects to riparian resources.

~~Thirty-two~~Twenty-eight watersheds would be managed as restoration watersheds and ~~1~~ three would be managed as~~ a~~ conservation watersheds (totaling 64,481 acres), which is 2 percent less than the prescription watersheds in Alternative A (66,077 acres). Development of new or continuation of existing aquatic HMPs would often have direct and indirect beneficial effects for riparian habitats and native fish species.

Effects from Special Status Plants Management

Effects would be the same as those described under Alternative A.

Effects from Wildland Fire Management

Effects would be similar to those described under Alternative A, although under this alternative effects may occur to riparian resources in the Craig Mountain ~~FMU~~FMA and portions of the Salmon ~~FMU~~FMA through evaluating and using wildfire for resource benefits.

Chemical, mechanical, or biological treatments on FRCC 2 or 3 lands may improve forest and rangeland health and would improve riparian health to the extent that such habitat is found in treated areas. Fuels treatments that emphasize biomass utilization would not affect riparian resources within RCA, since only actions that maintain or enhance such habitat would be allowed. Suspending livestock grazing in burned areas would decrease potential for damage to soils or vegetation made sensitive by being burned.

Effects from Visual Management

Effects under Alternative B would be the same as those described under Alternative A.

Effects from Forest Products Management

Potential impacts from forest products management are described under the Forest Products Management section of Effects Common to all Alternatives. As mentioned previously, a PSQ of 3,129 MBF on 40,598 acres is less than Alternative A (6,600 MBF on 35,757 acres), meaning that there is less potential for effects from logging activities under this alternative.

Protection of riparian areas during road construction would be provided by the buffer zones associated with the Road Construction Guidelines and the Aquatic and Riparian Management Strategy (**Appendix F** [see Volume II~~I~~]). The potential impacts based on buffer zone size are described under the Effects from Vegetation—Riparian and Wetlands Management section.

Effects from Livestock Grazing Management

Livestock grazing would be permitted on 1,880 aces of riparian areas (out of 105,619 acres) under Alternative B. The riparian/wetland acres would be 1.78 percent of the total acres and would be 11.65 percent less than offered for grazing under Alternative A. Therefore, potential effects are lower under this alternative than under Alternative A. Potential effects are listed under Effects Common to All Alternatives.

Effects from Minerals Management

The NSO stipulations would protect riparian habitats from surface-disturbing activities such as vegetation removal on 43,590 acres. Riparian habitats in river segments identified as suitable for inclusion in the NWSRS would be protected from minerals activities within 0.25-mile of the river.

Effects from Recreation Management

Under this alternative, similar to Alternatives C and D, 42,695 acres would be classified as Primitive or Semiprimitive Nonmotorized, decreasing the potential for disturbance of riparian zones in these areas relative to current management by approximately 20 percent.

Effects from Renewable Energy Management

Effects would be the same as those described under Alternative ~~B~~A.

Effects from Transportation and Travel Management

Potential for effects described under Effects Common to All Alternatives would decrease relative to current management since areas Open to cross-country OHV travel would be Closed or placed under restrictions. Limited travel areas would be increased to 125,729 acres and would be limited to designated routes, as opposed to existing routes in Alternative A. Potential for effects under this alternative would be lower than Alternative A.

Effects from Lands and Realty Management

Retention of public lands along the Salmon River would provide continued protection of riparian areas along the Salmon River from private land uses such as development or timber harvest.

Withdrawing public lands located on the Lower Salmon River would increase protection of riparian areas along the Salmon River from potential impacts associated with mining.

Consolidating right-of-way corridors would reduce potential loss of vegetation that is common to right-of-way construction and would reduce weed potential by minimizing right-of-way construction areas. This would reduce potential effects on riparian vegetation to the degree that rights-of-way cross riparian zones.

Effects from ACEC/RNA Management

In general, measures to improve conditions in ACEC/RNAs may improve conditions in riparian areas to the degree that riparian areas occur in ACEC/RNAs. Such measures include controlling nonnative vegetation, prohibiting soil or vegetation disturbance, and restricting grazing in some areas or at particular times, as described under Alternative A. Overall, effects on riparian vegetation are similar to those under the other alternatives. Developing and implementing a management strategy to support restoration of Cottonwood Flats would potentially result in better riparian cottonwood habitat than under current management. Listing the East Fork American River as an ACEC and allowing vegetation treatments to occur in ways that would afford maximum protection to the site would result in greater protection of riparian areas in this 570-acre parcel. In addition, by protective the Upper Lolo Creek as an ACEC and ensuring that new road construction is temporary, and making weed control a high priority would decrease the potential for effects. Assuming that classification as ACECs would protect resources in a given area to a greater degree than in other areas, this alternative would increase protection by ~~8,928~~10,553 acres (~~35~~ 41 percent) relative to Alternative A.

Alternative C

Effects from Geology Management

Effects would be the same as those described under Alternative B.

Effects from Soils Management

Effects would be the same as those described under Alternative B.

Effects from Water Resources Management

Effects would be similar to those described under Alternative B, except that a greater amount of protection and restoration would occur by managing 6 percent more watershed acres as conservation and restoration watersheds. This is 3 percent more watershed acres than prescription

watersheds in Alternative A and represents the greatest amount of watershed management of any of the alternatives. It also offers the most potential for restoration and protection of any alternative.

Effects from Vegetation—Forests Management

Effects would be similar to Alternative A, except that RCA stream buffers would be increased by 3,334 acres, decreasing the potential for effects.

Effects from Vegetation—Weeds Management

Effects would be the same as those described under Alternative B.

Effects from Vegetation—Rangelands Management

Effects would be similar to those described under Alternative B, except that 1,957 acres of riparian areas would be incorporated into allotments, the least of any alternative. This would lead to the lowest potential effect from livestock grazing.

Effects from Vegetation—Riparian and Wetlands Management

Effects would be similar to those described under Alternative B, except that 27,624 acres would be considered RCA stream buffers (21 percent more than Alternative B and 14 percent more than Alternative A). This is the most of any alternative; therefore, the potential for effects is lowest under this alternative.

Effects from Wildlife and Special Status Wildlife Management

Effects would be the same as those described under Alternative B.

Effects from Aquatic Resources, Fish, and Special Status Fish Management

Effects would be similar to those described under Alternative B, except that 6 percent more watershed acres managed as conservation and restoration watersheds under Alternative C. This would be 3 percent more watershed acres than prescription watersheds in Alternative A and would be the most of any alternative, resulting in the greatest protection and restoration potential of any alternative.

Effects from Special Status Plants Management

Effects would be the same as those described under Alternative ~~B~~A.

Effects from Wildland Fire Management

Effects would be similar to those described under Alternative B, except that every fire would be evaluated for its potential to assist in achieving resource goals, possibly increasing beneficial uses of this resource similar to Alternative A and to a greater extent than the other alternatives. Treated FRCC 2 and 3 (moderate to high risk) WUI areas would decrease by up to 20 percent under this alternative relative to Alternative B, potentially decreasing benefits to riparian vegetation from this resource use.

Effects from Visual Management

Effects would be similar to those described under Alternative B, except that the amount of land in VRM Classes I and II would increase to 73,699 acres, the most of any alternative, thereby reducing potential for disturbance in riparian areas more than any other alternative.

Effects from Forest Products Management

Effects would be similar to those described under Alternative B, except that PSQ would be reduced from 3,129 MBF to 3,101 MBF, and the commercial land base would be lowest of any alternative. Estimated PSQ would be 53 percent lower than under Alternative A. This alternative offers the lowest potential for effects from forest products management of any alternative.

Effects from Livestock Grazing Management

Livestock grazing would be permitted on 1,765 aces of riparian areas (out of 101,350 acres) under Alternative C. The riparian/wetland acres would be 1.74 percent of the total acres and would be 17.06 percent less than offered for grazing under Alternative A, as well as being less than under any other alternative. Therefore, potential grazing-related effects would be least under this alternative. Potential effects are listed under Effects Common to All Alternatives.

Effects from Minerals Management

Effects would be similar to those described under Alternative B, except that NSO restrictions on leasable minerals activities would increase to 68,854 acres, the most of any alternative. Therefore, potential mining ~~mineral-~~ related effects would be least under this alternative.

Effects from Recreation Management

Effects would be the same as those described under Alternative B.

Effects from Renewable Energy Management

Effects would be the same as those described under Alternative B.

Effects from Transportation and Travel Management

Effects would be similar to those described under Alternative B, except that additional measures would be taken to reduce motor vehicle use in certain areas, potentially resulting in reduced effects on riparian resources.

Effects from Lands and Realty Management

Effects would be the same as those described under Alternative B.

Effects from ACEC/RNA Management

Effects would be similar to those described under Alternative A, except that ACECs would increase by 35,601 acres (135 percent), potentially increasing the amount of riparian areas protected under this designation. In addition, classifying the Craig Mountain ACEC for custodial timber management, increasing the area by 19,386 acres, excluding livestock grazing, ensuring that new road construction is temporary, and making weed control a high priority would decrease the potential for effects. ~~Similar effects would occur by protecting Upper Lolo Creek as an ACEC.~~

Alternative D

Effects from Geology Management

Effects would be the same as those described under Alternative B.

Effects from Soils Management

Effects would be the same as those described under Alternative B.

Effects from Water Resources Management

Effects would be similar to those described under Alternative B, except that the BLM would manage 52,118 acres as conservation and restoration watersheds, 19 percent fewer watershed acres than Alternative B and 21 percent fewer than prescription watersheds in Alternative A. This is the least amount of watershed management of any alternative and offers the least potential for restoration and protection.

Effects from Vegetation—Forests Management

Effects would be similar to Alternative A, except that RCA stream buffers would be decreased by 3,580 acres, increasing the potential for effects.

Effects from Vegetation—Weeds Management

Effects would be the same as those described under Alternative B.

Effects from Vegetation—Riparian and Wetlands Management

Effects would be similar to those described under Alternative B, except that 20,710 acres would be considered RCA stream buffers, which is 9 percent less than Alternative B and 15 percent less than Alternative A. This is the least of any action alternative; therefore, potential for effects is highest under this alternative.

Effects from Wildlife and Special Status Wildlife Management

Effects would be the same as those described under Alternative B.

Effects from Aquatic Resources, Fish, and Special Status Fish Management

Effects would be similar to those described under Alternative B, except that managing 52,118 acres as conservation and restoration watersheds would be the least of any alternative, resulting in the least riparian protection and restoration potential.

Effects from Special Status Plants Management

Effects would be the same as those described under Alternative B.

Effects from Wildland Fire Management

Effects would be similar to those described under Alternative B, except that only fires occurring in areas managed for custodial forest management or areas not authorized for livestock grazing would be evaluated for their potential to assist in achieving resource goals, which would greatly reduce the number of wildfires that could be used for riparian resource benefits.

Alternative D offers the highest annual treatment goal of any alternative, potentially increasing riparian areas treated by prescription fire, chemical or biological methods by up to 20 percent over Alternative B and 40 percent over Alternative C.

Effects from Visual Management

Effects would be similar to those described under Alternative B, except that the amount of area in VRM Classes I and II would decrease to 30,313 acres, the lowest of any alternative. Therefore, this alternative would increase potential for disturbance in riparian areas more than any other alternative.

Effects from Forest Products Management

Effects would be similar to those described under Alternative B, except that PSQ would be increased to 4,823 MBF (decreased from an estimated annual ASQ of 6,600 MBF, or 27 percent,

from Alternative A), and the commercial land base of 45,190 acres would be the highest of any alternative. Therefore, this alternative offers the highest potential for effects to riparian areas from forest products management. As with all alternatives, riparian buffers would shield riparian areas from effects of most forest products activities, as these are most likely to occur in upland areas.

Effects from Livestock Grazing Management

Livestock grazing would be permitted on 2,324 aces of riparian areas (out of 135,850 acres) under Alternative D. The riparian/wetland acres would be 1.71 percent of the total acres and would be 9.21 percent more than offered for grazing under Alternative A, and would be more than any other alternative. Therefore, potential for grazing-related effects is highest under this alternative. Potential effects are listed under Effects Common to All Alternatives.

Effects from Minerals Management

Effects would be similar to those described under Alternative B, except that NSO restrictions would decrease to 35,045 acres, the least restrictive of any action alternative (Alternatives B, C, and D), but more restrictive than Alternative A. Therefore, potential effects to riparian resources from mineral management would be the second highest under this alternative.

Effects from Recreation Management

Effects would be the same as those described under Alternative B.

Effects from Renewable Energy Management

Effects would be the same as those described under Alternative B.

Effects from Transportation and Travel Management

Under this alternative, 23,189 acres would be Open to cross-country travel, which is the most except under Alternative A, and OHV use would be limited on 102,542 acres, which is the least of any action alternative. Cross-country motorized vehicle travel could impact soils and vegetation in riparian habitats and increase weed infestations. Establishing these designations would create the highest potential for effects of any action alternative) However, potential for effects is lower than under Alternative A.

Effects from Lands and Realty Management

Effects would be the same as those described under Alternative B.

Effects from ACEC/RNA Management

Effects would be similar to those described under Alternative B. ACECs would increase slightly from current management, potentially increasing the amount of riparian areas protected under this designation. In addition, the potential for short-term disturbance of riparian vegetation or soils would increase relative to other alternatives by using livestock grazing to support achievement of goals and objectives identified for ACEC/RNAs, but would be offset by long-term benefits of achieving resource goals by use of this method.

~~*Effects from Public Safety—Abandoned Mines and Hazardous Materials Management*~~

~~Effects would be the same as those described under Alternative B.~~

Cumulative Effects

Past actions that are relevant to riparian resources in the cumulative impact area include land tenure changes, wildland fire and wildland fire use and suppression, fuel and vegetation treatments, salable minerals, population growth, urban development, recreational use, OHV use, stream and watershed restoration activities, regional planning efforts, weed management efforts, and grazing. The types of impacts that have occurred and would continue to occur include direct destruction of riparian resources, loss of plant diversity, changes to canopy structure, loss of soil integrity, reduced riparian function, enhanced weed control efforts, greater focus on restoration of affected areas, and greater focus on use of wildland fire for resource benefits.

Watershed restoration efforts throughout the planning area would result in improvements to riparian areas. Alternative C would include the greatest number and acres of restoration and conservation watersheds and would contribute most to this trend. Because long-term wildfire suppression has led to circumstances where stand-replacing wildfire can occur and severely affect riparian resources, regional fire planning on the part of various land-management agencies, along with implementation of individual fire plans, would directly influence riparian health in the cumulative impact area, with those plans that promote a return to a natural fire regime leading to highest riparian health. Increased population, particularly in WUI areas, makes the use of wildfire for resource benefits more difficult than in other, less-populated areas. Increased fuels treatments, although generally carried out in non-riparian areas, would indirectly affect riparian resources by reducing potentially stand-replacing wildfires. Alternative D would treat the most area, with Alternative C treating the least. Under all alternatives, grazing management would comply with the same standards in practice in other parts of the planning area. The differences in treatment areas and grazed areas between the alternatives amounts to at most several thousand acres, which is a small portion of the overall planning area, therefore effects to the overall planning area are minimal under any alternative.

Cumulative effects would be similar among the alternatives. Alternative A would contribute to more regional cumulative effects resulting from land tenure adjustments, open OHV use, and wildland fire suppression. In general, Alternatives B, C, and D would provide more management measures than Alternative A that would directly or indirectly reduce the potential for cumulative impacts. However, each of these alternatives also would accelerate fuel-reduction treatments using all available methods within five years and would have fewer restrictions on wildland fire use for resource benefit. These measures could contribute to cumulative impacts on riparian resources. The emphasis in Alternative C on actions that value resource conservation, protection, and minimal human intervention would have the least impact or risk of impacts to riparian resources and would contribute the least to cumulative impacts. Overall, the actions proposed under any of the alternatives would not contribute to effects on a planning-area wide scale.

4.2.9 Wildlife and Special Status Wildlife

<u>Goal: Manage habitat to contribute to the conservation of special status species habitats and to maintain biological diversity of wildlife.</u>

Summary

Actions that increase habitat disturbance potential and alter vegetation structure, composition, and distribution generally have the greatest impact on wildlife. These actions result from timber harvest,

road building, increased recreation use, livestock grazing, fire, mineral extraction, and construction of any type of infrastructure. Proposed management practices can mitigate many of the effects from these actions. Alternative C would best manage habitat to maintain biological diversity of wildlife, followed by Alternatives B, A, and then D.

Alternative A would not address all species that have been listed as threatened, endangered, species of concern, or sensitive species with USFWS, Idaho Department of Fish and Game, and Idaho BLM. Alternatives B, C, and D would provide updated list and status for special status species and management emphasis and added focus for protection, conservation, or restoration of special status species habitat.

The BLM has established procedures and policies that assess the effects of existing and proposed projects on BLM-managed lands. The BLM would be responsible for analyzing potential impacts to ensure that activities would not cause significant adverse effects on the habitats that support native fish and desirable nonnative fish species. The BLM would be responsible for analyzing potential impacts and for taking appropriate actions to ensure that special status/BLM Sensitive designation is no longer warranted.~~The BLM would be responsible for analyzing potential impacts to ensure that no significant adverse effects would occur to BLM sensitive species or habitats.~~ In addition, the BLM may consult with USFWS in accordance with ESA Section 7 on activities that may affect federally listed species. **Table 4-13** identifies the indicators that were used to analyze effects under each alternative.

Table 4-13
Comparison of Wildlife and Special Status Wildlife Indicators by Alternative

Indicator	Alternative A	Alternative B	Alternative C	Alternative D
What: Measures of composition, structure, diversity, and relative abundance of habitat components	Snag (dead standing trees) management on 60% of each timber harvest area	Snag management on 100% of each timber harvest area and buffers	Snag management on 100% of each timber harvest area and buffers	Snag management on 100% of each timber harvest area and buffers
	No DFC management	10% old forest DFC=24,789 acres	20% old forest DFC=28,087 acres	No DFC management
	Similar weed management across alternatives	Similar weed management across alternatives	Similar weed management across alternatives	Similar weed management across alternatives
Where: Measures of distribution, patterns, and habitat component connectivity	Least potential number and area of ACECs, rivers suitable for the NWSRS, wilderness areas	Moderate potential number and area of ACECs, rivers suitable for the NWSRS, wilderness areas	Greatest potential number and area of ACECs, rivers suitable for the NWSRS, wilderness areas	Less potential than Alternative B
Causal factors: Measures of processes and disturbances, geo-climatic capability, historical range of variability	Estimated 358 acres of forest harvest/treatment per year	Estimated 242 acres of forest harvest/treatment per year	Estimated 191 acres of forest harvest/treatment per year	Estimated 361 acres of forest harvest/treatment per year
	35,757 acres of commercial forest	40,598 acres of commercial forest	34,611 acres of commercial forest	45,190 acres of commercial forest

Table 4-13
Comparison of Wildlife and Special Status Wildlife Indicators by Alternative *(continued)*

Indicator	Alternative A	Alternative B	Alternative C	Alternative D
	1,530 to 4,800 acres of forest treated by prescribed fire or mechanical fuel reduction per year	1,182 to 3,545 acres of forest treated by prescribed fire or mechanical fuel reduction per year; Vegetation treatments would support achievement of natural ecosystem functions, which may include natural fire regimes, stand structure, and fuel reduction in the WUI	1,448 to 5,377 acres of forest treated by prescribed fire or mechanical fuel reduction per year; Vegetation treatments would support achievement of natural ecosystem functions, which may include natural fire regimes, stand structure, and fuel reduction in the WUI	2,870 to 7,597 acres of forest treated by prescribed fire or mechanical fuel reduction per year; Vegetation treatments would support achievement of natural ecosystem functions, which may include natural fire regimes, stand structure, and fuel reduction in the WUI
	12,704 acres VRM I	12,704 acres VRM I	26,945 acres VRM I	7,205 acres VRM I
	7,~~204~~ 200 AUMs	~~6,254~~6,263 AUMs	6,020 AUMs	8,54~~0~~9 AUMs
	14,381 acres Primitive ROS	6,200 acres Primitive ROS	6,200 acres Primitive ROS	6,200 acres Primitive ROS
	0 acres NSO (case-by-case basis)	43,590 acres NSO	68,854 acres NSO	35,045 acres NSO
	No DFC management	24,789 acres DFC management (timbered blocks over 1,000 acres)	28,087 acres DFC management (timbered blocks over 500 acres)	No DFC management
Identify acreages for "no net increase in open roads/trails for motorized use"	0	101,526 acres	75,772 acres; 38,733 acres for "strive for decrease"	0
Habitat quality and trends	122,735 acres available for grazing	105,619 acres available for grazing	101,414 acres available for grazing	135,850 acres available for grazing
Acres of RHCAs in prescription watersheds or RCAs in conservation and restoration watersheds (on BLM lands)	24,290 (RHCAs in prescription watersheds)	22,847 (RCAs in conservation and restoration watersheds)	27,624 (RCAs in conservation and restoration watersheds)	20,710 (RCAs in conservation and restoration watersheds)
Acres of Open travel areas	85,308	0	0	23,189
Acres Limited travel areas	40,437 (limited to existing routes)	125,729 (limited to designated routes)	125,729 (limited to designated routes)	102,542 (limited to designated routes)

Source: BLM 2004a

Methods of Analysis

Indicators

Indicators used to assess impacts are outlined in **Table 4-13**, Comparison of Wildlife and Special Status Wildlife Indicators by Alternative.

Methods and Assumptions

Wildlife health within the CFO is directly related to the overall ecosystem health, habitat abundance, habitat fragmentation, and wildlife security provided, and thus most resource management actions have at least an indirect effect on wildlife. Impact analysis on wildlife resources included an assessment of whether each action would result in the possible destruction, degradation, or modification of habitat, as well as impacts that could improve wildlife habitat. A large proportion of actions under all alternatives are mitigation measures for other actions and protective measures, so that many of the individual actions could improve wildlife habitats or the health of populations, depending on the success of the action when completed. The degree of impact attributed to any one management action or series of actions is influenced by the watershed, time and degree of action, existing vegetation, and precipitation. The indicators listed above were used to guide, frame, and measure impacts.

Impacts were identified with the use of best professional judgment and were assessed according to the following assumptions:

- Success of mitigation is dependent on specific protective measures, past results, and the assumption that proper implementation of such would take place;
- Implementation-level actions will be further assessed at an appropriate spatial and temporal scale and level of detail;
- Additional field inventories could be needed to support implementation-level decisions, which may be subject to further analysis under NEPA; and
- Implementation-level decisions that may affect species listed under ESA would be subject to appropriate ESA Section 7 consultation with USFWS.

Effects Common to All Alternatives

Effects from Soils Management

Under all alternatives wildlife habitat would be indirectly conserved via conservation measures to prevent erosion and other degradations to soil, which in turn diminishes impacts on vegetation and thus wildlife habitats. Preventing sedimentation in water courses also can improve the health of fish populations, which benefits fish-eating wildlife, such as bald eagle.

Effects from Water Resources Management

Effective watershed management, which minimizes erosion, maintains hydrologic flow, and maintains vegetative community health, would result in healthy and diverse plant communities, which in turn provide wildlife habitat, especially in riparian areas. Healthy watersheds improve fish habitat, which in turn provides foraging opportunities for fish-eating wildlife.

Effects from Vegetation—Forests Management

Vegetation treatments that alter tree species composition or stand structure for specific resource objectives or for commercial value would alter wildlife habitats immediately. This would improve

habitat for some species, especially those that select more early-seral or open forest habitats, and would degrade habitats for others, especially those that prefer denser and structurally diverse habitats. These treatments may return forests to a condition closer to historic composition or a desired condition in the long-term. Impacts would be highly dependent on (1) species, (2) habitat conditions before and after treatments, (3) type of treatment, (4) details of how each treatment is carried out, (5) adjacent habitat types, and (6) long-term management of each area after treatments.

Effects from Vegetation—Weeds Management

Spread of noxious and invasive weeds results in decreases in habitat quality, habitat diversity and forage for wildlife. Treatment actions would not be sufficient to control the spread of weeds into all wildlife habitats but would reduce these impacts in treated areas. Actions to prevent and control invasive and noxious weeds using integrated weed management techniques could reduce or at least slow down the rate of increase in the CFO and severity of damage to wildlife habitats across all alternatives. Reducing the quantity of invasive species, thereby decreasing plant competition, would allow native species vital to wildlife to increase (or at least slow down the rate of decrease). Although weed treatments would generally improve wildlife habitats in the long term, short-term disturbances to wildlife would occur. Weed treatment actions could remove forage and cover in areas dominated by weeds, resulting in short-term impacts on wildlife that are using weed infested areas. Short-term impacts would vary by type of application. All treatments, especially mechanical treatments, would cause some species to temporarily avoid treated areas. Some injury and mortality could occur from machinery, especially for small less mobile species. Herbicides would be applied with all applicable guidelines to prevent harm to wildlife, but some residual risk would still exist.

Effects from Vegetation—Riparian and Wetlands Management

Actions that would improve riparian and wetland PFC would in turn improve habitats for riparian- and wetland-dependent wildlife species, especially via increases in quantity and quality of riparian vegetation. Affected species could include bald eagle, yellow-billed cuckoo, harlequin duck, willow flycatcher, Coeur d'Alene salamander, Idaho giant salamander, western toad, several snail species, and other riparian-dependent wildlife.

Effects from Wildlife and Special Status Wildlife Management

Wildlife and special status wildlife management actions would generally improve wildlife habitats, with the exception of certain measures designed to improve habitat for one type of wildlife that could decrease habitat quality for another. Wildlife management emphasis would generally include multispecies benefits, and management emphasis would strive to achieve historic and natural habitat conditions. Actions related to general compliance with the ESA would be the same across alternatives. These include reviewing activities for impacts on listed species, consultation with USFWS as appropriate where listed species may be affected, coordination with USFWS on recovery efforts, and management under delisting (if applicable) and other requirements. Continuing bald eagle midwinter inventories for long-term trend information would continue to enhance appropriate opportunities for conservation and would contribute toward delisting the species by monitoring population size and distribution.

Effects from Aquatic Resources, Fish, and Special Status Fish Management

Generally any actions that increase fish populations can provide additional foraging opportunities for fish-eating wildlife, such as wading birds and bald eagles. Actions that result in improved health of aquatic systems can also result in improved aquatic invertebrate populations that are sources of

food for several species of waterfowl and American dipper (a song-bird that feeds on aquatic insects in streams). Any fish-related stream improvement actions that improve the quantity, quality, and structure of riparian vegetation indirectly increase the extent and improve the quality of riparian habitats for wildlife, such as yellow warbler, and BLM sensitive species, such as willow flycatcher.

Effects from Special Status Plants Management

Actions to conserve special status plant species generally would improve habitat and would protect wildlife species that occupy similar habitat types or that are affected by similar disturbances. Special status plant management objectives and management actions would strive to achieve good-quality habitats that support native plant populations, which support good-quality wildlife habitats. These actions include inventories, mapping, discretionary activity impact review, and consultation as appropriate with USFWS.

Effects from Wildland Fire Management

Fuel treatments would have similar impacts as forested vegetation treatments and may return sites to historic fuel loading and structure. Effects on wildlife would vary by the habitat needs of species. Fuel treatments would result in more open forested conditions improving habitat for species that select those types of habitats. Acreage of forest with dense multi-story cover would be reduced, decreasing available habitat for species that select those types of habitats. Effects would change over time. Short-term effects from any kind of vegetation treatment could temporarily displace wildlife. Habitats would be considerably changed immediately after treatments and then gradually evolve over time. Details of effects would vary considerably dependent on details of current conditions and treatments at a site-specific level. Wildland fire use in areas that have had fuel reductions would generally result in increased growth and vigor of forage plants and maintenance of open habitats.

Effects from Visual Resources Management

Impacts from visual resources on wildlife are indirect and come from actions under other areas of resource management that are authorized within each VRM class. Vegetation treatments, road construction, recreational facilities construction, and mining are actions that would change visual appearance and also would affect wildlife habitat and their associated species. Generally, VRM Classes III and IV would contain more alterations of wildlife habitat over time than VRM Classes I and II.

Effects from Forest Products Management

General types of impacts are similar to those under Effects from Vegetation—Forests Management. Discouraging livestock grazing in reforested areas until seedlings are at least three feet tall or five years old would reduce potential competition between ungulates and livestock for forage.

Effects from Livestock Grazing Management

Management of BLM lands to meet Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management (BLM 1997a) (**Appendix A** [see Volume II~~I~~]) would minimize impacts from livestock grazing across alternatives. Potential impacts from livestock grazing include the following:

- Competition for forage, water, and space;
- Habitat alteration;
- Competition for grass and forbs for big game, such as elk, which is especially critical in winter~~;~~;

- Adverse impacts to bighorn sheep from domestic sheep and goat grazing because of potential for disease transmission;
- Degradations to stream banks from compression, sloughing, and removal of vegetation, resulting in erosion;
- Changes in plant species composition from overuse;
- Potential loss of shrubs in riparian areas, leading to a decrease in nesting riparian songbirds and bank stability;
- Appropriate levels of grazing, stimulating growth of some plant species and increasing succulents;
- Overgrazing, which decreases range condition;
- Weed control to reduce weed spread and resultant impact to native plant communities;
- Fences that create travel barriers, cause stress and energy loss, result in injury and death from entanglement, alter big game distribution, and create perches for predators;
- Fences for control of livestock to reduce impacts on vegetation, streams, and thus wildlife; ~~and~~
- Water developments that expand the spatial and temporal range of where both big game and livestock can exist, creating more pressure on vegetation and competition with each other~~.~~; and
- New water developments would allow increased use of an area by wildlife. New developments would provide previously unavailable watering sites for different wildlife species when livestock are not in the vicinity or conflicting with wildlife use of the area.

Effects from Minerals Management

Minerals management activities have the potential to impact wildlife everywhere except the Frank Church Wilderness, because mineral activities could occur everywhere but in the Wilderness. Minerals management impacts on wildlife generally occur from surface disturbance and thus loss and fragmentation of habitat, as well as disturbances from noise and movement from the exploration, construction, and operation of facilities and roads. Actions spell out where, how much, and what type of mineral exploration and extraction can occur. Generally, the tighter the restriction, the fewer impacts on wildlife.

Effects from Recreation Management

Impacts from recreation management actions can include loss or modification of habitat from construction of recreational facilities, including roads, which are addressed under Effects from Transportation and Travel Management. Other impacts are similar to the indirect impacts from transportation and travel management, such as increased human-wildlife interaction, which can cause animals to alter behaviors, home ranges, and habitat use and sometimes become physiologically stressed, especially in winter. Some bird species would abandon active nests if sufficiently disturbed.

Most BLM-managed lands (about 100,800 acres) would be open to snowmobiles, which can cause physiological stress in mammals from expending energy needed to stay warm with limited food supply. Limiting this type of travel to designated trails in the Craig Mountain WMA would reduce impacts on big game from snowmobiles in an area important to big game populations.

Effects from Renewable Energy Management

Potential impacts from renewable energy management are generally similar to those described under Effects from Minerals Management and Effects from Vegetation—Forests Management.

Effects from Transportation and Travel Management

Roads and trails can fragment habitats, reduce wildlife security areas, increase road kill, and alter home range and migration corridors of wildlife. On a broad general scale, roads decrease habitat quality and impair populations. The magnitude of impacts varies by species, habitat types, size and traffic volume of roads, and seasonal use. Species that require forest interior habitats, have large home ranges, follow distinct migration patterns, or are wary of humans are affected the most by roads. Roads, trails, and snowmobile access increase human-wildlife interactions. Vehicles can degrade wildlife habitats from surface disturbance and can displace and stress animals, which is especially important in winter. Motorized vehicle use and associated human uses that impact critical habitat niches for wildlife, such as den sites, nest sites, critical foraging areas, travel corridors, and security areas, are particularly vulnerable to wildlife disturbances and displacement.

Effects from Lands and Realty Management

Habitat fragmentation could be reduced via land acquisition and adjustment that reduces the checkerboard pattern of public lands ownership and increases the size of publicly owned blocks of land. Larger blocks of contiguous lands allow for consistent management of wildlife habitats without unregulated private land activities interspersed. Unfragmented lands are especially important to shy forest interior species. Degraded habitat on acquired lands could be improved. Public lands with low habitat value could also be exchanged for lands with better wildlife habitat or that are adjacent to unfragmented blocks.

Effects from ACEC/RNA Management

Generally special management areas such as ACECs and RNAs result in protection of wildlife from human activities and long-term improvement or at least maintenance of habitat quality because of numerous restrictions, such as OHV use, mineral exploration, and timber harvest. Several actions that protect resources within ACECs and RNAs would be the same across all alternatives, including the following:

- No new rights-of-way or road construction in Wapshilla Ridge ACEC/RNA;
- No livestock grazing in Captain John Creek ACEC/RNA;
- Management of the Long Gulch ACEC/RNA, in accordance with the updated MacFarlane's Four-o'clock Recovery Plan;
- Allowing no ground-disturbing activities and withdrawal from mineral entry in the Long Gulch ACEC/RNA;
- Filing for nonconsumptive water rights, permitting no new rights-of-way or road construction, and withdrawing from mineral entry at Lucile Caves ACEC/RNA;
- Management of the Skookumchuck ACEC/RNA, in accordance with the updated MacFarlane's Four-o'clock Recovery Plan, no grazing, and withdrawal from mineral entry; and
- In the Lower Lolo Creek ACEC, timber harvest activities on slopes over 50 percent would use yarding methods (such as aerial or high-lead systems) that minimize ground disturbance.

These management actions would have direct and indirect conservation impacts on wildlife, including several special status species that use these areas. The restrictions above, some of which are for sensitive and listed plants, would also reduce potential habitat degradations of wildlife habitats, including several BLM sensitive species, nongame species, upland game, bighorn sheep, elk, mule deer, mountain lion, and black bear at Captain John Creek, BLM sensitive snails at Lucile Caves, and several sensitive wildlife species at Lower Lolo Creek.

Effects from National Trails Management

Actions to protect resources along the National Trails could directly or indirectly affect wildlife and special status wildlife if these measures prevented disturbances of habitat or animals, such as restoring damaged areas around trails or a seasonal closure for a special status species.

Effects from Wild and Scenic Rivers Management

Under all alternatives, 29 miles of river segments found suitable, as well as 112 miles of the Salmon River that has been a study river since 1968, would be managed to preserve their outstandingly remarkable values. Wild and scenic river management can restrict activities that would alter the tentative classification, which could indirectly conserve wildlife habitat, especially for riparian species, in areas where actions would have been authorized without the classification. These impacts would vary according to the criteria for which each segment was found suitable. Special status species that are riparian-dependent and could be the most affected include harlequin duck, willow flycatcher, Coeur d'Alene salamander, Idaho giant salamander, and Columbia River tiger beetle.

Effects from Wilderness and Wilderness Study Areas Management

Continued management of BLM land would generally maintain existing conditions for wildlife in the following:

- 750-acre portion of the Frank Church/River of No Return Wilderness, in compliance with the Wilderness Act;
- The 5,571-acre Marshall Mountain WSA; and
- The 6,463-acre Snowhole Rapids WSA under Interim Management Policy for lands under wilderness review.

Bald eagles occur in the Snowhole Rapids WSA, and wolves could occur in the Frank Church/River of No Return Wilderness. Management under wilderness and WSA regulations would continue to provide indirect protection in addition to the ESA for these listed species.

Effects from Watchable Wildlife Viewing Sites Management

Actions to maintain or improve wildlife habitat could improve habitat for a variety of wildlife, including deer, elk, bighorn sheep, waterfowl, raptors, and river otter. This would be in conjunction with providing wildlife viewing opportunities in Lower Salmon River Canyon (87 miles), Middle Salmon River Canyon (80 miles), Snake River in Hells Canyon (68 miles), and Craig Mountain WMA (24,000 acres). Specific impacts would depend on the nature of individual habitat improvement measures made in these areas. Increased wildlife viewing can affect behavior in some wildlife species that may flush in response to human presence or avoid using areas frequented by humans. However, providing wildlife viewing opportunities helps build appreciation and knowledge of wildlife with the general public, which can result in increased indirect long-term support and funding wildlife programs.

Effects from Native American Tribal Uses Management

Consulting with tribes to identify culturally significant plants, animals, fish, and important habitats could improve habitat conditions for those species and habitats if these consultations result in changes in management that would improve habitats. ~~However, Tribes collecting or hunting special status species, as allowed under their treaty rights, could impact those species.~~

Effects from Public Safety—Abandoned Mines and Hazardous Materials Management

Generally, actions to remediate contaminated sites to safeguard human health would also affect wildlife habitats and populations, especially those that depend on riparian and wetland habitats. Reducing contaminants in the environment reduces the potential for animals to ingest them. It also reduces biomagnification because contaminants are concentrated as they pass up through the food chain. Removing contaminants from the environment through such actions as mitigating newly discovered hazards within 120 days and pursuing the reduction of hazards at abandoned mine sites would generally affect fish-eating species, such as osprey and belted kingfisher, as well as bats, which mostly forage on insects near water. Closing abandoned mines could affect bats. However, if the mines are closed in a manner to allow access to bats, then these bat populations would be preserved. Remediation and stabilization actions along creeks would promote the growth of riparian vegetation and reduce sediment loads and thus would gradually improve habitat for riparian-dependent wildlife species. Additional actions to more effectively manage hazardous sites and cleanups could indirectly improve habitat and the health of wildlife more under Alternatives B, C, and D than under Alternative A.

Alternative A

Effects from Soils Management

In addition to impacts noted under Effects Common to All Alternatives, under Alternative A the MFP Road Guidelines (BLM 1981a) and the Riparian Management Guidelines (BLM 1985e) would avoid and mitigate many surface disturbances and erosion, which could reduce impacts on quantity and quality of vegetation and thus habitats from other resource uses, especially those associated with roads and those located in riparian areas. Prioritizing existing roads for restoration, including obliteration, could increase quantity of wildlife habitat, reduce human disturbance on wildlife, and reduce habitat fragmentation, where roads are obliterated.

Effects from Water Resources Management

In addition to impacts noted under Effects Common to All Alternatives, under Alternative A wildlife habitat, especially riparian and wetland habitats would be conserved from water management actions, such as implementation of the MFP Road Guidelines (BLM 1981a), Riparian Management Guidelines (BLM 1985e), and PACFISH (BLM and Forest Service 1995). These actions directly and indirectly conserve riparian vegetation, which is especially critical wildlife habitat.

Effects from Vegetation—Forests Management

Under Alternative A treating dry ponderosa pine and dry conifer cover types and whitebark pine would reduce stand densities, which would result in impacts on wildlife described under Effects Common to All Alternatives. Improving old-growth forest structure may help prolong the life of old-growth stands and thus, in the long term, maintain or improve habitat for old-growth-dependent species, such as fisher.

Effects from Vegetation—Weeds Management

Actions to prevent and control invasive and noxious weeds using integrated weed management techniques consistent with the BLM's *Partners Against Weeds: An Action Plan for the Bureau of Land Management* (BLM 1996) could reduce or at least slow the rate of increase of the area and severity of damage to wildlife habitats, as described under Effects Common to All Alternatives, under Alternative A.

Effects from Vegetation—Rangelands Management

Alternative A identifies improvements in rangeland condition and riparian habitats, which would benefit wildlife. Alternative A identifies areas for development of HMPs, which could improve rangeland condition.

Effects from Vegetation—Riparian and Wetlands Management

Under Alternative A riparian management actions would continue to reduce the potential for degradations of riparian wildlife habitat. Implementing BMPs for riparian management units and the Riparian Management Guidelines (BLM 1985e) and PACFISH (BLM and Forest Service 1995) would avoid and mitigate many surface disturbances and erosion. This also would protect and enhance riparian vegetation, which could reduce impacts on riparian-dependent wildlife habitats from other resource uses, especially those associated with roads and those located in riparian areas.

Effects from Wildlife and Special Status Wildlife Management

In addition to impacts noted under Effects Common to All Alternatives, under Alternative A, following elk habitat coordinating guidelines would continue to maintain elk habitat conditions by guiding silvicultural practices that could affect elk habitat components.

Improving half the 3,840 acres of poor condition range to fair condition and half the 13,766 acres of fair condition range to good condition within 20 years could improve 8,803 acres of habitat for range and grassland wildlife species. These species include BLM sensitive species such, as ferruginous hawk, prairie falcon, and Brewer's sparrow. Managing lands identified for intensive wildlife management would continue to improve or maintain habitat for wildlife in these areas via HMPs and use restrictions.

Practicing snag management over 60 percent of any timber harvest area, with at least two large diameter and breast height snags per acre, plus additional snag recruitment actions, would help maintain cover, denning, nesting, and foraging microhabitat features for snag- and cavity-dependent forest wildlife species, such as woodpeckers.

Protection of active raptor nests with a 100-yard nondisturbance buffer would provide limited protection of these nests. This buffer size could be insufficient based on the species, topography, vegetation, site distance, and type of activity.

Effects from Aquatic Resources, Fish, and Special Status Fish Management

Under Alternative A, actions to improve aquatic, riparian, and fisheries habitats with implementation of management plans and use restrictions for sensitive areas would have indirect impacts on wildlife consistent with the impacts described under Effects Common to All Alternatives.

Effects from Special Status Plants Management

In addition to impacts noted under Effects Common to All Alternatives, under Alternative A the Long Gulch and Skookumchuck populations of MacFarlane's four-o'clock would be protected as ACEC/RNAs (completed). This is further described under Effects from ACEC/RNA Management.

Effects from Wildland Fire Management

Analysis of how wildland fire management actions would affect forested lands is described in Effects from Wildland Fire Management in Sections 4.2.5, Vegetation—Forests and 4.2.12, Wildland Fire Management. Predictions for forest conditions post-fire and treatments described in these sections form the basis of forest wildlife habitat. Impacts on species are variable and are described under Effects Common to All Alternatives.

Effects from Visual Resources Management

Alternative A, like Alternative B, would be intermediate between Alternatives C and D (**Table 4-13**, Comparison of Wildlife and Special Status Wildlife Indicators by Alternative) in terms of indirect impacts, as described under Effects Common to All Alternatives.

Effects from Forest Products Management

Alternative A designates 35,757 (35 percent) of the forested acres as commercial forest, 24,000 acres (less than 25 percent of the CFO) of which would be intensively managed with a focus on maximizing timber production on a sustained yield basis. Within this area, wildlife would not be a primary concern, and thus habitat quality would be lower than in other BLM-administered forested lands in the CFO. This is because less vegetative structural diversity and more human disturbances would exist, and fewer specific protections would apply. These losses of habitats and disturbances would generally affect late seral dependant wildlife more than early seral wildlife. Habitat conditions could improve for a few select species that thrive in early seral and disturbed habitats.

Effects from Livestock Grazing Management

Alternative A would generally be intermediate between Alternatives B and D in quantity of AUMs, allotments, and leased area (**Table 4-14**, Grazing ~~Statistics~~ Factors that Could Affect Wildlife). Improvements that have been completed under Alternative A, including 25.5 miles of fence, 30 spring developments, 7 catchments, 10 cattle guards, 2.7 miles of fence for stream protection, and 1,900 acres of noxious weed control, would have indirect impacts on wildlife, as described under Effects Common to All Alternatives. Allocation of 1,004 AUMs of competitive big game forage would reduce conflicts for forage with livestock from big game species, such as deer and elk. Also see **Table 4-50** in Section 4.3.2, Livestock Grazing.

Table 4-14
Grazing ~~Statistics~~ Factors that Could Affect Wildlife

Grazing Statistic	Alternative A	Alternative B	Alternative C	Alternative D
Permitted AUMs	7,~~204~~200	~~6,254~~6,263	6,020	8,54~~0~~9
Number of allotments	168	166	145	170
Area available for grazing (acres)	122,732	105,619	101,350	135,850
Big game competitive AUMs[1]	1,004	864	829	1,111

Source: BLM 2004a

[1]Only identifies competitive livestock/big game AUMs not allocated to livestock. Total available AUMs/forage for big game is significantly larger than indicated competitive amount.

Currently, the BLM CFO has four allotments that are leased for sheep grazing (**Table 4-15**). Domestic sheep or goat grazing is a concern because of associated risks for disease transmission from domestic sheep and goats to bighorn sheep. Using a risk rating process adapted from the Payette National Forest, a level of disease transmission risk was made, and ranged from low to high for the four BLM sheep allotments.

Table 4-15
BLM Sheep Allotments and Risk Analysis for Disease Transmission to Bighorn Sheep

Allotment Name Allotment No.	Total Acres	Class of Livestock AUMs[1]	Season of Use	Subbasin(s)	Level of Disease Transmission Risk from Domestic Sheep to Bighorn Sheep[2]	Bighorn Sheep Habitat
Partridge Cr. Allot. No. 36240	9,166 acres	Sheep 287 AUMs	4/11–7/15	Lower Salmon R.	High	Suitable Habitat
		Sheep 142 AUMs	10/15 – 11/30			
		Cattle 30 AUMs	5/1 – 10/15			
Marshall Mtn. Allot. No. 36284	4,719 acres	Sheep 166 AUMs	7/5 – 8/4	Middle Salmon R. S.Fk. Salmon R.	High	Suitable Habitat
Hard Cr. Allot. No. 36242	5,186 acres	Sheep 218 AUMs	6/15 – 7/15	Little Salmon R.	Low	Secondary Suitable Habitat
Big Cr. Allot. No. 36358	480 acres	Sheep 81 AUMs	6/1 – 10/31	Little Salmon R.	Low	Secondary or Incidental Use Habitat

[1]Conversion factor for AUM: 1 AUM = 1 cow and calf or 5 sheep and lambs (less than six months).
[2]Adapted from *Risk Analysis of Disease Transmission Between Domestic Sheep and Bighorn Sheep on the Payette National Forest* (Forest Service 2006). "Risk rating" was determined by rating given to nearest Payette National Forest Sheep Allotment and proximity of bighorn sheep habitat (Forest Service 2006). It is noted that these allotment specific ratings have not had an expert panel risk assessment, which was conducted for Payette National Forest sheep allotments.

Effects from Minerals Management

General effects are described under Effects Common to All Alternatives, above. Under Alternative A, 131,044 acres would continue to be open to leasable minerals activities subject to the standard lease terms and site-specific mitigation measures/stipulations, with 12,786 acres subject to nondiscretionary closures (same nondiscretionary closure acres for all alternatives). Approximately 131,044 acres would also be open to mineral (salable) materials disposal subject to the standard permit terms and site-specific mitigation measures/stipulations, with 12,034 acres subject to discretionary WSA closures and 750 acres subject to nondiscretionary closures. Approximately 121,961 acres would be open to locatable minerals with site-specific mitigation measures/stipulations developed during the BLM's review of a plan of operation. This would apply to all alternatives..

Effects from Recreation Management

In addition to the impacts noted under Effects Common to All Alternatives under Alternative A, the BLM would continue to manage public lands for a variety of recreational activities within all ROS settings, as shown in **Table 4-~~15~~16**.

Table 4-16
Recreation Opportunity Spectrum

ROS Class	Alternative A		Alternative B		Alternative C		Alternative D	
	Acres	%	Acres	%	Acres	%	Acres	%
Primitive	14,381	10.00	6,200	4.32	6,200	4.32	6,200	4.32
Semiprimitive	18,816	13.08	36,495	25.40	36,495	25.40	36,495	25.40
Semiprimitive motorized	26,206	18.22	23,593	16.42	23,593	16.42	23,593	16.42
Roaded, natural	55,988	38.93	54,867	38.19	54,867	38.19	54,867	38.19
Rural	0	0.00	22,478	15.65	22,478	15.65	22,478	15.65
Semiurban	27,349	19.02	0	0	0	0	0	0
Urban	40	0.03	40	0.03	40	0.03	40	0.03
Undesignated	1,046	0.73	0	0	0	0	0	0

Source: BLM 2004a

These percentages are indicative of the management emphasis for recreation activities on BLM-administered lands. A much smaller portion of the planning area is reserved for primitive experiences, when compared to opportunities for activities that include motorized uses. Generally wildlife and their habitats within the primitive class would be affected the least from recreation.

Impacts, as described under Effects Common to All Alternatives, would increase with each class up the ROS. More acres would remain in primitive ROS class under Alternative A than under the other alternatives, so that Alternative A could have the fewest impacts on wildlife from recreation (**Table 4-~~15~~16**, Recreation Opportunity Spectrum).

The BLM would continue to allow 44 commercial water-based outfitter permits issued with the Idaho Outfitters Guides Licensing Board on the Salmon and Clearwater Rivers. No permits would be issued for Lolo Creek, and permits for Craig Mountain would require concurrence of the Idaho Department of Fish and Game.

Effects from Transportation and Travel Management

In addition to the impacts noted under Effects Common to All Alternatives under Alternative A, Alternative A would provide areas Open to cross-country OHV use. Areas Open to motorized cross-country travel have the greatest potential to alter wildlife behaviors and do damage to habitats, as described under Effects Common to All Alternatives. Closing roads yearlong to all motorized vehicles on 108 miles of routes would reduce disturbances to wildlife near those routes. Locating designated areas and trails to minimize harassment of wildlife and especially listed species would further reduce potential conflicts with wildlife use.

Effects from Lands and Realty Management

In addition to the general impacts from lands and realty management described in Effects Common to All Alternatives under Alternative A, identifying hazards on public lands, if corrected, could locally reduce impacts on wildlife that could be harmed by these hazards, such as toxic materials that could be ingested. Keeping the public lands within 0.25-mile of the Salmon River withdrawn from mineral entry would prevent surface disturbances of wildlife habitat within 18,532 acres.

Effects from ACEC/RNA Management

Under Alternative A, impacts would be consistent with the general types of impacts on wildlife described under Effects Common to All Alternatives, where wildlife habitat would be protected by certain actions. These include actions that directly prohibit specific impacts on wildlife and their habitats and indirectly from conserving other natural resources, such as listed and BLM sensitive plants. Although these management actions would conserve wildlife resources, Alternative A would generally be less effective than Alternative B, C, or D where additional actions would be added to refine management of ACECs and RNAs, as well as adding new ACECs.

Alternative B

Effects from Soils Management

Implementation of BMPs (**Appendix B**, Best Management Practices [see Volume II~~I~~]) for soil-disturbing activities and application of reclamation measures to mitigate adverse impacts on soils and water add additional actions that could benefit wildlife and their habitats, including special status species, over Alternative A. The BMPs could prevent additional soil-disturbing activities that could encourage healthy vegetation communities, which are the foundation of wildlife habitats. Reclamation measures further restore wildlife habitats that have already been impacted. Alternative B, which includes a more thorough and protective list of BMPs and reclamation measures, would provide for more protection of wildlife and their habitats than Alternative A.

Effects from Water Resources Management

Implementation of BMPs (**Appendix B**, Best Management Practices [see Volume II~~I~~]), monitoring, and adaptive management add additional actions that could benefit wildlife and their habitats, including special status species, over Alternative A. The BMPs could prevent additional erosion that could lead to healthier vegetation communities, which are the foundation of wildlife habitats. Associated monitoring and adaptive management could increase the effectiveness of the BMPs. Alternative B, which includes a more thorough and protective list of BMPs and reclamation measures, would provide for more protection of wildlife and their habitats than Alternative A.

Effects from Vegetation—Forests Management

Blocks over 1,000 acres, which would be managed to improve forest health and vigor, account for 24,789 acres (24 percent of forest land) (17 percent of the CFO). These areas would be managed to meet DFC listed in **Appendix D**, Desired Future Conditions for Forest Vegetation/Wildlife Habitat (see Volume II~~I~~). Impacts on wildlife of managing for DFC would have some short-term impacts on wildlife from harvesting activities, including removal of potential cover, dens, nesting sites, and foraging opportunities from tree removal, and behavioral disturbances, including displacement associated with noise, movement, and vibrations. These activities, if successful, could transform forest stands into conditions closer to historical range of variability in native wildlife habitats, and they would represent an improvement in habitat quality for many species. As described under Effects Common to All Alternatives, forest treatment impacts on wildlife vary widely by species.

Managing species composition and canopy closure of large trees, giving preference to ponderosa pine and western larch, would, over more than 50 years, increase the amount of old-growth forest wildlife habitat. Identifying and recording old-growth stands and determining if they meet pre-fire suppression criteria could help prevent old-growth stands and their associated limited wildlife habitat from being lost in a severe fire. Performing site-specific analysis on forest vegetation proposals would allow for tailoring projects to maximize, within other constraints, the quality of wildlife habitat post-harvest/treatment by identifying and retaining specific microhabitat features, including nest sites, snags, dens, food sources, and migratory routes, as well as designing the composition and structure of the stand.

Harvesting timber in stands where there is high risk of extensive mortality, in order to maximize the economic return, would degrade wildlife habitats in the short-term due to loss of forested habitat and disturbance from harvest activities. Cavity-dependent and insectivorous species would be the most affected by the loss of potential snags and insects that may be present in dead and diseased trees. In the long term, live trees would be replaced more quickly, providing habitat for species requiring mature forest sooner.

Effects from Vegetation—Weeds Management

Types of impacts from weed management actions on wildlife are similar to those described under Effects Common to All Alternatives. Numerous additional specific actions under Alternative B would make weed management more effective than under Alternative A and thus would be more successful at slowing down the encroachment of weeds in native wildlife habitats.

Effects from Vegetation—Rangelands Management

Under Alternative B actions designed to promote the health of native vegetation communities and rehabilitate areas in nonnative vegetation would generally reduce degradations of wildlife habitat quality and improve it where rehabilitated by increasing quantity and quality of native plant communities that form habitats. Species that use canyon grassland habitat would be the most affected and include short-eared owl, vesper sparrow, mourning dove, and mule deer. The BLM sensitive species that use these habitat types include Brewer's sparrow, Woodhouse toad, and prairie falcon. Management actions and treatments that improve rangeland conditions would be emphasized in the Rattlesnake Ridge and Craig Mountain canyon grassland areas.

Effects from Vegetation—Riparian and Wetlands Management

Alternative B could be slightly less effective at conserving and restoring riparian wildlife habitats than Alternative A because Alternative B RCA stream buffers would total 22,847 acres, 6 percent less than the 24,290 acres of RHCAs under Alternative A.

Effects from Wildlife and Special Status Wildlife Management

Actions designed to conserve bald eagle could increase bald eagle use in the CFO and contribute toward species recovery, if successful, by increasing foraging opportunities, area of suitable nesting and roosting habitat, numbers of suitable nest trees, and protection of any active nests from disturbances.

Implementing applicable conservation and restoration measures identified in Canada Lynx Conservation Assessment and Strategy and the Recovery Plan for Canada lynx could increase the area of denning and foraging habitat on BLM-managed lands in the CFO and could contribute toward recovery.

Implementing applicable measures from the gray wolf recovery plan could increase populations of ungulates and alternate prey, suitable denning and rendezvous sites, and sufficient space with minimal human exposure. This could in turn increase the number of packs and individuals in central Idaho and contribute toward recovery. Maintaining and enhancing large stands of cottonwood would at least maintain the potential for yellow-billed cuckoo to occur in the CFO.

Actions to manage sensitive species and their habitats via inventories, database maintenance, guild-based habitat management, land tenure adjustments, conservation easements, restoration projects, and cooperative planning could improve, maintain, or reduce degradations to these species' habitats. Types of impacts would be specific to each species and the project-level implementation of these general guidelines. These actions, if successful, would reduce the possibility of CFO management contributing to a species being listed under the ESA in the future.

Striving to improve the ecological condition of native grassland plant communities, with an emphasis on bighorn sheep, elk, and deer winter range areas, could improve habitat conditions for species that use grasslands for part or all of their life. Improvement in big game winter range areas could increase the size of these herds by reducing winter mortality, and thus increasing success rates for these species.

Alternative B would be more successful at maintaining and improving snag-dependent wildlife habitat than Alternative A.

Actions to protect riparian areas from degradations and to achieve PFC would indirectly conserve and enhance riparian wildlife habitats as well. Increased riparian health would result in increased cover, nesting habitat, and food by increasing density, extent, and structural complexity of riparian vegetation. Improved bank stability and other conditions that reduce sedimentation, increase shading and instream structure, and improve water quality could lead to increases in fish density, which provides more foraging opportunities for fish-eating birds.

Protecting active raptor nests with a 100-yard nondisturbance buffer would provide limited protection of these nests. The possibility of a larger buffer being required to suit the specific situation would make raptor nest protection more effective under Alternative B than under Alternative A.

Actions to improve bighorn sheep habitat could result in an increase in population size in the long-term as well as an increase in hunting opportunities. Improvements to bighorn habitats would also improve habitat conditions for other canyon grassland species

General wildlife management actions to provide for overall species diversity, including providing water sources and developing management plans, reintroductions, and transplants, would generally contribute toward maintaining or improving biodiversity and quality of habitats in the CFO. Population health parameters could improve for some species due to management actions. At a minimum these management actions reduce impacts from other activities that could impair habitats and populations. Few management actions can have the same effect on all wildlife species. Actions that improve habitat for one group of wildlife may lessen the quality of habitat for another on any particular piece of land. Managing habitats for diversity at a landscape level balances out these issues.

Not authorizing any net increase in motorized vehicle use in priority management areas on 101,526 acres would prevent the increase of wildlife disturbance from vehicles.

Effects from Aquatic Resources, Fish, and Special Status Fish Management

Types of impacts on wildlife are similar to those described under Alternative A, but additional actions to conserve, enhance, and restore aquatic habitats could provide additional riparian wildlife habitat improvement and result in greater aquatic food sources for wildlife. Emphasis for restoration in 32 watersheds (64,481 acres) would have direct and indirect effects on wildlife habitats.

Effects from Special Status Plants Management

Actions designed to ensure that special status plant populations are stable or continue to improve could indirectly have similar impacts on wildlife that use the habitat types occupied by special status plants and conversely could decrease habitat quality for species that do not use each habitat type affected.

Effects from Wildland Fire Management

Types of impacts of wildland fire management on wildlife would be similar to those under Alternative A. Unplanned fire for wildland fire use would not be evaluated in the Craig Mountain ~~FMU~~FMA and a portion of the Salmon ~~FMU~~FMA (**Figure H-2**, Areas Available for Wildland Fire Use—Alternative B [see **Appendix H** in Volume II~~I~~]).

Treatment of up to 40 percent (approximately 33,760 acres) of CFO lands to reduce FRCC (moderate to high risk) WUI areas would represent less change in wildlife habitat than Alternative D (60 percent [approximately 50,650 acres]) and more than Alternative C (20 percent [approximately 16,883 acres]). Treatments in DFC areas outside of the WUI would strive to achieve historic fire regimes and vegetation-fuel-structure characteristics. Old growth/old forest stands would be managed to meet structural component targets in these areas, as described in DFC tables (**Appendix D**, Desired Future Conditions for Forest Vegetation/Wildlife Habitat [see Volume II~~I~~]).

Effects from Visual Resources Management

Indirect effects would be the same as those described under Alternative A.

Effects from Forest Products Management

Under Alternative B, 40,598 acres (40 percent of the forested acres) would be managed as commercial forest, and an estimated 242 acres would be treated annually (estimated 3,630 acres over the life of the RMP, which is almost 4 percent of the forested vegetation) (**Table 4-~~16~~17**, Commercial Forest Use Projections). Types of impacts are similar to those described under Alternative A.

Cavity-dependent wildlife species, such as woodpeckers, depend on snags for cover and reproduction. Population sizes of these species are limited by the availability of snags. Snag management would be followed for all timber sales based on forest type (**Table 4-~~17~~18**, Desired Range of Snags per Acre for Potential Vegetation Groups [PVG]) and would maintain or improve snag availability for the long term.

Table 4-17
Commercial Forest Use Projections

Commercial Forest Use Projections	Alternative A	Alternative B	Alternative C	Alternative D
Commercial forest land (acres)	35,757	40,598	34,611	45,190
Proportion of forested area (%)	35	40	34	44
Acres of forest management per year	358	242	191	361
Acres of forest management in a 15-year period[1]	Estimated 5,370	3,630	2,865	5,415
Predicted annual PSQ in MBF	6,600 (ASQ)	3,129	3,101	4,823

Source: BLM 2004a
[1] Based on the annual acres of forest management multiplied by 15 years.

Table 4-18
Desired Range of Snags per Acre for Potential Vegetation Groups

Diameter Group	PVG-1	PVG-2	PVG-3	PVG-4	PVG-5	PVG-6	PVG-7	PVG-8	PVG-9	PVG-11
10 to 20 inches	0.4-0.5	1.8-2.7	1.8-4.1	1.8-2.7	1.8-5.5	1.8-5.5	1.8-5.5	1.8-7.5	1.8-7.5	1.4-2.2
Greater than 20 inches	0.4-2.3	0.4-3.0	0.2-2.8	0.2-2.1	0.4-3.5	0.2-3.5	0.2-3.5	0.2-3.0	0.2-3.0	1.4-2.2
Total	0.8-2.8	2.2-5.7	2.0-6.9	2.0-4.8	2.2-9.0	2.0-9.0	2.0-9.0	2.0-10.5	2.0-10.5	2.8-4.4
Minimum Height	15 feet	30 feet	30 feet	30 feet	30 feet	30 feet	30 feet	30 feet	30 feet	15 feet

Source: BLM 2004a

Effects from Livestock Grazing Management

The impacts from livestock grazing management on wildlife are similar to those described under Alternative A. The Number of allotments and area of grazing would be intermediate between Alternatives A and C (**Table 4-14**, Grazing ~~Statistics~~ Factors that Could Affect Wildlife). Also see **Table 4-50** in Section 4.3.2, Livestock Grazing. Retiring three allotments could improve wildlife habitats within those allotments because any potential competition for forage would be alleviated and cover for wildlife may increase. Habitat for other species may not be improved. It needs to be noted that current conditions and trends for wildlife habitat would probably continue, because these allotments are not currently grazed by livestock. Construction of exclosures and ESA Section 7 consultation would reduce the potential for accidental take of listed plants from grazing. Modifying grazing authorizations to strive toward meeting unmet Idaho Standards for Rangeland Health (BLM 1997a) (**Appendix A** [see Volume II~~I~~]) would reduce degradations on rangeland wildlife habitats. It is difficult to control season of use and authorized AUMs on small tracts of fragmented BLM lands, which comprise a large majority of the allotments. Consequently, with exception of acres available for grazing, overall effects are expected to be similar for all alternatives. To promote the achievement of bighorn sheep management objectives, new domestic sheep or goat grazing would not be authorized where such grazing would result in risk of disease transmission to bighorn sheep. On existing sheep grazing allotments, coordination with grazing lessee's and appropriate state/federal agencies, and tribes would be taken to reduce or eliminate risks for domestic sheep

transmission of disease to bighorn sheep. Primary focus would occur on allotments with high risks for disease transmission to bighorn sheep (**Table 4-15**, BLM Sheep Allotments and Risk Analysis for Disease Transmission to Bighorn Sheep).

Effects from Minerals Management

General effects are described under Effects Common to All Alternatives, above. Under Alternative B, effects would be similar to those described under Alternative A, but would be further limited by additional areas with surface use restrictions (leasables and mineral materials), which include 43,590 acres subject to NSO stipulations to protect resources, including wildlife and special status wildlife, and 42,403 acres of public lands would be subject to CSU stipulations to protect visual quality and rivers suitable for the NWSRS. These stipulations mostly eliminate potential impacts on wildlife from mineral management within the NSO areas and would reduce them within the CSU stipulation areas.

Effects from Recreation Management

In addition to the impacts noted under Effects Common to All Alternatives, under this alternative the BLM would continue to manage the Elk City, Little Salmon River, John Day Creek, and Marshall Mountain areas as Extensive Recreation Management Areas. Lolo Creek and Craig Mountain would be designated as SRMAs, identifying recreation as the principal use of these lands. The Lolo Creek SRMA would emphasize backcountry, dispersed, and nonmotorized recreation opportunities, with an emphasis on whitewater boating and fishing. The Craig Mountain SRMA would provide opportunities in a natural setting for big game hunting, hiking, and biking, while promoting backcountry recreation experiences. Managing lands as SRMAs rather Extensive Recreation Management Areas could encourage additional use of these lands and thus increase the level of disturbances to wildlife, as described under Effects Common to All Alternatives. However, because these two SRMAs emphasize nonmotorized activities, the impacts would be less.

Similar to Alternative A, the BLM would continue to manage public lands for a variety of recreational activities within all ROS settings (**Table 4-~~15~~16**, Recreation Opportunity Spectrum). Under Alternative B, less than half of the acres affected under Alternative A would be managed as primitive, potentially opening over 8,000 acres to additional human disturbances that could affect wildlife, as described under Effects Common to All Alternatives.

Effects from Renewable Energy Management

Authorized renewable energy development could have some impacts on wildlife via alteration of habitats from removing vegetation from construction activities. Human disturbances from construction and operation of facilities, such as noise, movement, and vibrations, would alter wildlife behavioral use patterns in the vicinity of the project. Impacts would vary by species, type of development, topography, and habitat type. Removing vegetative treatment byproducts to use in generating plants would reduce the quantity of woody debris on the forest floor similar to removal for a forest or fuels management project. In turn, this would remove cover for wildlife species that use that type of habitat feature.

Effects from Transportation and Travel Management

In addition to impacts noted under Effects Common to All Alternatives, under Alternative B no acres would be Open to cross-country motorized vehicular traffic, thereby reducing impacts on wildlife more than Alternative A. Closing roads to all motorized vehicles yearlong on 100 miles of

routes would reduce disturbances to wildlife near those routes. Implementing the travel plan would ensure additional protections for wildlife, special status wildlife, and their habitats over Alternative A through patrols, enforcement, education, visitor contacts, monitoring, and use restriction signage.

Obliterating or decommissioning roads and trails could reduce habitat fragmentation in the long term.

Effects from Lands and Realty Management

Types of impacts from land tenure adjustments are described under Effects Common to All Alternatives. Improvements to wildlife habitat via land acquisition would be more likely under Alternative B because 113,728 acres in 12 management blocks have been identified with ranked resource values. Wildlife ranks as "high value" for 70,657 acres in 6 blocks. In addition, conservation easements would be used to protect resources, including wildlife.

Encouraging linear rights-of-way to be collocated would reduce the area of surface disturbance that could degrade wildlife habitat by vegetation removal and conversion and spread of noxious weeds. Wildlife and habitats would receive varying levels of protection and conservation from withdrawals and special designations that restrict potential land use conflicts.

Effects from ACEC/RNA Management

Under Alternative B ~~three~~ four new ACECs would be created: 5,759 acres on the Salmon River from White Bird Creek to French Creek, 570 acres on the East Fork American River, 1,625 acres on Upper Lolo Creek, and 6,356 acres on the American River. Adding another ACEC to the East Fork of the American River would further protect species along the river corridor, especially riparian-dependent wildlife, such as yellow warbler, bald eagle, and other riparian-dependent species.

Possible updates to the Clearwater River Islands Goose Nesting HMP could further enhance waterfowl habitat and nesting success rates in the Lower and Middle Cottonwood Islands ACEC/RNA. Possible updates of the Lucile Caves HMP could improve conservation efforts for BLM sensitive land snails.

Effects from National Trails Management

Effects would be the same as those described under Alternative A.

Effects from Wilderness and Wilderness Study Areas Management

Management of the wilderness area and WSAs under interim policy would have the same effect as under Alternative A. If Congress were to release the WSAs from wilderness consideration, management of these areas could offer slightly less protection for threatened and endangered species from other actions and human disturbance. These species would still receive required protection from the ESA.

Effects from Watchable Wildlife Viewing Sites Management

Impacts on wildlife and special status wildlife described under Alternative A would be continued and expanded under Alternative B with additional habitat improvements, viewing opportunities, and partnerships, which could improve more wildlife habitat and populations than under Alternative A.

Effects from Native American Tribal Uses Management

Consulting with tribes to identify culturally significant plants, animals, fish, and habitats, and then incorporating that information into monitoring protocols, could improve habitat conditions for those species and habitats, as well as for species with similar habitat requirements if management actions were adjusted to address the results of monitoring data.

Alternative C

Effects from Soils Management

Effects would be the same as those described under Alternative B.

Effects from Water Resources Management

Effects would be the same as those described under Alternative B.

Effects from Vegetation—Forests Management

Types of impacts from forest vegetation management would be similar to Alternative B. However, under Alternative C, the threshold of contiguous forest blocks would be reduced from 1,000 to 500 acres for management support of attaining DFC. Blocks would total 28,087 acres under Alternative C, a 3-percent increase from Alternative B. This could lead to attainment of more acres of wildlife habitats in DFC than under Alternative B.

Effects from Vegetation—Weeds Management

Effects would be the same as those described under Alternative B.

Effects from Vegetation—Rangelands Management

Effects would be similar to those described under Alternative B, with the addition of promoting native plant communities in one additional area, Salmon River canyon grasslands. Thus, Alternative C has the greatest potential to improve rangeland wildlife habitats.

Effects from Vegetation—Riparian and Wetlands Management

Alternative C would be slightly more effective at conserving and restoring riparian wildlife habitats than Alternative A because of greater sizes of the RCA stream buffers. Alternative C would have RCAs totaling 27,624 acres, 14 percent greater than RHCAs under Alternative A.

Effects from Wildlife and Special Status Wildlife Management

The impacts from wildlife and special status wildlife management are similar to Alternative B with the following exceptions:

- Under Alternative C, the addition of the Lower Salmon River in emphasis management areas for native grassland communities could increase the area of grassland wildlife habitat that is improved;
- Under Alternative C, the reduction of the threshold of contiguous forest size from 1,000 to 500 acres for management support of attaining DFC could lead to attaining more acres of wildlife habitats in DFC than under Alternative B;
- Riparian and wetland management actions would be more effective at improving riparian wildlife habitat because of larger RCA stream buffers (buffer widths are the largest for Alternative C compared to all other alternatives) and more watersheds and acreage identified for conservation or restoration (3 percent more than prescription watersheds under

Alternative A). Specifying use criteria for grazing allotments along fish-bearing streams could further conserve riparian areas; and

- More acres/areas identified for no net increase and/or emphasis for decrease in open routes for motorized use.

Effects from Aquatic Resources, Fish, and Special Status Fish Management

The impacts from aquatic resources management actions would be similar to those under Alternative B, with additional improvement to riparian wildlife habitats because of additional conservation and restoration watersheds (6 percent more than Alternative B and 3 percent more than prescription watersheds under Alternative A). Conservation and restoration measures identified for listed and BLM sensitive fish would have direct and indirect effects for riparian-dependent wildlife species.

Effects from Special Status Plants Management

Effects would be the same as those described under Alternative B.

Effects from Wildland Fire Management

Effects would be the similar to those described under Alternative B, except all unplanned fires would be evaluated for wildland fire use (**Figure H-1**, Areas Available for Wildland Fire Use—Alternatives A and C [see **Appendix H** in Volume II~~I~~]). Treatment of up to 20 percent of CFO lands (approximately 16,883 acres) to reduce FRCC (moderate to high risk) in WUI areas represents less change in wildlife habitat than Alternative B (40 percent [approximately 33,766 acres]) and Alternative D (60 percent [approximately 50,650 acres]). Habitat could improve for some species and not for others. With less fire management, there would be less opportunity for habitat improvements needing harvest per winter range HMPs.

Effects from Visual Resources Management

Indirect impacts on wildlife and special status wildlife from visual resources are the least among the four alternatives, as described under Alternative A (**Table 4-13**, Comparison of Wildlife and Special Status Wildlife Indicators by Alternative), because there would be the greatest number of acres in VRM Class I and II and the fewest in Class III.

Effects from Forest Products Management

Under Alternative C, types of impacts from forest products management are similar to those under Alternative B, except for fewer acres of forest harvest and treatment and larger RCA stream buffers for riparian areas within forested lands, as described under Vegetation—Riparian and Wetland. Habitat could improve for some species and not for others. With less fire management, they would be less opportunity for habitat improvements needing harvest per winter range HMPs.

Effects from Livestock Grazing Management

The types of impacts on wildlife from livestock grazing management are similar to those under Alternative B. However, there would be fewer AUMs, allotments, and grazed acres (**Table 4-14**, Grazing ~~Statistics~~ Factors that Could Affect Wildlife). Habitat could improve for some species and not for others. Also see **Table 4-50** in Section 4.3.2, Livestock Grazing. Reduced risks from transmission of disease from domestic sheep and goats to bighorn sheep may occur. Effects to bighorn sheep are similar to those described in Alternative B.

Effects from Minerals Management

Effects would be similar to those described under Alternative B, except 68,854 acres of the public lands open to leasing would be subject to NSO stipulation to protect resources, including wildlife and special status wildlife. Also, 59,122 acres of the public lands open to leasing would be subject to CSU stipulations to protect visual quality and rivers suitable for the NWSRS. These stipulations mostly eliminate potential impacts on wildlife from mineral management within the NSO areas and reduce them within the CSU stipulation areas. The increase in surface use stipulations would decrease potential impacts compared to Alternatives A and B. Alternative C specifies the largest acreages for lease stipulations and could, therefore, result in the least amount of impacts.

Effects from Recreation Management

Effects would be the same as those described under Alternative B.

Effects from Renewable Energy Management

Effects would be the same as those described under Alternative B.

Effects from Transportation and Travel Management

Effects would be similar to those described under Alternative B, except that managing for a decrease in motorized vehicle use on BLM-managed lands in 5 priority areas on 38,733 acres could decrease vehicle disturbances, habitat damage from OHVs, access to remote habitats, and fragmentation of habitats.

Effects from Lands and Realty Management

Effects would be the same as those described under Alternative B.

Effects from ACEC/RNA Management

Under Alternative C the Craig Mountain ACEC would be increased to 23,342 acres from the current 3,956 acres, an almost 5-fold increase. This would increase the number of protective measures in place for an area already managed for wildlife. Habitats would be further conserved by additional restrictions on roads and grazing, as well as a monitoring program. Forest habitats would be further conserved and/or restored by designating DFC for forest habitats, which would conserve and protect old forest characteristics. Upper Lolo Creek would be designated an ACEC. This 1,625-acre parcel would directly and indirectly conserve wildlife, especially riparian-dependent wildlife, by restricting timber harvest, withdrawal from minerals, road decommission, exotic plant management, riparian restoration, and forest management for DFC. Designation of the 576-acre Partridge/Elkhorn ACEC and the 590-acre Little Salmon River ACEC would protect wildlife, including BLM sensitive wildlife that use old-growth ponderosa pine, such as goshawk, by emphasizing management for large trees.

Effects from National Trails Management

Effects would be the same as those described under Alternative A.

Effects from Wilderness and Wilderness Study Areas Management

Effects would be the same as those described under Alternative B.

Effects from Watchable Wildlife Viewing Sites Management

Effects would be the same as those described under Alternative B.

Effects from Native American Tribal Uses Management
Effects would be the same as those described under Alternative B.

Alternative D

Effects from Soils Management
Effects would be the same as those described under Alternative B.

Effects from Water Resources Management
Effects would be the same as those described under Alternative B.

Effects from Vegetation—Forests Management
Effects would be similar to those described under Alternative B, except that, under Alternative D forest vegetation management could be less effective at conserving wildlife habitat than the other alternatives because there is no objective to manage for forest DFC and old forest characteristics.

Effects from Vegetation—Weeds Management
Effects would be the same as those described under Alternative B.

Effects from Vegetation—Rangelands Management
Rangeland management actions would be less protective of wildlife and special status wildlife habitats and would provide less potential to improve than under Alternatives A, B, and C because there would be no specific management emphasis actions to convert nonnative communities to native.

Effects from Vegetation—Riparian and Wetlands Management
Alternative D would be slightly less effective at conserving and restoring riparian wildlife habitats than Alternatives A, B, and C because of smaller sizes of the RCA stream buffers. Alternative D would have RCAs totaling 20,710 acres, 15 percent less than RHCAs under Alternative A, 9 percent less than RCAs under Alternative B, and 25 percent less than RCAs under Alternative C.

Effects from Wildlife and Special Status Wildlife Management
Effects would be similar to those described under Alternative B, with the following exceptions:

- Incorporating important sensitive species habitat components into activity and project design could conserve and in some cases improve sensitive species habitats. These improvements could contribute to preventing a future need for ESA listing;
- Riparian and wetland management actions could be less effective at improving riparian wildlife habitat because of smaller RCA stream buffers (15 percent, 9 percent, and 25 percent less acres than Alternatives A, B, and C, respectively), as described under Effects from Vegetation—Riparian and Wetland Management above;
- 21 percent, 19 percent, and 24 percent fewer priority (prescription, conservation, or restoration) watersheds than Alternatives A, B, and C, respectively; and
- No designated management areas with restrictions to not allow no net increase in open routes for motorizes vehicles, which is identified in Alternatives B and C.

Effects from Aquatic Resources, Fish, and Special Status Fish Management

Effects would be similar to those described under Alternative B, with less potential improvement to riparian wildlife habitats because of fewer conservation and restoration watersheds, 19 percent less than Alternative B and 21 percent less than prescription watersheds under Alternative A.

Effects from Special Status Plants Management

Effects would be the same as those described under Alternative B.

Effects from Wildland Fire Management

Effects would be similar to those described under Alternative B, except evaluation of unplanned fire for wildland fire use would not be done in commercial forest lands or grazing allotments (**Figure H-3**, Areas Available for Wildland Fire Use—Alternative D [see **Appendix H** in Volume II~~I~~]). Only fires that have been determined to not affect these resources would be allowed to burn. This could preclude potential wildlife habitat improvements .

Treatment of up to 60 percent of CFO lands (approximately 50,650 acres) to reduce FRCC (moderate to high risk) in WUI areas would represent more change in wildlife habitat than under Alternative B (40 percent [approximately 33,766 acres]) and Alternative C (20 percent [approximately 16,883 acres]). Habitat could improve for some species and not for others.

Effects from Visual Resources Management

Indirect impacts on wildlife and special status wildlife from visual resources are the greatest among the four alternatives, as described under Alternative A (**Table 4-13**, Comparison of Wildlife and Special Status Wildlife Indicators by Alternative), because there would be the fewest number of acres in VRM Class I and II and the greatest in Class III.

Effects from Forest Products Management

Effects would be similar to those described under Alternative B, except there would be more acres of forest harvest and treatment and smaller RCA stream buffers for riparian areas within forested lands, as described under Vegetation—Riparian and Wetlands.

Effects from Livestock Grazing Management

Effects would be similar to those described under Alternative B, but considerably more grazing would be permitted (**Table 4-14**, Grazing ~~Statistics~~ Factors that Could Affect Wildlife). Also see **Table 4-50** in Section 4.3.2, Livestock Grazing. Allotments that would be retired under Alternatives B and C would be increased under Alternative D, thus resulting in more potential for conflicts with wildlife management and potential degradations to wildlife habitat and populations as described under Effects Common to All Alternatives. Reduced risks from transmission of disease from domestic sheep and goats to bighorn sheep may occur. Effects to bighorn sheep are similar to those described in Alternative B.

Effects from Minerals Management

Under Alternative D, effects would be similar to those described under Alternative B, but would be less limited because of fewer areas with surface use restrictions (leasables and mineral materials), which include 35,045 acres subject to NSO stipulations to protect resources, including wildlife and special status wildlife, and 32,013 acres would be subject to CSU stipulations to protect visual quality and rivers suitable for the NWSRS. These stipulations mostly eliminate potential impacts on wildlife from mineral management within the NSO areas and reduce them within the CSU stipulation areas.

The increase in surface use stipulations could decrease potential impacts compared to current levels. Types of impacts would be the same as those described under Alternative A.

Effects from Recreation Management

Effects would be similar to those described under Alternative B throughout most BLM-managed lands. However, in the Craig Mountain WMA SRMA, access would be improved to promote rural, developed recreation instead of backcountry experience. This could result in more disturbances to wildlife and their habitats from the impacts of increased human presence and vehicles, as described under Effects Common to All Alternatives.

Effects from Renewable Energy Management

Effects would be the same as those described under Alternative B.

Effects from Transportation and Travel Management

Effects would be similar to those described under Alternative B, except that there would be a 23,189-acre Open area that would allow for more potential wildlife disturbance than under Alternatives B or C.

Effects from Lands and Realty Management

Effects would be the same as those described under Alternative B.

Effects from ACEC/RNA Management

Effects would be similar to those described under Alternative B. The only proposed difference is to allow livestock grazing to support achievement of goals on Wapshilla Ridge ACEC/RNA. Quantity and composition of vegetation may be altered by grazing, but if grazing is being used as a tool to achieve goals, the health of wildlife habitats likely would not be impaired.

Effects from National Trails Management

Effects would be the same as those described under Alternative B.

Effects from Wilderness and Wilderness Study Areas Management

Effects would be the same as those described under Alternative B.

Effects from Watchable Wildlife Viewing Sites Management

Effects would be the same as those described under Alternative B.

Effects from Native American Tribal Uses Management

Effects would be the same as those described under Alternative B.

Cumulative Effects

Most of the cumulative projects listed in Section 4.1.3, Cumulative Impacts, have or will affect wildlife. Population increases, timber activities, fire suppression, road construction, weeds, and mineral development have had the greatest effects. These actions and their interactions have resulted in the loss of and changes in habitat across northern Idaho, resulting in degraded quality of these habitats and the populations they support. The above actions directly and indirectly result in changes in vegetation species composition and structure. On public lands, these changes in vegetation have the greatest effect on wildlife as opposed to private lands where development results in the complete loss of habitats under the footprint of infrastructure. These changes include the following: old

single-story ponderosa pine forests have decreased; early seral forests have decreased; mid-age/mature stands of lodgepole and grand fir have increased; white pine blister rust has almost eliminated western white pine and whitebark pine; native canyon grasslands, primarily bluebunch wheatgrass and Idaho fescue, have declined due to weed invasion; agriculture has eliminated the majority of native Palouse grasslands; and vegetation and wildlife habitats are less diverse than historic conditions from past timber harvest practices, fire exclusion, roads, grazing, agriculture, weeds, and recreation. Improvements have included high populations of whitetail deer, wolves surpassing recovery goals, the first successful nesting pairs of bald eagles documented in the area, delisting of the peregrine falcon, high upland bird numbers, Idaho Department of Fish and Game habitat improvement projects, and conservation easements being implemented by Potlatch.

In the foreseeable future, implementing the RMP in combination with National Forest Plans and revisions would put numerous new mitigation, restoration, and conservation measures in place that would reduce the potential extent and severity of effects from other actions. Implementing several programs, such as RCA stream buffers, when combined with similar programs on Forest Service lands, would rehabilitate damaged lands such as riparian areas. Actions on BLM lands would have a noticeable effect at the local level, but because BLM lands are a small total area of scattered parcels, the Cottonwood RMP's contribution to cumulative effects on wildlife across northern Idaho is relatively small. The actions of the Forest Service, as well as state, private, and tribal lands, shape the conditions of much of northern Idaho.

Forested vegetation treatments and harvest, including prescribed fire in conjunction with similar actions on Forest Service, and some private, state and tribal lands, would, if successful, bring forested lands into DFC, a condition more similar to the historic range of variability for species composition and structure. However, logging would have short-term effects on wildlife from roads, noise, and presence of humans on all types of land ownership. Long-term effects would occur for species requiring the denser, more-complex structure of mature forests where converted to more open or early seral-stage stands. These species could decline to a historical level more in balance with the historical amount of mature forests. Species that select more open, single-canopy forest structures would experience an increase in available habitat from this type of forested vegetation treatments.

The same types of cumulative effects would occur under all alternatives. Generally, Alternative C would contribute the greatest potential for improvement in wildlife habitat in northern Idaho because of numerous management actions, mitigation measures, and restrictions designed to improve wildlife habitats. There would be less conversion of forested habitats to historical structures, so that habitat conditions for some species dependent on early seral stages and single story ponderosa pine, would be less improved than under Alternatives B and D. The least amount of change resulting from forest vegetation treatments would occur. Alternatives A and D would contribute less to any improvements in wildlife habitat conditions across northern Idaho because of more focus on commodities, especially under Alternative D. More acres of forest vegetation would be treated than under Alternative C, resulting in more effects on wildlife. Alternative B is intermediate between Alternatives C and D in most regards.

Most of the cumulative impact projects in Section 4.1.3, Cumulative Impacts, have had or will have effects on special status wildlife. Cumulative effects described above also apply to those wildlife species listed under the ESA or designated sensitive by the BLM. Actions and mitigation measures

to comply with the ESA and work towards recovery would make a small contribution to recovery of listed species in northern Idaho, because of the small quantity of BLM-managed lands. The Forest Service has by far the greatest control over the health of listed and sensitive species in northern Idaho because of the large amount of land in its ownership. Development on private lands in northern Idaho also would put additional pressure on special status species. Comparisons of effectiveness among the Cottonwood RMP alternatives would be the same as for non-special status wildlife.

4.2.10 Aquatic Resources, Fish, and Special Status Fish

Goal: Manage habitat to contribute to the conservation of special status and native fish species.

Summary

Healthy riparian areas are critical to aquatic systems that include invertebrate populations and fish, including special status fish species. Under Alternative A, aquatic resources management for the CFO includes designating streams for development of aquatic HMPs, Riparian Management Guidelines (BLM 1985e), PACFISH (BLM and Forest Service 1995), and Fisheries and Water Quality Objectives (BLM 1985d). Prioritized areas for achievement of fisheries and water quality objectives are identified as prescription watersheds for achievement of objectives. Under Alternatives B, C, and D, the Aquatic and Riparian Management Strategy (**Appendix F** [see Volume III]) is somewhat similar to Alternative A for providing conservation and restoration measures for fisheries and water resources. The Aquatic and Riparian Management Strategy (**Appendix F**) provides more flexibility for adaptive management, which is also specific to the incorporation of the aquatic and riparian habitat component of ICBEMP into BLM land use plans.

Alternative A does not address all species that have been listed as threatened, endangered, species of concern, or sensitive species with USFWS, National Marine Fisheries Service, Idaho Department of Fish and Game, and Idaho BLM. Alternatives B, C, and D provide updated status for special status species and management emphasis and added focus for protection, conservation, or restoration of special status species habitat.

Because of the intermingled and fragmented land patterns and small BLM ownership within many watersheds, Chapter 2 identifies focus areas where achievement of fisheries objectives (e.g., DFCs) may be more achievable. This strategy focuses on public land ownership within a watershed and where similar management emphasis would also probably occur (e.g., BLM, Forest Service, Idaho Department of Fish and Game). Alternative A identifies prescription watersheds, and Alternatives B, C, and D identifies conservation/restoration watersheds, where focused fisheries management would occur.

Degradation of aquatic habitats and fisheries, including special status fish populations, could occur as a result of land management activities. Resource management such as forestry, minerals, travel, recreation development, and use and grazing can affect aquatic habitats. The potential for impact is dependent upon the success and adequacy of protective measures such as riparian buffer zones, mineral withdrawals, and adherence to the Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management (BLM 1997a) (**Appendix A** [see Volume III]). Alternative C would best manage habitat to contribute to the conservation of special status and native fish species,

followed by Alternatives B, A, and then D. **Table 4-~~18~~ 19** identifies the indicators that were used to analyze effects on aquatic resources, fish and special status fish under each alternative.

Table 4-19
Comparison of Aquatic Resources, Fish, and Special Status Fish Indicators by Alternative

Indicator	Alternative A	Alternative B	Alternative C	Alternative D
Changes to fish habitat condition in priority prescription, conservation, and restoration watersheds	Improved for 66,077 acres in 39 prescription watersheds (many are the same as restoration and conservation watersheds in Alternatives B, C, and D)	Improved for 64,481 acres in ~~32~~ 28 restoration watersheds and ~~1~~ 3 conservation watersheds	Improved for 68,359 acres in ~~40~~ 37 restoration watersheds and 3 conservation watersheds	Improved for 52,118 acres in ~~27~~ 24 restoration watersheds and ~~1~~ 3 conservation watersheds
Miles of streams in PFC flowing across BLM lands as an indicator of good fish habitat	537	537	537	537
Miles of fish-bearing streams within prescription, conservation, and restoration watersheds flowing across BLM lands	69	80	81	65
Miles of fish-bearing streams flowing across BLM lands	162	162	162	162

Source: BLM 2004a

Methods of Analysis

Indicators

Indicators are used to identify the level of impact. For aquatic resources, fish, and special status fish, the indicators used for impact analysis are identified in **Table 4-~~18~~19**, Comparison of Aquatic Resources, Fish, and Special Status Fish Indicators by Alternative.

Methods and Assumptions

Potential impacts on aquatic resources, fish, and special status fish from each alternative are based on interdisciplinary team knowledge of the resources and the planning area and information gathered from the public during the planning process. Impacts were identified using best professional judgment and were assessed according to the following assumptions:

- Healthy riparian areas are critical for properly functioning aquatic ecosystems. Improvements or protection of riparian habitats would indirectly improve or protect aquatic habitats and fisheries. Degradations to riparian habitats would indirectly degrade aquatic habitats and fisheries;
- Impacts described for fish populations and aquatic habitats would have similar effects on special status fish species where they occur;
- Emphasis and management opportunities for maintenance or improvement of fish habitat

conditions would occur in designated prescription, conservation, and restoration watersheds; and

- All BLM management actions would incorporate appropriate project design, BMPs, and mitigation to not result in any adverse long-term trends for water quality and aquatic habitats at a sixth-code HUC.

Effects Common to All Alternatives

Effects from Water Resources Management

Properly functioning floodplains are important for functioning aquatic ecosystems. Protecting floodplains would indirectly protect aquatic habitats and fisheries. The BLM would not impair long-term achievement of state or tribal water quality standards. It is the responsibility of the BLM through implementation of the Clean Water Act to protect and restore the quality of public water under its jurisdiction to the extent feasible. The development and implementation of water quality restoration plans (or, in some specific instances, sufficiently stringent management measures) would provide the specific action by which the BLM would meet TMDL requirements on lands under their jurisdiction.

Effects from Vegetation—Forests Management

Forest management includes activities such as commercial timber harvest, vegetation treatments, and road construction. These activities can affect aquatic resources. Potential impacts associated with forest management include:

- *Increased sedimentation.* For various forestry practices, the relative contribution of sediment appears to be moderate from clear-cutting (i.e., higher than from selective cutting or patch-cutting), moderately high from skid trails, and moderate from site preparation. By far, excess sediment generation is greatest from logging roads, particularly if built near streams (Waters 1995). Increased sedimentation in streams can affect fish populations in a variety of manners, including direct mortality, reduction in suitable spawning gravels, suffocation and mortality of eggs, and displacement of individual fish. Increased sedimentation resulting from forest vegetation treatments could occur even if the treatments occur outside the buffer zones.
- *Altered stream flow regimes.* Water yield increase resulting from excessive vegetation removal could result in scouring of stream channel bottoms and decreasing fish habitat and food sources (BLM 1981a). Scouring is dependent on the percent of total overstory forest canopy removed at a watershed level and does not occur at a result of localized vegetation removal. Consequently, the potential for scouring to occur would be relatively low.
- *Changes in water temperature.* Increases in water temperature can occur in areas where streamside vegetation is removed or altered flow regimes exist, increasing the amount of sunlight reaching the water or reducing summer base flow conditions. The default buffer zones on fish-bearing water bodies identified would vary between Alternative A and Alternatives B, C and D. The buffer zones would prevent vegetation treatments from occurring in these areas unless treatment would benefit the riparian plant community structure and riparian goals. As water temperature increases, the amount of available dissolved oxygen for fish and aquatic invertebrates decreases.

- *Logging debris accumulation.* Logging debris and jams in moderate amounts may provide increased and improved aquatic habitats. Large quantities of debris may form check dams that fill with silt, causing loss of food-producing rubble and gravel. Large quantities may also form migration barriers (BLM 1981a). The default buffer zones would generally prevent streams from changes in the amount of large woody debris recruitment for streams.

Effects from Vegetation—Weeds Management

Herbicide treatments of noxious weeds could degrade water quality in water bodies through the introduction of minimal amounts of herbicides, which are considered of low to moderate risk to aquatic organisms. Careful management and monitoring of applications would minimize the potential for these impacts. Potential for these impacts would be the same for all four alternatives.

Depending on existing riparian ecological condition and potential for weed infestations, large noxious weed infestations could provide inferior riparian habitat than populations of native riparian species, which could affect aquatic habitats. Noxious weed control measures would help prevent these conditions. Invasive plants can create or exacerbate conditions that reduce water quality. Directly or indirectly, invasive plants can affect stream bank stability, sediment, turbidity, shade and stream temperature, dissolved oxygen, and pH (Forest Service 2005a). Reduction of total acres impacted by invasive plants would positively affect water quality and therefore aquatic resources.

Effects from Aquatic Resources, Fish, and Special Status Fish Management

Alternative A would provide similar protection for aquatic and riparian areas as the Aquatic and Riparian Management Strategy (**Appendix F** [see Volume III]) measures to be implemented under Alternatives B, C, and D. Alternative differences would exist for watersheds designated as prescription watersheds (Alternative A) or as conservation or restoration watersheds (Alternatives B, C, and D). The PACFISH (BLM and Forest Service 1995), Riparian Management Guidelines (BLM 1985e), and Fisheries and Water Quality Objectives (BLM 1985d) could be more restrictive for some actions than the Aquatic and Riparian Management Strategy identified for Alternative B, C, and D (**Appendix F**). Alternative A has larger default buffers for lakes and large rivers than the other alternatives. Default buffers on all other types of fish-bearing water bodies within RHCAs and RCA stream buffers would be the same across all alternatives. These buffer zones would serve to protect aquatic habitats from impacts associated with other resource uses such as forest products and minerals, as described in the Effects Common to All Alternatives section. Alternatives B, C, and D are more specific for implementation of conservation and restoration actions for special status fish.

Effects from Special Status Plants Management

Management measures that protect sensitive riparian plant species would indirectly protect aquatic habitats by maintaining healthy riparian areas where sensitive plant species occur.

Effects from Wildland Fire Management

The use of non-fire fuel management strategies such as timber harvest could impact aquatic habitats and fish. Potential impacts are described under Effects from Vegetation—Forests Management. The use of protective riparian buffer zones would lessen the severity of impacts on aquatic habitats in riparian areas from fuels management compared to fire. The potential degradation of aquatic habitats resulting from a high-severity fire could include burning of riparian habitats, increased landslide potential, increased sedimentation, and scouring. Fuel management strategies could reduce these impacts in areas where high-severity fires could occur. Factors in wildland fire management

that could affect aquatic resources, fish, and special status fish are related to the size of area where vegetation is removed and its proximity to fish-bearing waterbodies.

Effects from Visual Resources Management

VRM Classes I and II contain restrictions that limit the amount of timber harvest or mineral resource extraction that may occur within these areas. VRM Classes III and IV contain few restrictions limiting land uses. The increased restrictions associated with VRM Classes I and II could indirectly protect fish populations and aquatic and riparian habitats from impacts associated with other land uses.

Effects from Forest Products Management

General potential impacts, described under Effects from Vegetation—Forests Management, are more likely to be realized under Alternatives B and D than under Alternative A.

Effects from Livestock Grazing Management

The quality of riparian areas influences the productivity of stream fisheries. Livestock grazing can affect the riparian environment by changing, reducing, or eliminating vegetation, and by actually eliminating riparian areas through channel widening, channel aggrading, or lowering of the water table (Platts 1991). In the CFO, assessments per the Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management (BLM 1997a) (**Appendix A** [see Volume II~~I~~]) have shown that current grazing levels are compatible with aquatic resources as assessed in Standard 1 (watersheds), Standard 2 (riparian areas and wetlands), and Standard 3 (stream channel and floodplains). In all alternatives, the Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management would be implemented, and allotments where grazing occurs in occupied habitat and adjacent to occupied habitat would be monitored and management changes implemented to assure grazing use is compatible with the maintenance of listed fish species habitat. Federal listing of salmon, steelhead, and bull trout, and subsequent ESA Section 7 consultation with USFWS, would reduce potential for BLM impacts to listed fish and aquatic habitats under all alternatives.

Effects from Minerals Management

In instances where conservation measures are not successful, or the identified buffers are inadequate, the actions associated with mining could impact fish populations and aquatic habitats. The potential impacts on fish and aquatic habitats from mining activities include but are not limited to:

- *Increased sedimentation on fish-bearing streams.* Excess sediment generation can be the direct result of surface disturbances for mineral extraction, drilling, and facilities construction and also for road construction, maintenance, and use. Increased sedimentation in streams can affect fish populations in a variety of ways, including direct mortality, reduction in suitable spawning gravels, suffocation and mortality of eggs, and displacement of individual fish. Increased sedimentation resulting from mining could occur even if the mining activities are outside the buffer zones.
- *Introducing hazardous materials to fish-bearing rivers, streams, and lakes.* Hazardous materials from mining activities and from equipment use and maintenance could be released into fish-bearing water bodies. Associated with locatable minerals extraction are mine tailings, which can introduce heavy metals. Similarly, the extraction of fluid materials can result in oil or

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