United States
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Forest Service

Lolo
National Forest

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The Lolo National Forest Plan

Final Environmental Impact Statement

Appendices

COVER: Lolo Peak, a prominent landmark just south of Missoula, towers above Lolo Creek at an elevation of 9,096 feet. The Lolo National Forest, which includes the original Lolo Forest Reserve established in 1906, is named after this mountain.

APPENDIX A - IDENTIFICATION OF ISSUES, CONCERNS, AND OPPORTUNITIES

A. INTRODUCTION

A preliminary scoping of issues and concerns was completed by May, 1978. Past planning actions and public involvement activities, along with current management concerns, led to the original listing of tentative issues.

A letter was mailed May, 1978 to 750 parties who indicated an interest in the Forest Plan. Included were times and dates for public workshops to be held as part of the issue identification process. There were 52 responses to this initial mailing.

A news release announcing Forest Plan workshops was distributed to local media. Workshops were held in Missoula, Seeley Lake, Plains, Thompson Falls, Superior, and Frenchtown in June, 1978. Planning teams, the Public Information Officer, and Forest Supervisor conducted the workshops. A total of 135 people attended. Similar workshops were held at the Supervisor's and District Offices for Forest employees. Some 31 issues were identified and ranked after these workshops.

The Notice of Intent to prepare a Forest Plan and Environmental Statement was published in the Federal Register in August, 1978.

A total of 182 responses were received from the public. The following affiliations were represented: 71 industry-related responses, 22 government-related responses, 12 recreationists, 63 private individuals, two community representatives, six environmentalist/conservationists, three from local media, and three educators.

Items identified at workshops and in letters or phone calls were initially grouped by MIH (Management Information Handbook) codes. This list was reviewed by the interdisciplinary team to sort which issues could be addressed by the Forest Plan, those issues which could be or had been resolved by laws, regulations, or current policy, and those resolved at the Forest level.

Upon finalizing the issues, the interdisciplinary team compiled a list of those management concerns that could not be combined into broad issue statements. The list was submitted to the Forest Supervisor who indicated his priorities for management concerns to be addresed in the planning process. Upon Regional Forester's staff review, a final list of management concerns was prepared.

A packet containing a final list of issues and public concerns leading to them was mailed on July 28, 1978. Copies were sent to all parties who participated in the process, a number of agencies and officials who remained on the mailing list, Regional Office staff units, and other Region One Forests.

The next phase of issue analysis was writing problem statements for each of the issues. Work groups with District and Supervisor's Office representatives wrote problem statements, management concerns, and opportunities for each issue.

The interdisciplinary and management teams determined major issues to be addressed in the Plan, in the design of alternatives, and in the FORPLAN model. The following elements were considered: the degree to which issue/concern affects the Forest, whether the Forest Plan could resolve the issue/concern, category of resolution, area affected, duration of issue/concern, intensity of issue, concern, resources affected, and future management options. The Regional Forester approved 13 major issues pertaining to: timber, recreation, minerals, range, visual quality, water and soils, roads, social and economics, land exchange, wildlife, aquatic environment/fisheries habitat, powerline and pipeline corridors, and fire.

Additional public involvement was initiated in September, 1983, to aid in resolution of the roadless (undeveloped) land use assignment issue. Prior to this, Forest planning had examined a broad range of uses for roadless areas but had not included an evaluation for wilderness designation except for Montana Wilderness Study Areas.

The Forest received 78 responses to requests for comment on the roadless issue. Respondents included: private citizens representing recreationists, timber, and agriculture industries; local and national conservation groups; local, state, and Federal agencies; and organized recreational groups.

The Draft EIS and proposed Forest Plan was completed and released for public review in January 1985. At the close of the comment period on June 1, 1985, 481 comments were received. Two issues received a large number of comments. A concern for increasing timber sale offerings to historic levels or to a level to meet local needs was expressed by many individuals and the timber industry representatives. The other concern was to increase the recommendation for wilderness to include either the areas recommended by the Governor of the State of Montana or those recommended by the Wilderness Coalition.

Other often mentioned issues include concerns for maintaining water quality, monitoring the effects of Forest activities, restrictions on mineral exploration including oil and gas, recovering Threatened and Endangered species of plants and animals, invasion of noxious weeds, increased road construction, road closures and the importance of big-game hunting.

B. CONSULTATION WITH OTHERS

1. Agencies and Indian Tribes

a. Contacts

The following agencies and Indian Tribes are on the Forest Plan mailing list. They received Forest Plan notes which provide information on status of the plan, comments requested, and public meeting dates.

County Commissioners - Flathead, Granite, Lake, Mineral, Missoula , Powell, Ravalli, and Sanders Counties.
Agricultural Stabilization & Conservation Service,
Army National Guard,
Bonneville Power Administration,
Maine, Bureau of Public Land
Bureau of Land Management,
Bureau of Indian Affairs,
City-County Planning, Missoula, Montana
City Plann, Superior, Montana
County Board of Commissioners, Conrad, Montana
State of Montana Dept. of Health & Environmental Sciences
Idaho, Dept. of Fish, Wildlife, and Game
Dept. of Highways, Helena, Montana
Montana Dept. of Natural Resources & Conservation
Dept. of Parks & Recreation
Montana Dept. of State Lands
Montana Dept. of Documents, Montana State Library
BC, Environment & Land Use Comm. Secretariat
Montana Environmental Information Center
Environmental Protection Agency
Montana Environmental Quality Council
Federal Aviation Administration
Federal Bureau of Investigation
Federal Energy Administration, Office of Environmental Programs
Federal Energy Regulatory Comm., Office of Electric Power Regulation
Federal Highway Administration
County Court House, Five Valleys District Council, Missoula, Montana
Forest Commission, Melbourne, Victoria
Granite County Conservation District, Philipsburg, Montana
Granite County Extension Service, Philipsburg, Montana
Granity County Planning Board, Philipsburg, Montana
Lake County Planning Board, Polson, Montana
Mineral County, Superior, Montana
Michigan Dept. of Natural Resources
Mineral County Planning Board, Superior, Montana
Mineral County Sheriff Office, Superior, Montana
City-County Library, Missoula, Montana
County Extension Service, Missoula, Montana
Missoula County Rural Conservation District, Frenchtown, Montana
Planning Board, Missoula, Montana
Technical Center, Forestry Dept., Missoula, Montana
Montana Aeronautics Commission
Montana Bureau of Mines & Geology,
Montana Dept. of Fish & Game
Montana Dept. of Forestry
Montana Division of Forestry,
Montana Dept. of Highways, Right-of-Way Bureau
Montana State Dept. of Livestock
Montana Historical Society
Montana Dept. of State Land
Montana State Clearinghouse, Office of Budget & Program
National Park Service
Northern Forest Fire Laboratory, Missoula, Montana

Office of Environmental Quality, Sec. of Agri., Washington, DC
Sanders County Extension Agent, Thompson Falls, Montana
Sanders County Sheriff's Office, Thompson Falls, Montana
Missoula County Water District, Seeley Lake, Montana
Soil Conservation Service
Montana State Historic Preservation Office
US Corps of Engineers
USDA-Forest Service
USDA-Forest Service, Director Civil Rights
USDA-Forest Service, N.E. Forest Experiment Sta.
USDA-Forest Service, Southeastern Region
USDA Forest Service, Region 5
USDA-Forest Service, Watershed Systems Dev. Group
Tribal Council, Flathead Indian Agency, Pablo, Montana
U.S. Fish and Wildlife Service
USDA-Office of Equal Opportunity
USDA-Office of the Secretary
US Dept. of Commerce
US Dept. of the Interior, BIA
US Dept. of the Interior, Fish and Wildlife
US Dept. of the Interior, Office of Inv. Project Review
USDI-BIA Flathead Irrigation Project
USGS Conservation Division

b. Review of Plans

Missoula Valley River Parks System - Conceptual Plan
-Visual Quality should be maintained to Retention or Partial Retention standards.

-Access should be maintained to all parcels of land along the rivers.

-Several of the parcels along the river west of Missoula are recommended for exchange to other public agencies, this should not reduce public access or increase development possibilities.

Granite County Comprehensive Plan
-The plan is concerned that the "blue ribbon" status of Rock Creek be maintained.

-Important wildlife values in the area should be protected, such as mountain goat habitat, deer and elk winter range, and bighorn sheep habitat.

-Concern about yearlong access above Ranch Creek.

-Concern over additional development in the Rock Creek area.

Mineral County Comprehensive Plan
-This plan lists concern about employment in the County. The National Forest contribution of timber into the market place should be at about present levels.

-Several locations which have recreational values should be protected.

-Several existing and potential domestic watersheds were listed for protection.

Missoula County Comprehensive Plan
-This plan expressed concern about needing additional access to the Clark Fork River and producing a broad economic base, including recreation development to expand employment opportunities in the Seeley Lake area.

Clark Fork of the Columbia River Basin - Cooperative Study
-This plan calls for a reservoir in the Rattlesnake drainage.

-Additional funds are requested for recreation maintenance and construction.

-There is a concern for additional public access to the river.

-Preservation of minimum streamflows is required.

Bonneville Power Administration - Long range energy corridor requirements for the Pacific Northwest.
-This agency is concerned about potential energy corridors.

Flathead Indian Reservation of the Confederated Salish and Kootenai Tribes - Timber Management Plan.
-The Tribe is concerned about access to the Reservation from the Forest.

-The tribal land in the South Fork of the Jocko is sacred ground where only tribal members are permitted.

-A large portion of the boundary between the Ninemile District and the reservation is inaccessible land and is considered important for roadless recreation and wildlife values.

-Most of the reservation land near the common boundary north of the Flathead River is planned for timber management.

2. Other Consultations

Other consultations included written and personal contacts with both private individuals and concerned groups. The responses from these parties centered around the following issues:

Environmentalist Groups

-Concerned with wilderness management
-Roadless management
-Water quality, sediment production
-Total forest management, values of all resources, not just timber

-Hunting and fishing quality improved or maintained
-Wildlife potential should be maximized
-Study impacts of Forest management on fisheries outside the forest boundaries
-Timber management, long-term sustained yields should be below the calculated maximum, eliminate unprofitable timber sales
-Need a plan for powerline/pipeline corridors
-Roads, no new access allowed, should close all new roads
-Threatened and endangered, should provide for recovery and eventual delisting
-Thorough and realistic economic analysis, suitable and unsuitable lands identified
-Management for old growth
-Oil and gas leases studied

Recreation Groups

-Trails, continue or increase opportunities for construction, maintenance, facilities and structures
-Analyze fish and wildlife recreation economic values
-Maintain or enhance quality of hunting and fishing
-Study impacts of Forest management on fisheries outside the forest boundaries
-Ensure that timber goals are consistent with other resource management
-Monitor quality of the water and sediment production
-Close all new access roads
-Analyze capabilities of the land
-Maintain opportunity to lease residences and resorts
-Wilderness management
-Analyze economics of all recreation values

Industry

-Timber supply remain constant, much of industry is dependent on the Lolo National Forest
-Threatened and endangered species management is not appropriate in all the areas suggested by the Lolo
-Old growth management is not needed, enough old growth exists in the wilderness areas
-Too much roadless area is being proposed
-Should encourage domestic mineral exploration
-Landownership adjustment, consider needs of other landowners
-Fire management, consider air quality, economics of proposals

C. SELECTED ISSUES, CONCERNS, AND OPPORTUNITIES

1. Issues Addressed in the EIS

Public issues were addressed through one or more of the following means: quantitative analysis using a mathematical model; Forest policies, standards and guidelines (found in the Forest Plan) to guide the way certain resources are managed; and management areas and related

prescriptions created to accomplish specific resource objectives through specific management practices.

Those issues addressed through quantitative analysis vary by alternatives in this EIS. Many of the issues addressed in this manner reflect tradeoffs in how much of a particular resource use will be available or occur in the future. Goods and services expressed in outputs are often the indicators of how an alternative addresses an issue. Table II-42 in Chapter II summarizes some of the indicators of how alternatives addressed the issues.

The Forest policies, standards and guidelines that resolve some of the following issues and concerns were formulated through alternative analysis. Alternatives were developed to resolve the issue and a preferred alternative was selected from which the direction was written. These analyses are included in the Forest planning records. Resolution of the issues and concerns through policy statements does not vary between the alternatives listed in this EIS.

a. Range

(1) Situation

Most of the Lolo's range is forested or transitory, with less than 5 percent classified as permanent rangeland. It provides yearlong forage for big-game and summer forage for livestock, including pack and saddle livestock. Livestock grazing is not a major use of the Forest, but it is important to a number of permittees.

(2) Related Issues and Concerns

Issue No. 1. Where and how much livestock grazing can occur on the Forest and be compatible with water quality, fisheries, timber management, soils, vegetation, and recreation?

Direction for resolution of this issue is established by Forest Policy No. 1 and Forest Management Guideline No. 1, by specific grazing prescriptions for each management area. The amount of livestock grazing varied by alternative (as indicated by AUMs assigned per decade) while considering the tradeoff with other resource values. (See Table II-25 in Chapter II.)

Issue No. 2. When conflicts arise between livestock grazing and wildlife habitat, where should emphasis be placed?

Direction for resolution is established by Forest Policy No. 1, developed in response to this issue.

Issue No. 3. What are the social and economic aspects of livestock grazing on the Lolo National Forest?

Information on this issue was available through analysis using the Input/Output Model (Appendix B). Effects on jobs, community

stability, local social and economic situations were considered in evaluating various alternative grazing levels.

Management Concern No. 1. What investments should the Forest make to maintain grazing capacity and minimize conflicts with other uses?

Management Concern No. 2. How will uses outside the Lolo National Forest be affected by increased or decreased livestock grazing on the Forest?

Direction for resolution of these concerns is established by Forest Management Guideline No. 1.

Management Concern No. 3. To what extent will the Forest consider the use of herbicides to accomplish noxious weed control?

Direction for resolution of this concern is established by Forest Policy No. 24, developed in response to this concern.

b. Recreation

(1) Situation

A variety of recreation attractions occur on the Forest, with opportunities to provide recreational experiences to suit most tastes. With 37 percent of the Lolo Forest presently roadless, future land use assignments for development or roadless management can have a substantial effect on the resulting kind of recreation setting, i.e., roaded natural, semiprimitive, or primitive.

Campgrounds, picnic grounds, and ski areas provide services for developed recreation activities, maintaining a low user density compatible with public expectations.

(2) Related Issues and Concerns

Issue No. 1. How much roadless, nonwilderness recreation opportunity should the Forest provide and where should it be located?

Direction for resolving this issue is established through prescriptions for roadless management in Management Areas 10 and 11. Alternatives provided for varying amounts of roadless management while examining the costs and benefits of providing for other resource values. Indicators of these levels were expressed by categories of developed, roadless for decades one and five as well as the amount of roadless recommended for wilderness (Table II-15). Appendix C provided similar information for each roadless area.

Issue No. 2. Where and what kinds of access are needed to provide for the Forest users' recreation needs?

Direction for resolving this issue is established by Forest Policy No. 23, and Travel Plan analysis in which the type of recreation and distribution of users dictated the location and type of access.

Issue No. 3. What kinds of access and facilities (trails, toilets, plowed parking lots, unloading ramps, and so forth) should be provided to meet the Forest's dispersed recreation needs?

Direction for resolution is established by Forest Policy No. 2 and Forest Management Guideline No. 2, developed in response to this isse.

Issue No. 4. What is the Forest role in meeting demands for developed recreation (campgrounds, picnic grounds, ski areas, marinas, etc.) and where should developed sites generally be located?

Direction for resolution is established by Forest Policy No. 3 and Forest Management Guideline No. 3, developed in response to this issue.

Issue No. 5. How much land area should the Forest provide for ORV use and where should it be located?

Direction for resolution is established by Forest Policy No. 19, developed in response to the issue.

Issue No. 6. How should recreation in the Rattlesnake Drainage be managed?

Public Law 96-476, enacted October 19, 1980, established the Rattlesnake National Recreation Area and Wilderness; the law requires that the area be managed primarily for its wilderness, watershed, recreation, wildlife, and education values. (See Chapter II.)

Issue No. 7. How can the Forest provide opportunities for people to enjoy fish and wildlife species, quality hunting and fishing, seeing and hearing animals of various kinds?

Direction for resolution is established by Forest Policy Nos. 4 and 5, developed in response to this issue.

Management Concern No. 1. Recreation opportunities need to be broader and consider the physically handicapped, elderly, and a range of opportunities and levels of challenge for forest users.

Direction for resolution is established by Forest Policy No. 2, developed in response to this concern and Forest Management Guideline No. 2.

Management Concern No. 2. There is a need for more coordinated planning for metropolitan area recreation; e.g., areas of high use in the Missoula area.

Direction for resolution is established in the management direction for Management Area 9.

c. Wilderness

(1) Situation

Lolo Forest Planning had examined a broad range of uses for roadless areas but has relied upon the evaluation and wilderness recommendations made in the Roadless Area Review and Evaluation (RARE II) Final Environmental Impact Statemet (EIS), completed in 1979. However, a revision in the NFMA regulations in September 1983, directed that roadless areas would be evaluated for wilderness designation in the Forest planning process.

(2) Related Issues and Concerns

Issue No. 1. What roadless areas should be recommended for Wilderness?

Issue No. 2. How should the roadless areas that are not recommended for wilderness be managed?

Alternatives were designed to examine a range of land recommended for wilderness and roadless management. Indicators of these levels by the categories of roadless, wilderness, and developed by alternative in the Comparison section of Chapter II (Table II-15). The consequences of varying levels was considered for resources such as timber, minerals, wildlife, water and fish and expressed in Chapter IV. Appendix C evaluated each roadless area.

d. Timber

(1) Situation

Timber is one of western Montana's most important natural resources, providing the backbone for the area's major industry. The Lolo offers for sale a variety of species of timber for the manufacture of wood products. Residues from timber management activities provide firewood for many local residents.

Issue No. 1. What level of sustained annual yield of timber products should the Lolo provide that will maintain Forest productivity and still meet local, regional, and national needs?

Issue No. 2. Where and to what degree of intensity can timber management be applied to ensure that the best sites are managed to meet future needs?

Various levels of timber harvest were examined through the analysis of alternatives. Specific measures of yield were the allowable sale quantity, long term sustained yield, and the suitable acres for timber production. Each of these indicators varied by alternative, and the allowable sale quantity was determined for 12 decades. The analysis included various management intensities and prescriptions for various lands to determine the level of intensity needed for optimum PNV and timber outputs while protecting other resource values. Tables II-26, 27, and 28 provide the varying outputs by alternative.

Issue No. 3. In what ways can the Forest achieve better utilization of wood products?

Direction for resolution is established by Forest Policy No. 6, developed in response to this issue.

Issue No. 4. To what extent will economics be a factor in determining sale feasibility?

Direction for resolving this issue is established in the Forest Management Standard No. 4.

Management Concern No. 1. There is a need to improve utilization in order to increase yields, reduce fuels, and lower management costs.

Direction for resolution is established by Forest Policy No. 6, developed in response to the concern.

Management Concern No. 2. There is a need for investment guides for marginal sites on the Forest.

Direction for resolving this concern is established through Forest Management Guideline No. 5.

Management Concern No. 3. To what extent will the Forest consider the use of herbicides to accomplish roadside maintenance and various silvicultural objectives?

Direction for resolution is established by Forest Policy No. 24, developed in response to the concern.

Management Concern No. 4. The Forest needs to establish criteria for use of timber harvest systems.

Direction for resolving this concern is established through Forest Management Guideline No. 6, developed in response to this concern.

Management Concern No. 5. There is a need to develop a means of integrating all resource goals when preparing reforestation plans, especially for backlog areas.

Direction for resolving this concern is established by management goals identified for each management area. Reforestation plans for backlog areas will be responsive to individual management area goals.

e. Water and Soils

(1) Situation

Nearly 3.5 million acre-feet of water from the Forest's watersheds provide recreation, fisheries habitat, agricultural and domestic supplies, and contribute to the Northwest's hydroelectric power network. Many communities obtain a major portion of their water from the Lolo's watersheds. Water on the Lolo is generally of excellent quality.

Generally, soils on the Lolo National Forest are derived from residual parent materials and are stable, but some are derived from granitics, glacial tills, and lake sidements and can be highly sensitive from a sedimentation standpoint. The potential for erosion of these soils and geologic parent materials is magnified by steep slopes and natural, as well as man-caused, disturbances.

Issue No. 1. How can we maintain watershed protection on lands with intermingled ownership?

Direction for resolution is established by Forest Policy No. 7, developed in response to this issue.

Issue No. 2. Considering that water quality is an indicator of how the land responds to management, what level of water quality should the Forest strive to maintain in various drainages?

Direction for resolution is established by Forest Policy No. 14 and Forest Management Standards and Guidelines 7 and 10, developed in response to the issue; and specific prescriptions applied to management areas.

Issue No. 3. To what extent should areas on the Forest such as steep slopes, granitic soils, and glacial and lake sediments be developed?

Direction for resolving this issue is established through Forest Management Standard No. 8, and the quantitative analysis. These areas were evaluated individually and the model reviewed cost effectiveness to enter these areas in a manner which would protect the resource and compared this to the value of the timber removed. Alternatives reflected this analysis and indicators of varying levels of development are shown by the sediment production potential (Table II-32 in Chapter II).

Management Concern No. 1. There is a need for a basic policy statement on water quality standards. This statement will provide

an opportunity to explain to what extent water quality is an indicator of proper management, to explain State and Federal water standards to the public, and to identify areas on the Forest that need special treatment to either maintain or improve water quality.

Direction for resolution is established by Forest Policy No. 14, developed in response to the concern.

Management Concern No. 2. There is a need to identify streams of high value for recreation and fisheries where water rights need to be acquired by the Forest Management Guideline No. 11.

Direction for resolving this concern is established through Forest Management Guideline No. 11.

Management Concern No. 3. There is a need to consider basic soil productivity, especially relevant to activities that cause compaction.

Direction for resolving this concern is established by Forest Management Standard No. 9, quantitative analysis, specific management prescriptions, project design, and timber sale administration.

f. Wildlife

(1) Situation

The Lolo National Forest is home to about 425 species of wildlife including: 10 big game species; 27 commonly occurring small-game and waterfowl species; about 300 species of birds; the endangered peregrine falcon, bald eagle, and Rocky Mountain grey wolf; and the threatened grizzly bear and Rocky Mountain grey wolf. Big game hunters spend approximately 100,000 hunter days on the Lolo annually.

(2) Related Issues and Concerns

Issue No. 1. How much land suitable for big game habitat should be managed for this use and to what extent should features such as wallows, security areas, and winter range be protected?

Direction for resolution is established by Forest Policies No. 8 and 9, developed in response to the issue, and quantitative analysis. Analysis included evaluating the populations of the deer and elk and determining the acres of habitat needed to support this population based on cost effectiveness and projected need. By alternative, big game productivity and population potential is estimated in Table II-18 in Chapter II.

Issue No. 2. What are the geographic limits of essential habitat for grizzly bear and other threatened and endangered species, and

what management activities are compatible with their habitat requirements?

Direction for resolution is established by Forest Policies No. 10, 11 and 13, and Forest Management Guideline No. 13. Habitat components were mapped which defined the areas the bear is using. From this, the Management Situations 1 and 2 were defined and management guidelines were determined to maintain or enhance these areas.

Issue No. 3. How much land area on the Forest is needed in various types and ages of vegetation to maintain diverse habitats suitable for fish, game and nongame species of wildlife?

Direction for resolving this issue is established by quantitative analysis, specific prescriptions developed for riparian zones, and prescriptions for wildlife management in the appropriate management areas. Percentages of the drainages needed for old growth component were determined and constrained in the modelin formulating alternatives. Results of nongame animal diversity is expressed in Table II-20 by indicating for each alternative the amount of land assigned to management compatible with old growth.

Issue No. 4. How can the impact of human activities on wildlife be mitigated?

Direction for resolving this issue is established by Forest Policy No. 23, and prescriptions for wildlife management in all management areas.

Management Concern No. 1. The Forest needs to develop long range wildlife habitat management objectives that include the rationale for road closures.

g. Aquatic Environment/Fisheries Habitat

(1) Situation

The Lolo has 667 streams that provide about 3,500 miles of aquatic habitat. There are 96 lakes on the Forest totaling 5,220 acres. About 60 species of fish occur in the Lolo's waters. Rock Creek, on the Missoula Ranger District, is a designated blue-ribbon trout stream.

(2) Related Issues and Concerns

Issue No. 1. Where and how much aquatic environment/fisheries habitat on the Forest should be improved?

Direction for resolving this issue is established by specific prescriptions developed for riparian zones in Management Areas 13 and 14.

Issue No. 2. How can the Forest continue to protect the fisheries, wildlife, and recreation values in the Rock Creek "blue ribbon" trout stream?

Direction for resolution is established by Forest Policy No. 15, developed in response to the issue and specific management direction in each of the management areas in Rock Creek.

Management Concern No. 1. The Forest needs specific objectives for riparian zone management because of high resource values and conflicting uses.

Direction for resolution is established by specific prescriptions developed for riparian zones in Management Areas 13 and 14, and prescriptions for riparian management in other management areas.

h. Lands

(1) Situation

The Lolo National Forest administers approximately 2.1 million acres of National Forest System lands. Within the Forest boundary are approximately one-half million acres of state and private ownership with much of the land in a "checkerboard" pattern.

Due to the presence and orientation of mountain ranges and valleys within the Lolo National Forest, as well as the Forest's location relative to wildernesses and tribal lands, the Forest is likely to be considered for major powerline and pipeline corridors.

(2) Related Issues and Concerns

Issue No. 1. In order to improve National Forest management, which lands should the Forest identify for acquisition or disposal through purchase or exchange?

Direction for resolution is established through Forest Management Standard No. 15, and the resulting landownership adjustment program, developed in response to this issue.

Issue No. 2. In the event that pipeline and/or powerlines must be located on the Forest, where would they be least likely to impact resource values and uses?

Direction for resolution is established in Forest Policy No. 16, developed in response to this issue, and Forest Management Guideline No. 17.

Management Concern No. 1. The Forest needs guidelines on the issuance and administration of special use permits.

Direction for resolution is established through Forest Management Standard No. 16, developed in response to this concern.

i. Minerals

(1) Situation

Parts of the Lolo National Forest are mineralized; there are several operating mines, and exploration work is increasing on the Forest. A number of oil and gas leases have been filed in the eastern part of the Forest.

(2) Related Issues and Concerns

Issue No. 1. Where on the Lolo National Forest are there areas of mineral potential high enough to influence land allocation?

Direction for resolution is established by Forest Policy No. 17, developed in response to this issue.

Issue No. 2. Where on the Forest should the Forest Supervisor recommend approval of oil and gas lease applications and with what type of restrictions?

Direction for resolution is established by Forest Policy No. 18, developed in response to this concern.

j. Fire

(1) Situation

Fire has been a significant factor in shaping and maintaining the kinds of plant communities that occur on the Lolo. Prescribed burning is used to achieve a variety of resource management objectives including slash disposal after logging, site preparation for reforestation, maintenance of composition and structure of plant communities, and improving yield and quality of forage for livestock and wildlife. Wildfires are being allowed to play a more nearly natural role in wildernesses and some roadless areas. Opportunities for prescribed burning are limited by weather conditions, smoke management guidelines, air quality standards, topographic constraints, and residual vegetation.

(2) Related Issues and Concerns

Issue No. 1. Where and how much fire can be used to achieve resource management objectives within air quality guidelines and standards?

Direction for resolving this issue is established by time period through the quantitative analysis, by specific prescriptions for management areas, and by Forest Management Standard Nos. 20 and 21. Based on treatments of the land, acres needing to be burned were predicted (Table II-36 in Chapter II). This was compared to the present program and the number of days estimated in which burning is permitted.

Management Concern No. 1. Fire use and control programs need to be compatible with the role of fire in various ecosystems.

Direction for resolving this concern is established by specific management direction developed for each management area and Forest Guideline 26 developed in response to this concern.

Management Concern No. 2. The Forest needs a cost-effective fire suppression program responsive to the revised fire management policy.

Direction for resolution is established through Forest Management Standard No. 22, and Forest Management Standards and Guidelines 23, 24, 25, and 26 developed in response to this concern.

k. Roads

(1) Situation

The Lolo National Forest transportation system has 4,285 miles of system roads. In addition, there are approximately 900 miles of jeep trails and nonsystem roads within the Forest boundary. The road system is functionally classified into three categories: Forest arterials; Forest collectors; and Forest local routes. There are 584 miles of arterial, 2,817 miles of collector, and 884 miles of local roads in existence on the Forest. Arterial roads are the highest standard route and are typically double lane with some type of processed wearing surface. Of all Forest management activities, road construction has the greatest potential for impacting the appearance of the Forest and water quality.

Issue No. 1. What standards of roads are needed to support resource management activities on the Forest?

Direction for resolution is established by Forest Policy Nos. 20, 21, and 22, developed in response to this issue.

Issue No. 2. How much roading is needed on the Forest to provide adequate access while maintaining wildlife and fish habitat, visual quality, water quality, and soils stability?

Direction for resolving this issue is established by Forest Policy No. 23, quantitative analysis, and specific management area prescriptions. Analysis included miles of road necessary based on cost and characteristics of the land. Soils are protected in road design standards. Visual quality is accommodated through determining miles of road on various types of land. Table II-35 in Chapter II shows the road construction miles needed in the future to meet various alternative's objectives.

Issue No. 3. How much road closure should occur and what type of roads should be left open to the public?

Direction for resolution is established by Forest Policy No. 23, developed in response to the issue.

Management Concern No. 1. Transportation planning needs to be more responsive to, and better coordinated with, logging systems.

Direction for resolving this concern is established in Forest Policy No. 20, developed in response to this concern.

l. Social and Economic

(1) Situation

About 60 percent of the land in western Montana is Federally owned. The way Federal lands are managed affects the lives of all people to some extent. Economic dependency on forest resources is high; for example, the wood products industry provides about 50 percent of the area's income. The Lolo's publics respresent the full spectrum of occupations, ages, wants, and needs. The Forest is important in the lives of people as a place to play as well as work.

(2) Related Issues and Concerns

Issue No. 1. How will specific management allocation in the Forest Plan affect local community economics?

Information for addressing this issue is provided by analysis using the Input/Output Model (Appendix B), determining effects on jobs, community stability, and local economics, and the social assessment. Table II-38 shows the income and employment changes as affected by the alternatives.

m. Visual Quality

(1) Situation

Management of the Lolo Forest for a variety of products and services results in visible evidence of that management. Some areas of the Forest are more visually sensitive than others to management activities. The Lolo's scenery is an important "product" to residents and travelers alike in western Montana.

(2) Related Issues and Concerns

Issue No. 1. How much change from the natural-appearing landscape should take place and where should it occur, considering the public's social and economic needs?

Direction for resolution of this issue is established by Management Guidelines 27, 28, and 29; in the quantitative analysis; by specific visual quality objective prescriptions for each management area from which timber is harvested; and by specific management areas designed to maintain visual quality in visually sensitive areas of the Forest. The percent of inventoried visual sensitive areas that are maintained varies by alternative as shown by Table II-16 in Chapter II.

APPENDIX B - DESCRIPTION OF THE ANALYSIS PROCESS

TABLE OF CONTENTS

APPENDIX B - DESCRIPTION OF THE ANALYSIS PROCESS

I. Introduction

A. Planning Problem

The Forest Service is responsible for determining how best to manage National Forest lands based on public desires and land capabilities. The capability of the Lolo National Forest is influenced by its mountainous terraine, forested slopes with short growing seasons, and thin sandy soils. Over 300,000 acres of the 2.1 million acres of the Forest is currently in wilderness designation, or administratively proposed for wilderness. The remainder of the Forest supports both roaded and unroaded recreation including big-game hunting and scenery viewing, harvesting timber, and domestic livestock grazing. There is a dependent recreation-outfitter industry, a local wood products industry, numerous dependent water users, and some dependent livestock permittees.

Public interest includes divergent viewpoints about the use of commodities such as timber, grazing and minerals and noncommodities such as wilderness, unroaded recreation, scenery, wildlife, old growth, and diversity. The Forest's major planning goal is to provide enough information to help decisionmakers determine which combination of goods, services and land allocations will maximize net public benefit. The National Forest Management Act (NFMA) and the regulations developed under NFMA (36 CFR 219) provide the analytical framework to address this goal, and also state that the requirements of the National Environmental Policy Act (NEPA) and its regulations (40 CFR 1500-1508) must be applied in this analysis process.

B. Planning Process

The planning and environmental analysis process brings a new outlook and a new technology to National Forest land management, principally: (1) processes formerly used to make individual resource decisions are now combined to help make integrated management decisions, and (2) new mathematical modeling techniques are used to assist in the land allocation problem including identifying the most cost-efficient pattern of land management. This appendix describes the analysis phase of process steps 3, 4, 5 and 6. of the 10 step planning process described in the NFMA regulations and Chapter I of the DEIS.

1. Inventory Data and Collect Information (Step 3)

The interdisciplinary team determined what data was necessary based on the issues and concerns. The analysis of the management situation, formulation of alternatives and monitoring require data on resource capabilities, existing supply and demand, expected outputs, benefits and costs. Existing data was used whenever possible but was supplemented with new data to help resolve sensitive issues or

management concerns. Data is on file in the Forest Supervisor's Office.

2. Analysis of the Management Situation (Step 4)

This analysis examines resource supply and market conditions and determines suitability and feasibility for resolving issues. A land allocation model (FORPLAN) was used to address a number of specific requirements, including benchmarks. Requirements include: (a) the projection of the Forest's current management program; (b) determining the Forest's ability to produce a range of goods and services from minimum management to maximum production; (c) evaluating the feasibility of reaching the national production goals (RPA targets) and social demands identified as issues and concerns; and (d) identifying monetary benchmarks which estimate the output mix which maximizes present net value (or minimizes the cost) of resources having an established market or assigned value and meeting other departure analysis requirements. The analysis of the management situation document is on file in the Forest Supervisor's Office.

3. Formulation of Alternatives (Step 5)

The information gathered during the first four planning steps is combined and analyzed to formulate alternative management plans. The alternatives reflect a range of resource management direction. Each major public issue and management concern was addressed in one or more alternatives. Management prescriptions and practices were formulated to represent the most cost efficient way of attaining the objectives for each alternative. Both priced and nonpriced outputs are considered in formulating the alternatives.

4. Estimation of Effects of Alternatives (Step 6)

The physical, biological, economic, and social effects of each alternative were estimated and analyzed to determine how each responds to the range of goals and objectives assigned by the RPA program. FORPLAN was used to estimate some of the economic and physical output effects while other methods were used for remaining effects. The analysis included: (a) direct effects; (b) indirect effects; (c) conflict with other Federal, State, local and Indian tribe land use plans; (d) other environmental effects; (e) natural or depletable resource requirements and conservation potential; (f) historic and cultural resources; and (g) means of mitigation.

II. Inventory Data and Information Collection

A. Forest Data Base

1. Capability Areas

The basic land unit for which data were collected and stored was the Capability Area. Capability areas were defined to be homogenous on their potential vegetation response to management and were defined using the following properties:

a. Capability Areas represent a discrete area of the same habitat group.

b. Capability Areas lie entirely within a single subcompartment.

c. Capability Areas do not cross county boundaries.

d. Capability Areas do not cross Ranger District boundaries.

Property No. 1 above was the main idea behind Capability Area definition, and property No. 2 was the major qualification. The final two properties, while not trivial, did not exert a major influence of the process of delineating Capability Areas. There are slightly more than 8,000 Capability Areas on the Lolo. They range in size from a few acres to several thousand, with a mean of approximately 250 acres.

(1) Habitat Groups

A habitat group represents a set of similar habitat types, where habitat types are a method for classifying potential vegetation in the Northern Rocky Mountains. Seven habitat groups were utilized in defining Capability Areas.

(2) Subcompartments

Subcompartments had been defined for timber purposes but, on the Lolo at least, they also have important hydrologic properties. Since timber stands fall within a single subcompartment, defining Capability Areas to also lie within a subcompartment simplified the process of relating timber stand data to Capability Areas.

(3) County and Ranger District Boundaries

These are political boundaries and therefore describe no physical or biological attribute of the land. They do, however, define management responsibility (by organizational unit) and are therefore important to implementation and monitoring of the Forest Plan.

Further description of capabiltiy area attributes and how they are related to the structure of the Forest Planning Model can

be found in the planninng records. The assignment of habitat types to habitat groups is also discussed in the planning records.

2. Analysis Areas

These are one or more capability areas or parts of capability areas combined for the purpose of analysis in formulating alternatives and estimating various impacts and effects (FSM 1920.5). Capability areas were further stratified by existing timber types or condition classes and then aggregated into analysis areas based on similarities in capability, timber types, and economic effects.

3. Production Coefficients

Resource outputs were estimated by applying output coefficients to analysis area acres. The appropriate coefficients were assigned by considering analysis area attributes and management emphasis allocation. Production coefficients were developed for timber, dispersed recreation, livestock forage, big-game forage, water yield, and sediment. Documentation of their development can be found in the planning records.

4. Suitable Lands

Forest personnel used resource data to determine acres tentatively suitable for management practices. All areas were considered suitable for some form of recreation and some type of wildlife use. Roadless area size and evidence of human activities were used to determine wilderness suitability. Forest habitat type, soils, timber type, and legal status were used to determine areas tentatively suitable for timber production. Forest habitat type and slope were used to determine areas tentatively suitable for domestic livestock management practices. Habitat type was used to determine areas tentatively suitable for elk winter range.

Table B-1 - Land Suitability

	Acres 1/
Total National Forest Land 1/	2,083,192
1. Non-Forest land (includes water)	37,966
2. Forest land	2,045,226
3. Forest land withdrawn from timber production	385,922
4. Forest land not capable of producing crops of industrial wood	224,476
5. Forest land physically unsuitable: --irreversible damage likely to occur --not restockable within 5 years	7,742
6. Forest land --inadequate information 2/	-0-
7. Tentatively suitable forest land for timber production (item 2 minus 3,4,5,and 6)	1,427,095

1/ Excludes Harvey Creek area, 29,045 acres, administered by the Deerlodge National Forest.

2/ Lands for which current information is inadequate to project responses to timber management.

Usually applies to low site lands.

The tenatively suitable forest land for timber prodeuction (as shown above) is further refined by deducting the following land assignments to determine the available, suitable, productive forest land for each alternative.

1. Area withdrawn through legislation, regulation or administration:

   Wilderness
   Proposed Wilderness
   Research Natural Areas
   National Recreation Area

2. Area that cannot reasonably be assured to regenerate within 5 years (AF/Luhi)

3. Economically or technically unsuitable, or needed for other Multiple Use goals

This final determination by alternative is shown in Table B-12 if this Appendix and in Table II-44 as "Land Suitable for Timber".

5. Allocation and Scheduling

The condition classes of existing vegetation were used to schedule management activities over the time for the various benchmarks and alternatives.

6. Monitoring

Forest planning data provides a base from which changes can be measured and will also be used to monitor implementation activities.

7. Plan Implementation Programs

The data base provides biological and physical data that will help develop subsequent programs for plan implementation. As more information is available, the data base will be updated and improved.

8. Sources of Data

Sources of existing inventory data used in the analysis are as follows:

a. Forest Service Manual, Management Information Handbook (MIH 1309.11) provided definitions for outputs, activities, effects and other information.

b. Vegetative habitat types were inventoried in conjunction with unit plans completed from 1973 to 1977. The process is currently documented in Forest Habitat Types of Montana (Pfister and others, 1977.).

c. Land types were derived from the most current project or unit plan inventory, Land Type Legend, October 1981.

d. The National Watershed Identification System was used to identify regions and subwatersheds on the Forest. Map Base and Overlay Legend, January 1982. Based on U.S.G.S. Hydrologic Unit Map, 1974.

e. Compartments are the timber compartments identified in the timber inventory system and are subdivisions of the subwatersheds, map base, January 1982.

f. Administrative boundaries are delineated on the Lolo Forest Maps contained in the DEIS.

g. Slope was used in conjunction with land types to help delineate analysis areas. The slopes were extracted from U.S. Geological Survey maps.

h. Timber outputs were derived from the 1972 timber inventory. Timber types or size and condition classes were developed by Forest Service personnel.

i. U.S. Geological Survey maps, 1962-1978, and aerial photographs were utilized to delineate streams, lakes, and riparian areas.

j. The recreation opportunity spectrum (ROS) was utilized to map opportunities and develop capacity coefficients. The Recreation Information Management System was utilized to develop recreation visitor days.

k. Elk and livestock forage information was adopted from Range Analysis Handbook,FSH 2209.21-R1; Wildlife Surveys Handbook, FSH 2609-21: Clipping Studies (USDA Forest Service, nd).

l. Geologic information was developed from Berg (1973), Chase (1961), Clark (1979), Desormier (1975), Jerome (1968), Presley (1971), Ross (1950), Wahler (1975), Wallace and Klepper (1976), Wehrenberg (1972), and Winger (1973).

m. Mineral potential was developed utilizing the McKelvey system and mining claims officially recorded with the Bureau of Land Management.

n. Background sediment and sediment from management activities were predicted from: Megahan (1976). (Also see planning records.)

o. Background water and water yields which result from management activities were based on established forest procedures. (Also see planning records.)

p. The visual resource was mapped using the Visual Management System (USDA Forest Service, 1977).

q. Economics. Timber value delivered at the mill was based on Lolo Forest timber sales from FY 1976 to FY 1980; price trends from Haynes and Adams (1980); other resource values (price trends) from 1980 RPA reports (Beasley, 1978); and costs were developed by Forest personnel as documented in the planning records.

III. The Forest Planning Model (FORPLAN)

FORPLAN is a computer modeling system used to evaluate the thousands of possible combinations of management activities on the Forest. A linear programming solution technique is used to select the unique combination of these management activities that will provide the greatest contribution to the specified goals subject to a set of management constraints. For example a simplified FORPLAN model could select a sequence of timber harvests which would provide the maxiumum discounted dollar value return subject to constraints on, for instance, the maximum allowable level of sediment production. The formulation of the planning problem for the entire Forest considers management for a large number of multiple use outputs and is decidedly more complex.

The basic land unit used in the FORPLAN system is the analysis area. These are generally aggregations of areas with similar biological and physical attributes, so that they are homogeneous in their response to management and represent

similiar resource production capabilities. It is important to remember that analysis areas are not spatially contiguous but are collections of areas with similiar attributes from across the Forest. Activities are applied to analysis areas based on suitability criteria applied to their biological and physical attributes through the assignment of management prescriptions. Management prescriptions, in turn are defined by a combination of management emphases (e.g., timber, wildlife, visual quality retention, etc.) and management intensity (e.g., high, moderate, or low).

Production coefficients determine the outputs and costs of each analysis area-management prescription combination. For example, timber harvest volumes are assigned to timber-emphasis prescriptions based on the age of standing timber and the habitat group associated with the analysis areas. The costs of harvesting the timber are assigned to an analysis area based on attributes such as soil sensitivity and slope class.

Constraints were used to define the management situation for each alternative. Some important constraints applied to timber management were requirements for a sustained nondeclining flow of harvested volume, a specified minimum ending inventory, and maximum allowable clearcutting acreages. Additional constraints were also used to assure certain levels of production of non-market outputs which were not provided by the unconstrained FORPLAN solution because they lacked prices.

A range of management prescriptions were available for implementation on any given analysis area. Given an objective of attaining the maximum present net dollar value from the management of the Forest, the FORPLAN solution represents the most cost-efficient means of achieving that objective within the framework of constraints and the formulation of the planning problem.

A. Analysis Process and Analytical Tools

Work which preceded the FORPLAN analysis included designing management prescription, assigning sets of management prescriptions to analysis areas, and developing coefficients to assign resource outputs, benefits, and costs to analysis area-prescription combinations (see planning records for detailed documentation).

The prescription development process involved developing a representative range of management scenarios for all Forest areas. Management prescriptions were designed to incorporate basic protection of soil, air, and water resources and to meet the intent of existing laws, regulations, and policies. Full documentation of their development is in the Forest Plan Library.

A critical part of the model formulation was the assignment of activities and outputs to management prescriptions. This involved, for example, the assignment of timber harvesting sequences to timber emphasis prescriptions and subsequently, the assignment of production coefficients for sediment, timber, and water yield to each harvest entry. The management prescription is a simulation of cultural activities and of the environmental consequences of those activities.

Only a subset of management prescriptions was available for assignment to any given analysis area. The objective of assigning management prescriptions to analysis areas was to consider all appropriate and practical ways of managing each analysis area. A set of rules based on five biophysical factors (vegetative habitat, soil and slope, visual sensitivity, big-game habitat, and roadlessness) was used to make these assignments (complete documentation of rules is found in the planning records).

Because the Lolo NF was a national lead Forest in the planning process, much of the development work in FORPLAN was carried out on the Forest. The Lolo used its own prototype version of the model to complete the analysis discussed in the first and second drafts of the environmental impact statement. Subsequent to the second draft, the forest planning problem was formulated using a newer production version of FORPLAN (DE FORPLAN). This reformulation incorporated the same set of production coefficents and management prescriptions used in the prototype model and provided a test of the original planning analysis.

The DE FORPLAN model was used to simulate the preferred alternative from the second draft as a validation test of the prototype. The simulation provided results which matched those from the prototype and addtional analysis using the DE FORPLAN model was considered comparable to that completed using the prototypes.

FORPLAN was used to assign the most cost-efficient set of prescriptions to analysis areas in order to provide maximum value from management of the forest. This assignment was completed within the framework of constraints which were used to define the philosophy of each alternative.

A complete mapping of mangement prescription allocations from the FORPLAN solution was used to evaluate its feasibility. Mapping was used to identify spatial anomalies in the solution -- i.e., contiguous areas on the Forest that were allocated to different, incompatible management prescriptions -- and to refine allocations based on spatial relationships approximated but not defined by the model -- e.g., visual qualtiy objective zones, critical gizzly bear habitat, etc. These mapping decisions at the capability area level, based on the analysis area allocations, were tracked with a specially designed computerized accounting system. The results of the mapping exercise were then available for direct comparison with the FORPLAN solution. Solution refinement through mapping was then translated into allocation constraints and the model was solved again.

Mapping was done by District-level personnel and resource specialists familiar with the ground. The expertise of mappers was used to evaluate the feasibility of model-generated allocations. Specialists monitored the status of their respective resources.

B. Identification of Analysis Areas

There are three types of analysis areas used in the FORPLAN analysis:

1. General purpose
2. Riparian
3. Special

Analysis areas of the first type are designed on the principle of homogeneous management response. This type of analysis area is not geographically contiguous, and the acres that collectively comprise an analysis area frequently come from across the entire Forest. The bulk of the Forest is represented by this type of analysis area.

Riparian analysis areas are aggregations of stream and lake areas and are based on stream attributes. Like general purposes analysis areas, they are not geographically contiguous but they do not reflect homogeneous management response.

Special analysis areas represent situations where the advantages of having a generally contiguous and therefore heterogenous analysis areas outweighed the advantages of a homogeneous management response. These included wilderness areas, recreation areas, administrative sites, and other easily defined areas.

General purpose analysis areas were delineated using the following criteria with the prototype model:

1. Habitat group
2. Soil class
3. Slope class
4. Roadlessness
5. Big-game winter range
6. Visual quality objective

The prototype model allocated management prescriptions to analysis areas. The scheduling of timber outputs, however, was done using a separate component of the model which disaggregated the land area into land groups. Land groups were defined using the following attributes:

1. Habitat group
2. Soil class
3. Slope class
4. Allocation (from the allocation component of the model)
5. Condition (age) class

It is important to recall that capabilty areas are defined by habitat type and therefore do not represent areas homogeneous with respect to the age of vegetation. Capability areas can be split into subunits (CA/CC's) defined by condition class acres (a proxy for stand age) for scheduling.

In the DE FORPLAN formulation of the planning problem the allocation and schedule are both assigned to analysis areas for DE FORPLAN:

1. Habitat group
2. Soil class
3. Slope class
4. Condition (age) class

The other three attributes not carried forward from the definition of prototype analysis areas were tracked through DE FORPLAN using an alternate methodology. A land analysis software system was designed to track roadless, big-game winter range, and visual quality objective acreages to portions of general purpose analysis areas. Constraint capabilities provided by DE FORPLAN allowed treating these areas much like separate analysis areas -- i.e., different subsets of management prescriptions were assigned to different portions of different analysis areas.

1. Habitat Groups

The following habitat groups were used for planning purposes. Documentation of the grouping of habitat types into habitat groups is found in the planning records.

Habitat Group	Description
0	Nonforest and noncommercial forest
1	Warm and dry ponderosa pine and Douglas-fir
2	Moderately warm and dry ponderosa pine and Douglas-fir
3	Moderately cool and dry Douglas-fir
4	Moist
5	Cool and mod dry lodgepole pine
6	Cold high elevation whitebark pine and alpine fir

2. Soil Class

Soils are identifed as being:

MS -- More sensitive
LS -- Less sensitive

3. Slope

There are two slope classes:

<60 -- less than 60 percent
>60 -- greater than 60 percent

4. Condition Class

There are seven condition classes:

a. Nonstocked
b. Seedling/sapling
c. Poles
d. Immature sawtimber
e. Mature sawtimber
f. Mature sawtimber with overstory
g. Noncommercial forest/nonforest

C. Identification of Prescriptions

1. Overview

NFMA regulations define management prescriptions as "management practices and intensities selected and scheduled for application on a specific area to attain multiple-use and other goals and objectives" (36 CFR 219.3). Generally, a management prescription is a set of treatments or practices to develop and/or protect some combination of resources on a particular land type.

The interdisciplinary team reviewed the public issues and management concerns, used professional judgment and RPA Program targets for guidance in developing multiple use management prescription goal statements. The goal statements and related issues are as follows:

a. Developed Recreation Prescriptions

The goal is to manage to emphasize developed recreation areas.

b. Dispersed Recreation Prescriptions

The goal is to manage to provide opportunites for:

(1) Non-motorized roadless dispersed recreation

(2) Motorized roadless dispersed recreation

(3) Dispersed recreation in concentrated public use area through three separate prescriptions.

c. Riparian Presriptions

The goal is to manage riparian areas for aquatic and terrestrial animals; it was initiated by the wildlife and fish issues and water and soil issues.

d. Timber Prescriptions

The goal is to manage for the long-term growth and production of usable wood fiber. Three levels of management intensity and two

road closure situations resulted in a total of six timber prescriptions.

e. Visual Prescriptions

The goal of these prescriptions is to manage timber in areas adjacent to or readily visible from traveled routes, use areas, and residential areas to achieve retention and partial retention visual quality objectives. Prescriptions are also developed for visually sensitive areas of big-game winter range.

f. Range Prescription

The goal is to manage to emphasize domestic livestock grazing through intensive management. It was developed to respond to RPA targets and a manageemnt concern.

g. Minimum Level Prescription

The goal is the minimum emphasis - minimum intensity prescription. This is a custodial prescription generally applied to lands not needed to meet alternative objectives.

h. Wildlife Habitat Prescriptions

The goal is to manage winter and summer range for big-game, old growth for old growth dependent wildlife species, and essential grizzly habitat.

i. Research Natural Area Prescription

The goal is to manage Research Natural Areas, and is intended to meet research natural area targets assigned to the Forest.

j. Wilderness Prescription

The goal is to manage wilderness areas according to legislation designating them wilderness and the Wilderness Act.

k. Miscellaneous Prescriptions

The goal of these prescriptions is to manage a variety of situations across the Forest including; administrative sites, corridors, historic sites, mining operations, and non-commercial forest areas, both roaded and unroaded.

2. Design of Management Prescriptions

Management practices, standards, and guidelines were then developed and assigned to each goal statement in interdisciplinary work groups. Practices were developed and assigned based on current research, feasibility, cost efficiency, potential for resource damage and ability to meet minimum management requirements. The management standards and guidelines needed to accomplish the goals of a

prescription include the minimum management requirements, mitigation measures, and resource coordination that are required by existing laws, regulations, and policy.

Forest-wide standards and guidelines were developed to cover practices which are common to many prescriptions. The major Forest-wide standards and guidlines are for roading in riparian areas and for collector and local road construction.

The result was a set of 28 multiple-use management prescriptions with a broad range of emphasis, intensities, practices, standards,and guidelines. Some of the prescriptions emphasize a specific resource such as the timber, wildlife, range, riparian, and visual prescriptions. Intensities of management vary within prescriptions increasing the range of choices available to the FORPLAN model. Other prescriptions serve a single purpose such as the research natural area prescription. Costs of additional activities were determined for prescriptions.

The management prescriptions were designed to:

a. Project the current program to evaluate implications
b. Explore resource potentials
c. Explore opportunites to improve efficiency
d. Explore opportunites to resolve issues and concerns
e. Meet national targets (RPA)

Completed prescriptions were reviewed, discussed and revised as necessary by the management team, the interdisciplinary team and the core team.

3. Prescription Purpose, Criteria, and Assumptions

The timber, winter range, riparian, partial retention, roaded retention, unroaded retention, range and minimum level prescriptions are utilized in all FORPLAN runs. The semiprimitive, primitive, and wilderness prescriptions are in many FORPLAN runs but were eliminated from some to reduce the size of the model and were considered outside of FORPLAN. The developed recreation and research natural area prescriptions are described here.

a. Timber Prescription

(1) Purpose. Provide for cost efficiency of timber mangement, i.e., the greatest net return possible when alternative management practices are considered. Recognize and provide for other resource uses as specified in minimum management requirements.

(2) Criteria and Assumptions. Assigned to all analysis areas tentatively identified as suitable for timber production.

This prescription provides for intensive timber management practices. The timber management intensities range from one

regeneration entry (final harvest) to a precommercial thin, commercial thin, and a final harvest regime.

The most efficient precommercial and commercial thinning intensities are available to all tentatively suitable timberland.

The visual quality objective is Modification.

Minimum rotation ages are provided at or near CMAI at age 110 years for Habitat Groups 2 and 3, at age 115 years for Habitat Group 4, and at age 100 years for Habitat Group 5 under existing stand conditions. Within managed stands, CMAI is at or near age 95 for Habitat Groups 2 and 3, and 85 years for Habitat Groups 4 and 5.

Average Road Densities:

0 - 40 percent slope - 5.58 miles/section
40 - 60 percent slope - 6.79 miles/section
60+ percent slope - 6.79 miles/section

Collector and local roads opened or closed depending on wildlife and recreation needs. Prescriptions which do not require project road construction are also available.

Logging systems provide for the least-cost by land class.

Livestock grazing is allowed on slopes up to 40 percent.

Road density provides maximum potential for mineral exploration.

b. Wildlife Habitat Prescription - Elk Winter Range

(1) Purpose. Maintain or enhance deer and elk winter range on both suitable and unsuitable areas.

(2) Criteria and Assumptions. Assigned to all analysis areas suitable for elk winter range.

Suitable Timber Areas

Silvicultural systems employed will be compatible with winter range objectives.

Generally 0.4 miles or less of open road per section.

Livestock grazing is not compatible.

ORV use restricted from 10/1 to 6/1.

Modification VQO will be met.

Habitat improvement is compatible, probably accomplished through timber harvest and use of prescribed fire.

Unsuitable Timber Areas

No timber harvest.

No new road construction.

Livestock grazing compatible only if forage surplus after 100 percent of big-game needs met.

Modification VQO will be met.

Prescribed burning used to enhance shrub, grass, and forb palatability.

c. Wildlife Habitat Prescription - Elk Summer Range

(1) Purpose. Maintain or enhance key elk summer habit.

(2) Criteria and Assumptions. Timber harvest compatible within the following limitations: wallows, seeps, and other areas of concentrated summer elk use will be protected; optimal cover will be maintained; restricted use of mechanical equipment near wallows; activities will avoid elk use periods; employ advanced logging systems whenever possible.

Design adjacent roads to minimum standards acceptable for wildlife habitat objective and timber management.

Locate roads away from wallows and other key summer habitat.

Close roads to public use late June to September.

ORV use not compatible during the summer.

Livestock use not compatible.

Meet Modification VQO.

Wildfire suppression area.

Use prescribed burning for slash disposal, hazard reduction, and wildlife objectives.

Consider hazard potential in scheduling timber activities.

Remove hazard trees, especially in areas around wallows.

d. Wildlife Habitat Prescription - Grizzly Bear

(1) Purpose. Maintain or enhance habitat for the grizzly bear.

(2) Criteria and Assumptions. Timber harvest compatible on Habitat Groups 4 and 5 below 5,750 feet.

Modified timber harvest peripheral to wet meadows, stream bottoms, and avalanche chutes to maintain optimal cover.

Silvicultural systems preferred include species selection and 10 to 20 acre clearcuts.

Logging systems requiring minimum amount of roading preferred.

Construct roads to minimum standard acceptable for habitat manipulation needs.

Close roads to motorized vehicle use following activities.

Use timber harvest and prescribed fire to maintain and improve grizzly bear habitat.

Livestock grazing incompatible.

Meet Modification VQO.

Wildfire suppression area or modified suppression area over 5,750 feet.

Prescribed burning used to accomplish enhancement objectives, especially over 5,750 feet.

e. Wildlife Habitat Prescription - Old Growth

(1) Purpose. Provide habitat for old growth dependent species.

(2) Criteria and Assumptions. Area will be managed on a double timber rotation, with 50 percent constantly available as old growth.

Old growth stands should be at least 30 to 40 acres in size.

No construction activity within one-half mile of old growth areas between March 15 and July 15.

Close roads to motorized vehicles.

Road density as per Retention VQO.

Rapid fire suppression area.

Prescribed burning compatible for slash disposal, site preparation, creating fuel discontinuities following activity.

ORV use in old growth areas not compatible.

Livestock grazing compatible.

Meet Modification VQO.

f. Dispersed Recreation Prescriptions - Large Roadless Areas

(1) Purpose. Provide opportunities for motorized and nonmotorized roadless dispersed recreation.

(2) Criteria and Assumptions. Timber harvest not compatible.

Road construction for surface resource management is not compatible.

Trail construction compatible.

Livestock grazing on slopes under 40 percent permitted.

Trailhead facilities compatible where needed to meet objectives.

ORV use compatible on areas physically suitable (Prescription RB). ORV use not compatible with prescription RA.

Developed campgrounds and ski areas not compatible.

Meet Retention VQO.

Prescribed burning to improve forage production and hazard reduction compatible.

Habitat improvement projects compatible if not in conflict with recreation and visual quality objectives.

Do not allow mineral material permits.

g. Dispersed Recreation Prescriptions - Concentrated Public Use

(1) Purpose. Encourage a wide variety of dispersed recreation, including trail and road related opportunities.

(2) Criteria and Assumptions. Opportunities for timber harvest limited by recreation and visual quality objectives.

Compatible objectives of timber harvest are: salvage of hazard trees for public safety; sanitation harvest to maintain stand health and diversity; creating clearings for vistas and other manipulations to enhance recreation values.

Provide road access as needed for recreation objectives; close off roads not needed for recreation.

ORV use compatible on designated routes or areas.

Permit livestock grazing where compatible with recreation objectives and prescribe it where it will help meet objectives.

Prescribed burning for slash disposal, hazard reduction, and habitat modification to meet recreation objectives.

Do not allow mineral material permits.

Meet Partial Retention VQO.

Wildlife and fish habitat improvement projects compatible to meet/exceed recreation demands.

Design all projects/actions to minimize sediment production.

h. Developed Recreation Prescriptions

(1) Purpose. Manage areas primarily to provide developed recreation opportunities, including ski areas.

(2) Criteria and Assumptions. No scheduled timber harvest; harvest limited to removal of trees that pose a safety hazard or removal as needed to meet management objectives.

Slash disposal as needed to meet objectives.

Construct roadways and trails tailored to the site and adequate in design to accommodate planned use.

Withdraw from mineral entry.

Livestock grazing on developed sites not compatible. May be compatible on other portions of area.

Manage for Retention VQO.

Commercial vendors will provide services for ski areas.

Consider providing a wide spectrum of recreational opportunities via provisions for "primitive" developed to modern use facilities.

i. Riparian Prescriptions

(1) Purpose. Manage riparian areas for native wildlife and fish species. Resource uses compatible with riparian management are: maintain water quality and fisheries habitat, improve habitat for aquatic plants and animals, improve water quality, improve wildlife habitat, improve opportunities for recreation types III, IV, and V, and timber management on suitable land.

(2) Criteria and Assumptions. On suitable timber lands, maintain timber age class diversity by using double rotation harvest sequence. Limit timber harvest to that necessary to maintain health and diversity of riparian zone vegetation on unsuitable land.

Meet partial retention VQO.

Keep sediment increases within tolerable limits.

No livestock grazing permitted.

Logging systems will protect soils.

Maintain or enhance aquatic habitat -- pool quality and quantity.

Mining restoration done on a case-by-case basis, but designed to minimize impacts.

j. Partial Retention and Retention Prescriptions

(1) Purpose-Four prescriptions were developed to manage the visual resource: partial retention on or off winter range and retention on or off winter range.

(2) Criteria and Assumptions-Timber harvest compatible but restricted to meet VQO. Logging systems will be the least cost method by land class but cable systems will increase as road density decreases.

Average road densities - retention:

00-40% slope - 4.61 miles/section
40-60% slope - 4.85 miles/section
> 60% slope - 2.79 miles/section

Average road densities - partial retention:

00-40% slope - 5.60 miles/section
40-60% slope - 5.90 miles/section
> 60% slope - 4.24 miles/section

Livestock grazing not compatible on winter range areas. Livestock grazing compatible on slopes under 40 percent on nonwinter range areas.

Prescribed burning to achieve resource management objectives is compatible provided VQO is met.

k. Range Prescription

(1) Purpose-Intensify livestock grazing management to increase, or at least maintain, available AUM's and to maintain other resource values (usually applies to NCF areas).

(2) Criteria and Assumptions-Harvest timber as needed to improve forage values.

Improve livestock distribution by physical developments such as fences, water developments, and management techniques such as intensive grazing systems, salting, and range riding.

Improve forage production by techniques such as timber harvest, prescribed fire, noxious weed control and conifer invasion control, seeding, disking, and fertilization on nonforested range.

Permit grazing where physically suitable.

ORV use compatible on sites physically suitable.

Underburning compatible for hazard reduction and silvicultural, wildlife habitat, and range objectives.

Meet Modification VQO--rehabilitate places where VQO is not being met if management direction can be followed.

l. Minimum Level Prescription

(1) Purpose-Provide a custodial management level for all lands. Manage lands only to protect life, health, and safety of incidental users, prevent environmental damage to adjacent lands and prevent long-term degradation of resources.

(2) Criteria and Assumptions-Assigned to all analysis areas.

Timber management only to protect adjacent lands.

Recreation management only to prevent resource degradation.

Close all roads not needed to protect adjacent lands.

Maintain existing livestock use.

m. Wilderness Prescriptions

(1) Purpose-Manage areas as wilderness as defined by the Wilderness Act of 1964.

(2) Criteria and Assumptions-No timber harvest.

Management practices on, and uses of, the area will foster natural distribution and abundance of native species.

Livestock grazing compatible provided natural vegetative species composition is maintained.

Trail construction compatible with emphasis on primitive trails.

Attain Preservation as the VQO, except for modifications caused by the operation of natural processes.

n. Research Natural Area Prescription

(1) Purpose-Establish research natural areas to meet assigned targets as defined in FSM 4063.

(2) Criteria and Assumptions-Assigned to all proposed research natural areas.

Locate areas to minimize conflicts with recreation, range, timber, and minerals.

o. Miscellaneous Prescriptions

(1) Purpose-Provide management for areas not covered by other prescriptions. A variety of uses are specified including: administrative sites, utility corridors, historic sites, mining operations, scattered unroaded parcels of nonforest and noncommercial forest, and scattered roaded areas of nonforest and noncommercial forest.

(2) Criteria and Assumptions-Established to cover management situations that occur on relatively isolated sites with specialized requirements. Timber harvest is generally not compatible, but salvage may be permitted where access is suitable and adequate.

4. Use of Cost Efficiency in Developing Prescriptions

Cost efficiency was considered in developing prescriptions in the following manner. Objectives, standards, and guidelines were established for each prescription by resource element. Given the objective of the prescription, costs were estimated for resource elements to meet the standards or guidelines of the prescription. Costs of producing the outputs that would result from implementing the prescription were developed and compared to the benefit values produced. Prescriptions were carried forward if they were cost efficient in achieving prescription goals.

Two basic assumptions used in developing prescription costs were: costs experienced in implementing past practices were a reasonable basis from which to predict future costs; and the funding for production of outputs would include only the necessary funding.

D. Development of Timber Harvest Intensities

Management strategies for precommercial and commercial thinnings were based on two factors: economic and biological needs. Primary considerations for determining precommercial thinning schedule and growing stock levels were: (1) stand must be of an age in which the more desirable leave trees would have exhibited dominance, usually 15 to 20 years; (2) removal component following commercial entry would have reached a utilizable size; (3) maximum stocking levels retained which accomplish item (2).

A commercial thinning should be economically desirable and should retain sufficient growth stock to recover the volume on the stand in a reasonable time.

To be economically feasible, a stand should contain nearly 600 cubic feet/acre available for removal. The residual stand should retain 134 to 194 trees/acre depending upon species and site productivity.

The thinning entry schedule was determined by where cubic foot growth begins to slow. At or near the time of slower growth, a commercial removal is conducted. The assumption is that the growth rate will remain constant; therefore, replacing the volume removed over time. The time period is computed from the growth rate, times the years required to replace the volume (usually 30 years).

IV. Cost-Efficiency and Net Public Benefit

This section describes cost-efficiency criteria and explains how net public benefits is derived. This analysis is required by National Forest Management Act regulations (36 CFR 219) and plays an important part in the development, comparison, and selection of Forest planning alternatives.

A. Net Public Benefit

Maximization of net public benefit is a goal of the Forest planning process. Net Public Benefit is the overall value to the nation of all outputs and positive effects (benefits) less all the associated Forest inputs and negative effects (costs) of producing priced and nonpriced outputs from National Forest lands. Net public benefit cannot be assigned a meaningful dollar value because many non-market outputs and inputs cannot be assigned values. However this does not mean that economic analysis cannot provide useful information to managers when making natural resource decisions. The procedure used on the Lolo Forest follows that outlined by Colin Price (1976) regarding non-market outputs:

The correct way to allow for unmarketed benefits is to evaluate them as far as possible and include them in the calculation. If they cannot be calculated, then the proper procedure is to discount everything else at the accepted interest rate. Then, if negative net present values are found, an explicit decision can be made, whether the . . . calculated cost is justified by the uncalculated

B. Present Net Value (PNV)

PNV represents the dollar difference between the discounted value of all priced outputs and all costs over the 120-year planning period. Two discount rates, 4 percent and 7-1/8 percent were used to represent the cost of money over time. Priced outputs include those with market values (timber, livestock, forage, and developed recreation) and those with assigned nonmarket prices (dispersed recreation).

Each maximum resource benchmark was initially solved with a FORPLAN objective function of maximizing the desired resource. The model was then run again with the objective function of maximizing PNV with the desired resource constrained at the previously determined level. Each alternative was designed to achieve its goals and objectives in a manner that produces the greatest PNV.

The PNV calculated in FORPLAN is modified by including costs not modeled in FORPLAN. The modified values were used to evalute the benchmarks and alternatives. The costs not included in FORPLAN were fixed overhead costs which do not influence and are not significantly influenced by land allocation and output scheduling. This section describes how the prices and costs were calculated.

1. Priced Output Parameters Used in PNV

a. Discounting-Two discount rates representing the cost of money over time were used to calculate the economic consequences of benchmarks and alternatives within the FORPLAN model. The 4 percent rate approximates the return on long-range corporate investments, above the rate of inflation. (Row and others, 1981). It was the rate used to evaluate benchmarks and alternatives. Both rates were used for the preferred alternative. The 7-1/8 percent rate, which is consistent with the 1980 RPA, was used to determine sensitivity of the preferred alternative to the 4 percent rate. All costs and benefits were discounted from the midpoint of the planning period.

b. Real Dollar Adjustments-Inflation was not included in the discount rates, benefits, and costs due to the difficulty of estimating future inflation rates and because inflation would equally affect both costs and prices. All prices and costs are expressed in first quarter 1978 dollars, consistent with the 1980 RPA. The Gross National Product (GNP) implicit price deflator index is used to inflate or deflate price and cost data to this common base (FSM 1971.32b).

2. Costs Used in PNV

All agency costs were estimated for the 120-year planning period for all benchmarks and alternatives. This section discusses how costs were developed, the major expenditure categories, funding source, and the actual costs by resource.

a. Cost Development Process-Costs were developed by Forest personnel in conjunction with developing standards and guidelines for management prescriptions. The resource work groups estimated costs for every management activity specified by management prescription. The costs were based on historical data and professional judgment, and approximate the minimum funds needed to achieve the objectives of the management prescriptions within the standards and guidelines. Cost data was used in developing feasible and cost-efficient prescriptions for all combinations of site characteristics for all analysis areas.

Costs were modeled within FORPLAN by assigning cost coefficients to management prescription/analysis area combinations based on biological and physical attributes of analysis areas and estimated physical resource outputs. Documentation of cost development can be found in the Forest Planning Library.

b. Cost Categories-Costs were stratified into three classes: fixed Forest Service costs, variable Forest Service costs, and cooperator costs (FSM 1971.52).

Fixed costs are the minimum expenditures necessary to meet legal requirements of ensuring public safety and environmental protection. These costs are defined by the minimum level benchmark and are $3.0 million/year for the first decade and $2.6 million/year for the remaining years. These costs do not vary by alternative and do not affect land management decisions. The costs include fixed ownership requirements, short-term maintenance of range allotments, timber, human and community, and general administration.

Variable costs vary with the controlled output level specified in each benchmark or alternative. They include capital investments (the costs of creating or enhancing capital assets over time), planning and inventory, and operations costs (including annual costs of administration, management, and protection of existing resources and capital assets). Variable costs include the costs necessary to meet minimum management requirements which are in the standards and guidelines of planned activities.

Agency cooperator costs also vary as output levels change. The largest component of operator costs falls in the stump-to-truck logging cost category. These costs are sensitive to habitat group, slope, VQO, silvicultural method, and logging system.

In most cases, expenditures are appropriated through the normal Federal budget procedures. Two exceptions are in-kind payments and special collections. Road construction and reconstruction which are performed by timber purchasers are deducted from timber receipts. Second, most of slash disposal, site preparation, and reforestation costs following timber harvest are financed through special collection brush disposal and Knudsen-Vandenburg funds.

c. Cost Increases-Basic unit costs for logging and road construction are expected to increase above inflation over time (Haynes & Adams, 1980). All other costs, including all agency costs, are expected to remain constant with respect to inflation over time.

d. Cost Data by Resource-Costs are associated with each resource output for timber, range, recreation/wildlife, minerals, soil and water, and nonseparable costs. The nonseparable costs are not separated into resource, e.g., road maintenance, and general administration.

Calculating present net value by individual resource may be misleading because the costs include expenditures required to produce, enhance, or mitigate more than one resource. For example, slash disposal costs may contain a cost to mitigate visual quality. This cost appears in the timber category. Thus, the costs by resource output do not always have a direct relationship with the benefits by resource.

Cost codes for all management activities are displayed in Table B-2. The costs are grouped by resource program.

Table B-2 - Costs Incorporated in FORPLAN

Resource	MIH Code	Activity
Timber	A01	Recreation Planning
	308	Cultural Resource Inventory
	310	Visual Quality Inventory
	C01	Wildlife-Fish Planning
	P01	Fire Management Planning
	P10	Fuel Management Inventory
	F04	Soil-Water Administration
	G02	Minerals-Geology Inventory
	D01	Range Resource Planning
	J01	Special Uses
	J18	Right-of-Way Acquisition
	J19	Cost-Share Agreements
	F09	Water Resource Monitoring
	L12	Local Road Construction
	L13	Local Road Reconstruction
	L10	Local Road Preconstruction
	L11	Local Road Construction Engineering
	L14	Timber Purchaser Road Construction
	L29	Timber Purchaser Reconstruction
	L19	Timber Purchaser Road Maintenance
	L19	Forest Service Road Maintenance
	P11	Treatment of Activity Fuels
	E03	Silvicultural Exams - Presale
		Silvicultural Exams - Post Sale
		Silvicultural Exams - Pre TSI
	443	Planting
	447	Site Prep - Planting

Table B-2 continued

	449	Site Prep - Natural Regeneration
	E05	Pre-Commercial Thinning
	E06	Timber Sale Preparation
	E07	Timber Sale Administration
	---	Operator Administration
	---	Operator Temporary Development
	---	Operator Timber Haul
	---	Operator Stump-Truck
Range	D03	Range Non-Structural Improvements
	D05	Range Structural Improvements
Recreation	A08	Dispersed Recreation Administration
	A11	Trail Construction
	A12	Trail Maintenance
Wildlife & Fish	C03	Structural Habitat Improvement
	C04	Habitat Maintenance
	P12	Treatment of Natural Fuels
Soil & Water	F09	Water Resource Monitoring
Multiple Resources	L08	Collector Road Construction
	L09	Collector Road Reconstruction

Fixed Costs for Forest Service Organization Added Outside FORPLAN

Recreation	A01	Recreation Planning
	A02	Cult. Vis. Rec. Inventory
	A04	Cult. Res. Protection
	A05	Fac/Site Reconstruction
	A07	Fac/Site Management
Wilderness	B01	Wilderness Planning
	B03	Wilderness Use Administration
Fish & Wildlife	C01	F/W Sur. Pla. Pre. Administration
	C02	Non-Struct. Habitat Improvement
Range	D01	Range Restoration Planning
	D07	Range Administrative Management
	D06	Range Struct. Improvement Maintenance
Timber	E00	Timber Res. Plan. Inventory
	E04	Refor. Backl. Acres
	E09	Genetic Tree Improvements

Table B-2 continued

Soil & Water	F03	Soil-Water Improvements
	F04	Soil-Water Administration
	F08	Res. Imp. Maintenance
	F01	Soil-Water Inventory
	F02	Soil-Water Planning
Minerals & Geology	G01	Tech. Inventory & Evaluation
	G02	Site Specific Tech. Examinations
	G03	Processing Exploration Proposals
	G04	Processing Lease Applications
	G05	Processing Development Proposals
	G06	Administration of Operations
HRP	H02	Youth Conservation Corps
	H04	Senior Community Service
Lands	J01	Special Use Management
	J02	R-O-W Grants RP TR
	J03	Fed. Eng. Reg. Com. Per.
	J05	Land Status Mtce.
	J06	Property Boundary Cost
	J06	Property Boundary - Mile
	J08	Nat. American Land Claim
	J09	Other Land Title Claims
	J10	Encroachment
	J12	Land Adj. Planning
	J13	Land Exchange
	J15	Land Acquisition
	J18	R-O-W Acquisition
	J19	R-O-W Cost Share Ag.
	J22	Forest Level Plan
	J28	Coop Tech. Assis. Spf.
Facilities	L07	Collector Rd. Ce.
	L01	Trans. Sys. Plan Inv.
	L11	Local Rd. Ce.
	L19	Road Operation
	L20	Trail Inventory & Planning
	L25	FA&O Construction Recons.
	L28	Dam Administrative Management

Table B-2 continued

Protection	P07	Fire Support Fac. Sv.
	P02	Fire Prevention
	P01	Fire Mgt. Plan Analysis
	P03	Fire Detection
	P04	Primary Initial Att.
	P06	Fire Reinforcements
	P11	Treatment Acti. Fuel
	P19	Aerial Trans. Person
	P24	Law Enforcement
	P25	Coop Law Enforcement
	P10	Fuel Management Inventory
Administration	T02	General Administration

For additional information on specific MIH costs, see the planning records.

3. Benefits Used In PNV

All priced benefits were estimated for the 120-year period for all benchmarks and alternatives. Priced outputs include those resources that are or could be exchanged in the marketplace including timber, range, recreation, and special uses. This section discusses the methods used to estimate current and future values.

The prices used in the analysis reflect onsite values for grazing and recreation which are used on the Forest. Timber values are based on historical prices of timber delivered to the mill. Benefits are classified as market values (timber, range, developed recreation) or nonmarket values (dispersed recreation). Furthermore, some of the benefits are actual receipts or in-kind payments to the Government. The receipts serve as a base for 25 percent fund payments to local Governments. Finally, some of the benefits are fixed. These benefits are associated with the minimum level benchmark and are the benefits associated with no active management.

a. Timber Benefits-Stumpage values represent both the benefit value to the taxpayer as well as the actual receipt to the US Treasury. All timber outputs from the Forest are expected to be consumed. Because the real price of lumber is projected to increase faster than the real price of lumber production, the real price of delivered logs is also projected to increase. The price indices are (Haynes and Adams, 1980):

Decade	Delivered Log	Production Cost
1	112.9	111.8
2	134.3	136.5
3	153.1	150.9
4	175.2	150.9
5	196.4	158.1
6	207.9	159.5

The demand curve for timber was assumed to be horizontal; therefore, no downward sloping demand curve was used in the FORPLAN computer model. None of the available techniques for developing Forest level demand functions have a strong enough theoretical basis. See Downward Sloping Demand Curves (Reid, February 12, 1981).

b. Range Benefits-The value assigned to range forage reflects potential dollar returns from the range resource to the taxpayers even though only part of the price is actually collected by the Forest. The price is the net value to the rancher above the cash costs for grazing on the Forest. The value on the Forest is $10.33/AUM (Gee, 1981). Future prices listed below (dollars per AUM) are based on projections from the 1980 RPA analysis:

1985	$10.74
1995	11.28
2005	11.81
2015	12.03
2025	12.24

All forage outputs from the Forest are expected to be consumed up to the expected demand level as specified below (RPA) in thousand AUM's/year:

1985	14.3
1995	15.0
2005	16.0
2015	18.0
2025	20.0

All quantities produced above this level are assumed to be excess supply and are not valued. Receipts from the grazing program are fees paid by the permittee.

The value of the range program associated with minimum level benchmark is the value of the current program until allotments expire. The value in other benchmarks and alternatives is calculated by applying the appropriate prices to the livestock forage schedule in FORPLAN, subject to the demand limit specified above.

c. Recreation/Wildlife Benefit-The value assigned to recreation reflects potential dollar returns from recreation to the taxpayers even though most dollar values are not actually collected by the Forest. The value is the difference between the total value of a recreation experience to the recreation user and the cost of participating. The prices vary by type of experience and are expected to increase in the future. Receipts from developed recreation and special use programs consist of fees paid at campgrounds and fees paid for special use. The values for the Forest are displayed in Table B-3.

Table B-3 - Current and Future Prices for Recreation

(1978 Dollars, $/recreation visitor day)

	1985	1995	2005	2015	2025+
Big-game hunting	21.00	22.05	24.99	27.93	31.50
Other hunting	24.00	25.20	28.56	31.92	36.00
Wildlife viewing	29.00	30.45	34.51	38.57	43.50
Fishing	15.75	15.75	17.96	19.37	22.05
Wilderness	8.00	8.00	9.12	9.84	11.20
Other dispersed recreation	3.00	3.15	3.37	3.99	4.50

Source: FSM 1970 R-1, 1981.

Dispersed recreation, Types III and IV, and developed recreation, Type V, were valued at $3.00/RVD. Dispersed recreation, Type I, was valued at $12.57/RVD and assumed to be made up of 2.2 percent fishing, 29.3 percent big-game hunting, 2.8 percent other game hunting, and 65.7 percent wilderness use. Dispersed recreation, Type II, was valued at $15.24/RVD and assumed to be made up of 39 percent fishing, 26.8 percent big-game hunting, 9.4 percent other game hunting, and 24.8 percent all other uses.

Recreation use is projected to increase on the Forest as the population in western Montana increases. Since recreation capacity exceeds use projections, recreation use rather than capacity is valued, i.e., the value of the recreation resource is based on expected use rather than capacity. Expected recreation use is based on RPA projections, which are used to set upper limits on the quantity of recreation outputs valued in FORPLAN.

Expected recreation utilization based on RPA projections in thousand RVD's are as follows:

	1985	1995	2005	2015	2025
Type I	16.6	18.5	20.1	21.4	22.2
Type II	322.7	359.1	372.0	413.7	429.9
Type III-IV	813.6	905.4	982.3	1043.0	1083.9
Type V	352.5	392.6	374.9	385.9	405.1

C. Nonpriced Outputs

Numerous nonpriced outputs are produced in varying amounts in different alternatives by applying management prescriptions to specific areas and/or by applying output and inventory constraints. All dollar costs incurred with either direct or indirect production of nonpriced outputs are included in FORPLAN computation of PNV. To the extent that nonpriced outputs are achieved through the use of constraints, PNV is lowered as constrained levels are increased.

Examples of nonpriced outputs that were part of the Lolo analysis are:

Old Growth Habitat on each Habitat Group
Visual Quality
Water Quality
Riparian Protection
Soil Stability
Viable Wildlife Populations
Big-Game Winter Forage
Critical Elk Summer Habitat
Wilderness and Roadless Areas

V. Social and Economic Impact Analysis

A. Overview

In addition to priced and nonpriced outputs associated with Forest management practices, there are social and economic impacts that are of concern. It is important to treat and recognize impacts as a separate issue from economic efficiency.

The social and economic impact analysis was completed to evaluate the effects of Forest management on local people. While the evaluation of long-term effects (greater than 10 years) was an important part of the analysis, emphasis was placed on short-term impacts.

Management of the Forest influences employment levels, income, and State and local Government revenues which directly effect the well-being of local people. The population's lifestyles, attitudes, beliefs, values, and social organization are also linked to Forest management activities.

B. Impact Analysis Area

The Forest's impact area includes Flathead, Mineral, Missoula, Ravalli, and Sanders Counties. Missoula County is the trade center for western Montana.

C. Economic Impact Model

An input-output model (IMPLAN) was used to estimate the employment and income impacts of Forest outputs and activities. Direct, indirect, induced, and total impacts were calculated.

Economic input-output (I-O) analysis is a procedure for describing the structural interdependencies of a regional economy or impact area and serves as a short-term predictive model for evaluating the impacts of shifts in Forest outputs and activities.

I-O analysis is based upon the interdependence of production and consumption sectors in the impact area. For example, area industries may use raw materials to produce outputs which are inputs to other industries or final consumer goods.

Flows of industrial inputs can be traced via the I-O accounts to show linkage among the industries in the economy. The accounts are also transformed into a set of simultaneous equations that permit the prediction of economic effects resulting from changes in Forest outputs and activities.

I-O analysis is based on assumptions that limit the accuracy of projections. Therefore, the numbers presented are relative indicators rather than absolute projections.

1. IMPLAN Data Base

The I-O model data base consists of (1) a national level technology matrix and (2) a county-by-county file of estimated activity levels for total gross output, six components of final demand, three components of final payments, and employment for 466 industrial/business sectors. (See USDA Forest Service, 1983 for more information on the I-O model.)

The national technology matrix is based on a 1972 Commerce Department I-O model converted to an industry by industry basis and updated to 1977 using the RAS procedure (Clopper and others, 1974). The county level information is based on a 1977 data set constructed by Engineering Economics Associates of Berkeley, California.

Utilizing the national technology matrix and the regional control totals for the local impact area, a data reduction method was used to develop a regional input-output table. The method uses the property of "openness" displayed by regional economies compared with the national economy (Richardson, 1972). Smaller regional economies exhibit much greater tendencies or are more open to import and export than is observed at the national level. Based on the assumption that trade balances are the principal difference between national and regional purchase patterns, the supply-demand pool technique for data reduction was adopted (Schaffer and Chu, 1969).

2. Final Demand Expenditures

The I-O model translates Forest outputs and activities into employment and income impacts. An intermediate step is the translation of outputs into final demand dollars. Final demand expenditures are different from the values used in the efficiency analysis. Final demand expenditures represent the dollars spent by the final consumers of the finished products derived from Forest outputs. For instance, timber is processed into lumber which has a sale value at the mill. The sale value represents the amount of new money that will be directly generated for the local impact area--assuming that most is sold outside the impact area, this causes the local impact. The efficiency analysis examines only stumpage or the market value of the raw material that leaves the Forest.

This modeling step is accomplished by applying a final demand expenditure per unit of output to total outputs and linking the

resulting dollar amount to the sectors in which the direct expenditure takes place. This process determines the change that takes place in the existing economy. Expenditure information is contained in the planning records.

D. Base Year Employment and Income Information

Forest outputs for 1980 were identified and analyzed with the I-O model to provide a base situation from which employment and income changes could be measured. Table B-4 contains 1980 outputs levels, employment and income amounts associated with 1980 outputs, and the response coefficients per unit of output. Table B-5 shows employment and income for alternatives and benchmarks.

Table B-4 - Forest Outputs and Impacts in 1980

Output	1980 Production	Employment Total Jobs	Employment Jobs/Unit	Income Total M$	Income M$/ Unit
Livestock	13.8 MAUM	13.1	0.95	71.5	5.18
Timber*	70.0 MMBF	983.5	14.05	14661.5	209.45
Type I Recreation	16.7 MRVD	10.0	0.60	75.3	4.51
Type II Recreation	322.7 MRVD	345.3	1.07	2756.0	8.54
Type III-IV Recreation	813.6 MRVD	488.2	0.60	3759.0	4.62
Type V Recreation	205.3 MRVD	630.3	3.07	4736.3	23.07
T O T A L		2470.4		26,059.6	

*Volume Harvested in FY 1980

Table B-5 - Forest-Related Employment and Income for Alternatives and Benchmarks - Decade 1.

	Jobs	Income (MM$)
Alternatives		
a	3500	38.1
b	3399	36.6
c	3765	42.0
d	3444	37.2
e	3444	37.2
f	3444	37.2
g	3204	33.6
i	4163	51.3
j	3326	38.9
k	2505	27.0
min. level	1934	6.8
max. PNV	3670	40.6
RPA	3682	40.8

E. Social Measures

Public comments that led to the identification of issues also revealed some general beliefs, concepts, and attitudes held by individuals and groups concerning the ways in which they view the Forest and judge management activities. Analysis of public comments from this value orientation perspective led to different definitions of and attitudes about the Forest, indicating a variety of philosophies about Forest management and how it affects people's lives. The importance of particular issues and how issues should be resolved vary among those philosophies. By means of various public philosophies influencing the development of alternatives, a social link was established in the planning process between public issues and alternative ways publics view resolving them.

Analysis of public responses about issues, based on value orientations, indicated that the concerns held by the public about the Forest and its management could be defined in the planning process through 12 variables: access; regulation; fire; timber; visual quality; big game; nongame; dispersed recreation; developed recreation; livestock grazing; economic efficiency; and jobs. Treatment of those variables in each alternative display the actual impacts on the social and economic environments of people and local communities.

Social effects are measured in terms of changes that occur that influence those variables among alternatives. Those changes are measured from the current situation (alternative a).

The consequences of alternatives on the social variables are discussed with the appropriate resource or use elements in Chapters II, III and IV of the main body of this document.

VI. Analysis Prior to Development of Alternatives

A. Introduction

The primary analysis prior to developing alternatives was the analysis of the management situation--a determination of the ability of the Forest to supply goods and services in response to society's demands. This analysis provided a basis for formulating a broad range of resonable alternatives by examining the following:

-Benchmark analyses
-The minimum level of management with associated costs and benefits.
-The maximum physical and biological production potentials of single resources as well as sets of resources together with their associated costs and benefits.
-The maximum present net value of resources with an established market value or an assigned value (a cost efficiency measure).
-A point of reference was also defined from which the costs and effects of constraints were measured.
-Analysis of the current and expected future level of goods and services if current management direction continued.
-Projections of demand for goods and services.
-Analysis of the potential to resolve issues and concerns.
-Analysis of the need to change management direction.

The results of this analysis form the framework within which alternatives were developed.

B. Development of Minimum Management Requirements

Minimum management requirements (MMR) are defined in 36 CFR 219.27 of the NFMA. They can be summarized as follows:

1. Conserve soil and water resources.
2. Minimize hazards from flood, wind, wildlife, erosion, and other natural physical forces.
3. Reduce hazards from pest organisms.

4. Protect riparian zones.
5. Provide diversity.
6. Provide fish and wildlife habitat to maintain viable populations.
7. Adhere to multiple use laws.
8. Protect threatened and endangered species habitat.
9. Provide for rights-of-way and corridors.
10. Develop road construction standards.
11. Revegetate temporary roads.
12. Maintain air quality.
13. Reforest in 5 years.
14. Limit openings to 40 acres.

These resource protection requirements are incorporated in the Forest planning process in the following ways:

-through the development of management standards and guidelines.

-through the development of management prescriptions.

-through the assignment of prescription sets to analysis areas.

-through the spatial disaggregation of the FORPLAN solution by mapping.

Management standards and guidelines are discussed in Chapter 1 of the Forest Plan. Descriptions of philosophy, management direction, important standards and guidelines, and management practice schedules are listed for each management area in chapter 3 of the Forest Plan. Rules for applying prescriptions to analysis areas are documented in the Forest planning records. Mapping was completed by resource specialists and District personnel in order to assure a high level of congruity between Forest level standards and guidelines and the allocation provided by the model.

Once again it is important to remember the spatial resolution of the FORPLAN model. Allocations and schedules are made to areas that are not geographically contiguous. Impacts on important resources are, however, often heavily influenced by the arrangement of activities in both time and space. For example, sediment production is more realistically discussed at the scale of output by watershed rather than output by analysis area. While important parts of requirements for resource protection are part of the FORPLAN formulation, many are incorporated in the management direction and standards and guidelines applied to each management prescription. In other words, spatial analysis deficiencies of the FORPLAN analysis are accommodated within directions for implementation.

1. Conserve Soil and Water Resources

On the Lolo National Forest, sediment production from management activities such as road construction, timber harvest, grazing and mining can represent a major impact on the quality of water from timbered watersheds. The protection of basic soil and water resources is a part of the design of all management prescriptions.

Forest-level standards for water and soils (Forest Plan, Chapter II) are:

-Water quality will meet or exceed Federal and State standards.

-Development projects in areas with steep slopes, granitic soils, wet glacial tills, and lake sediments will not be implemented until they have been analyzed for environmental and economic feasibility.

-All management practices will be designed or modified as necessary to protect land productivity.

Timber harvesting and associated road construction represent activities with the highest potential for soil disturbance. Timber emphasis management prescriptions are designed with special consideration of these impacts. The following are incorporated in timber prescriptions:

-No tractor logging on slopes greater than 35 percent.

-Restrictions were placed on the application of silvicultural systems based on slope class (Forest planning records).

-Special prescriptions were applied to certain areas with soils constraints. Project road construction is not allowed in these areas.

An important element of water and soil protection which cannot be considered using FORPLAN is the management of lands of different ownership within a common watershed (Forest policy No. 7, Forest Plan, Chapter 1). The following hierarchial approach will be used to achieve watershed protection on lands with intermingled ownership:

a. Cooperative. Accelerate efforts to develop mutually agreeable water quality and quantity management standards with other landowners practicing forest management in areas of intermingled ownership. Seek cooperative agreements with these landowners on the shared responsibilities for achieving or maintaining the standards.

b. Buffering. This approach is to defer or delay activities on National Forest land that could cause stream channel damage when coupled with activities that have taken place or are in progress on intermingled lands of other ownership. This approach will be used only as an interim action during watershed reparation. If reasonable solutions cannot be achieved within 3 years, approaches (c) and (d) may be used.

c. Land Acquisition. This will be considered only for small or isolated parcels of land in areas where watershed protection could be better achieved if lands were in a single ownership. Acquisition could be through purchase or land exchange.

d. Legal Action. The Forest will support existing State or Federal laws for watershed protection by involving responsible enforcement agencies as necessary and by supporting legislation aimed at strengthening watershed protection (e.g., Forest Practices Act).

2. Minimize Hazards from Natural Physical Forces

The physical force of most obvious concern here is fire. Forest guideline No. 25 (Forest Plan, chapter 1) states that "...a balanced fire management program will be implemented that is cost effective and commensurate with threats to life and property, public safety, values, hazards, risks, and specific resource management goals and objectives." Fire management is completed pursuant to handbook direction.

Fuel loads on the Forest can be reduced by prescribed burning. These burns are assigned by the FORPLAN model for a number of reasons; e.g., big-game forage production, slash disposal, etc. The schedules for natural and activity fuels burning is assigned to each management area/analysis area combination based on habitat group. These schedules are documented in the Forest planning records.

Wind damage to residual trees of partial cuts is also a potential hazard. This hazard has been reduced through the assignment of appropriate silvicultural systems to management prescriptions and management prescriptions to analysis areas.

Hazards from flood and erosion are minimized through standards and guidelines discussed above under "Conserve soil and water resources."

3. Reduce Hazards from Pest Organisms.

The projection of potential hazards caused by pest organisms is a difficult task given the complex interaction of biological and physical factors. Direct evaluation of pest hazards was not attempted using the FORPLAN formulation because of: 1) the general and highly aggregated nature of the data and 2) uncertainty regarding the pest-tree complex.

Accordingly, pest control is a difficult question, compounded by the high proportion of the Forest which is old growth. The removal of natural fire from forested ecosystems has also had effects on the structure and distribution of stands which, in certain instances, has increased pest damage risk.

The transformation of the suitable commercial land base to a regulated forest should improve opportunities for integrated pest management. Regional guidelines direct silvicultural activities to provide protection for forest and range resources in pursuit of Regional and Forest objectives. In addition, the treatment of natural fuels on the Forest should also help provide for a more healthy Forest.

Forest Policy No. 24 directs pest control on the Forest (Chapter 1, Forest Plan):

> Pest control in an environmentally acceptable manner includes the application of cultural, mechanical, and biological techniques, and may require the use of fire or pesticides. The Forest will conduct administrative studies and support research to develop and evaluate the effectiveness and environmental safety of new pest management technology. Pesticides will be recommended for control application only if the environmental analysis indicates that this alternative is preferable and the Regional review and approval process (FSM 2150) is completed.

4. Protect Riparian Zones.

Riparian areas are included in the FORPLAN formulation as special analysis areas. Special management prescriptions were designed for these areas (see the discussion of Management Areas 13 and 14 in Chapter 2 of the Forest Plan). The following management goals are accommodated in the design of these prescriptions:

a. Manage riparian areas to maintain and enhance their value for wildlife, recreation, fishery and aquatic habitat, and water quality.

b. Provide opportunities to improve water quality, minimize erosion, and strengthen or protect streambanks through specifically prescribed vegetation manipulation and/or structural means.

c. Provide opportunities to improve fisheries and wildlife habitat through specifically prescribed vegetation manipulation and/or structural means.

d. Provide for healthy stands of timber and manage timber to give preferential consideration to riparian dependent species on that portion of the management area classified as suitable for timber production.

Timber harvest is limited to individual tree and group selection silvicultural systems.

5. Provide diversity

An extensive discussion of diversity, its place in NFMA regulations, and analysis on the Forest is presented in the planning record. Outputs from the FORPLAN model can be used to predict age distributions by habitat groups across the Forest. However, measures of diversity are meaningful only when applied at a higher spatial resolution. Much of the analysis done to ensure diversity was done through mapping. Major drainages were inspected for prescriptions which supported old growth across a representative cross section of habitat types. Where necessary an "old growth" prescription (MA 21) was assigned to land areas in the drainage to ensure an adequate

distribution. Indicator species are an important means of monitoring diversity and are discussed in the planning record.

6. Provide Fish and Wildlife Habitat to Maintain Viable Populations

   a. The Forest contains several distinct habitats that are important to different groups of wildlife and fish species. Even with many overlaps between habitat and the wildlife present, there are specific habitat requirements for most of these groups. The indicator species will be monitored because they are sensitive to management activities or are of special concern, such as the elk or westslope cutthroat trout.

      Fifteen important species groups were identified, and pileated woodpecker, goshawk, elk, sediment-sensitive invertebrates, and threatened and endangered species were selected as indicator species. Further definition of these groups can be found in Chapter 2 of the Forest Plan. Indicator species will be monitored to insure maintenance of viable populations.

   b. The activities that occur in the riparian area have the most influence on fish habitat and population potentials. Although riparian areas comprise a small percentage of the Forest, they receive a disproportionate share of the human use. Road development, developed recreation sites, grazing, and timber harvests all have effects on the riparian area, and on fish habitat.

      Special management prescriptions assigned to riparian areas are designed to protect aquatic resources

7. Adherence to Multiple Use Laws

   The planning process used to develop procedures and arrive at decisions described in the DEIS and Forest Plan complies with requirements of the National Forest Management Act of 1976 (NFMA). The DEIS follows the Council on Environmental Quality regulations for implementing the National Environmental Policy Act (Federal Register: Vol. 43, No. 55978-56007; November 29, 1978). Statements of public issues and management concerns that provided the focus for planning appear in the Summary and Chapter I. Subsequent chapters include reference to or discussion of the role of public comments throughout the planning process in arriving at a proposed action.

8. Protect Threatened and Endangered Species Habitat

   Regional guidelines regarding wildlife and fish provide guidance for habitat management and population levels including threatened and endangered species. Forest guideline No. 13 (Forest Plan, Chapter 1) states that:

   > Management practices in critical habitat of threatened and endangered species must be compatible with habitat needs of the species (grizzly bear, gray wolf, bald eagle, and peregrine

falcon). There are no other known plant or animal species in the Forest that have been identified as threatened or endangered under provisions of the Endangered Species Act of 1973. If and when any such species or habitats are identified, appropriate measures, pursuant to Section 7 of the Endangered Species Act, will be taken to protect their habitat.

A special management prescription was developed for application to areas of critical grizzly bear habitat. Although other management prescriptions such as roadless and wilderness occur within essential habitat, this prescription is designed to maintain and enhance grizzly bear habitat through vegetative manipulation, if necessary.

9. Provide for Rights-of-Way and Corridors

Forest guideline No. 17 states that:

> Utility and transportation corridor designation on the Forest will follow procedures established by the Regional Forester. The current interagency utility-transportation corridor study will identify the process that will be followed to develop joint corridor siting policies and criteria. (Participants in this study are the State of Montana, U.S. Forest Service, and U.S. Bureau of Land Management.

A special management prescription was designed to consist of potential transportation and utility corridors that may be identified on the Lolo Forest. Existing and potential rights-of-way will be evaluated to determine if they are compatible with other facilities or uses. If they are determined to be capable of accommodating more than one facility, they will be designated a right-of-way corridor (36 CFR 219.13(b)(10)).

The management area will consist of the land directly under and adjacent to the facility such as a pipeline or powerline. As these corridors are identified, the acreages within them will be deleted from the management areas they cross. Full documentation of this prescription can be found in Chapter 2 of the Forest Plan under Management Area 5.

10. Develop Road Construction Standards

Forest Policy No. 20 states that:

> Lolo National Forest roads will be the minimum number and meet the minimum design standards possible while still meeting safety, user, and resource needs. This will require that logging system design, timber sale design, and transportation planning be emphasized on all timber sales to comply with this policy. No access roads will be constructed without an approved transportation plan and appropriate NEPA documentation.

Additional specific guidelines are found in the descriptions of individual prescriptions.

11. Revegetate Temporary Roads

Temporary roads will be revegetated to reduce the risk of erosion.

12. Maintain Air Quality

Forest standards for fire state:

a. Air quality will be maintained at a level that is adequate for the protection and use of National Forest land and that meets or exceeds Federal and State standards.

b. Prescribed fire objectives will be met within the constraints established by Montana State Airshed Group's Memorandum of Understanding.

13. Reforest in 5 Years

In order to have reasonable assurance of regeneration in 5 years, seedlings are planted on many harvested areas. Planting variables considered were: single species, species mix, stocking rates and site preparation. The minimum requirement for species is a mix that minimizes plantation losses and the need to replant. Stocking rates are 200 to 600 trees per acre. The rate varies because the drier habitat types cannot support full stocking. Site preparation is required in most cases because native planted species cannot grow efficiently if existing vegetation competes for soil nutrients, water, and sunshine. Reforestation is included in the prescriptions with timber harvest as a management practice.

14. Forty-Acre Clearcut Limit

Clearcutting is one silvicultural system used on the Forest for even-aged timber harvest. The Regional Guide establishes that the openings created by even-aged silviculture normally will be 40 acres or less. Costs and practices used are based on clearcuts of 40 acres or less and are included in the management prescriptions.

C. Benchmarks

Benchmarks were developed to define the production potentials and economic relationships of the Forest. The efficient schedule of management activities, resource outputs, environmental effects, economic consequences, and land allocation to meet the purpose of each benchmark were estimated. This section describes the purpose of each benchmark.

All benchmarks were designed to meet the minimum management requirements (MMR) in 36 CFR 219.27. The minimum level and maximum supply potentials that define the limits of supply are not alternatives. The minimum level potential is not responsive to public issues and management concerns and does not provide for multiple use and sustained yield of the several products and services that are available from the National Forest as directed in the Multiple Use-Sustained Yield Act of 1960. The

maximum supply potentials are not alternatives because the maximization of one resource is at the expense of other resources and seriously reduces the total values that can be achieved from the Forest. Benchmarks are compared to the production potential that would occur if current management direction was continued.

1. Maximize Present Net Value (Benchmark h)

This benchmark establishes the mix of resource uses and schedule of outputs and costs that maximized present net value using market and nonmarket assigned values. Most constraints are removed from the model, including clearcut acres, nondeclining flow of timber harvest, and scheduling of harvests to benefit other resource values such as elk forage production. Nondeclining flow of timber harvest is replaced by a range of allowed departures from nondeclining flow by decade. For decades one through three, harvest may increase 25 percent or decrease by 10 percent. For decades four through twelve, it may rise or fall by 25 percent.

The only other constraints applied are those that will maintain the productivity of the land and maintain an ending timber inventory to assure long-term productivity. The existing laws and regulations pertaining to wilderness and areas recommended for wilderness are also recognized. The objective function is to maximize the present net value. Table B-6 displays the average annual levels of resource production under Benchmark h.

Table B-6 - Average Annual Resource Production Under the Maximum

Present Net Value Benchmark h

	1981-1990	1991-2000	2001-2010	2011-2020	2021-2030
Potential Livestock Use (MAUM)	15.4	15.9	15.9	15.9	15.9
Potential Developed Recreation(MRVD)	405	405	405	405	405
Potential Dispersed Recreation (MRVD)	1635	1635	1635	1635	1635
Allowable Sale Quantity (MMBF)	123	154	193	188	234
Water Yield Increase (M ac-ft)	693	969	1204	1447	1884
Big-Game Winter Forage (MAUM)	27.4	27.5	51.7	69.6	98.1
Elk Summer Quality Index (% of Existing Situation	115	115	115	115	115
Elk Population Potential (Number)	8.2	8.2	8.2	8.2	8.2

2. Maximize Timber/Range (Benchmark i)

The maximum legal capability of the Forest to produce timber was determined by this benchmark. Timber production was maximized in the first decade at 219 MMBF and remained at that level through decade twelve. The maximum production potential recognizes the need to protect soil and water resources and that lands producing less than 20 cubic feet per acre per year are not suitable for timber management.

Allowable Sale Quantity, Nondeclining Flow, Maximum Potential and Continuation of Current Direction (Annual Million Board Feet).

	1981-1990	1991-2000	2001-2010	2011-2020	2021-2030
Maximum Potential	219	219	219	219	219
Current Production	126	149	149	149	149

The maximum potential assumes that wilderness will be declassified and that proposed wilderness will not be classified. The contribution of these lands to the allowable sale quantity in the above table is 35.9 million board feet annually. Production values for the other resources are displayed in Table B-11.

3. Maximize Wildlife Habitat Potential (Benchmark j)

The purpose of this benchmark was to analyze the potential for big game habitat based on the availability of forage on winter range. This benchmark established the maximum potential for big game based on forage production. The maximum production potential for wildlife habitat improvement is measured in terms of big-game animal unit months (AUM's) of forage production on winter range and by the summer range quality index (Table B-7).

It is not possible to maximize habitat for all of the species groups concurrently, as management activities that would benefit one group would be detrimental to others.

Big-Game Habitat, Maximum Potential and Continuation of Current Direction (Average Annual)

	1981-1990	1991-2000	2001-2010	2001-2020	2021-2030
Winter Forage, MAUM's					
Maximum	43.0	46.5	47.9	47.8	48.8
Current	20.8	21.2	23.9	24.9	23.6

Table B-7 Average Annual Resource Production Under Maximization of Winter Forage by Time Period

	1981-1990	1991-2000	2001-2010	2011-2020	2021-2030
Potential Livestock Use (MAUM)	14.30	17.50	19.70	20.30	21.10
Potential Developed Recreatio (MRVD)	304.00	304.00	304.00	304.00	304.00
Potential Dispersed Recreation (MRVD)	1437.00	1739.00	1906.00	2063.00	2216.00
Allowable Sale Quantity (MMBF)	159.40	159.40	159.40	159.40	159.40
Water Yield Increase (M ac-ft)	86.70	126.80	154.50	181.10	182.50
Total Water Yield (MM ac-ft)	3.61	3.65	3.68	3.71	3.71
Water That Meets Quality Goals (MM ac-ft)	3.19	3.22	3.24	3.27	3.27
Big-Game Winter Forage (MAUM)	43.00	46.50	47.90	47.80	48.80
Elk Summer Range Quality Index (% of Existing Situation)	131.00	131.00	131.00	131.00	131.00
Elk Population Potential (Number)	12,200	13,100	13,100	13,100	13,100
Fish Population Potential (M Number)	665	663	659	655	652
Roads Needed for Management					
Collector (Miles)	3000 will increase over time to				3110
Local (Miles)	2020 will increase over time to				8728
Visual Quality (% of Sensitive Areas Maintained)	46.00	46.00	46.00	46.00	46.00
Wilderness (M acres)	343.70	343.70	343.70	343.70	343.70
Roadless Area Management (M acres)	135.00	135.00	135.00	135.00	135.00
Total Budget (MM$)	22.11	22.08	19.44	18.10	20.59
Present Net Value = $223,406,000					

In order to attain the maximum production potential, type conversions (timber to browse) and deregulation of timber harvests on approximately 163,266 acres of commercial forest land would be necessary.

Under the maximum potential, the wildlife species requiring old-growth timber and snags would experience a sharp decline in population, and one to three species may be eliminated from the Forest. The riparian marsh species would also decline but to a lesser degree. Populations of other species would remain stable or increase.

4. Maximize Wilderness (Benchmark k)

Wilderness assignment was maximized in order to explore the foregone monetary values and resource outputs by comparison with Benchmark h. This benchmark was used to develop the greatest amount of wilderness by assigning all of the inventoried roadless area to wilderness. The wilderness benchmark represents an attempt to preserve the natural environment to the maximum extent possible on the Forest. Timber management and development activities were confined to the most productive sites presently developed and those not having soils, wildlife, or visual constraints. The maximum potential for wilderness on the Lolo is approximately 44 percent of the Forest, or 915,898 acres. An additional 111,000 acres of scattered small parcels could be maintained as roadless. The combined acreage would provide for a carrying capacity of approximately 2 million primitive and semiprimitive recreation visitor days per year. Other resource outputs are displayed in Table B-11.

5. Minimum Level (Benchmark l)

This benchmark defined the minimum costs of public landownership and the resource outputs which are incidental to Forest management. Benchmark 1 served as a minimum reference point to develop and/or test alternative activities, outputs, and costs which result from Forest Service activities. The purpose of the Minimum Supply Potential is to show the unavoidable costs and benefits that occur as long as the Forest is in public ownership. It reflects the cost of managing just the land resources and the decision to incur these costs remains with the decision to retain the land in Federal ownership and not within the authority of the Forest Service planning process.

Management provides only those benefits that are necessary to protect the life, health, and safety of the incidental user; preventing environmental damage to National Forest and adjoining or downstream lands due to causes in excess of natural successional processes; and administering unavoidable special uses and leases.

The outputs derived under this potential and shown in Table B-8, reflect management practices and associated costs and outputs that protect soil and water resources and prevent permanent impairment of the productivity of the land. The minimum levels, or some portion of them, are included as the base level in every alternative. Examples of management activities include fire suppression, insect and disease control, law enforcement, search and rescue, special use management, and a decreasing level of road and trail maintenance over time. Incidental outputs include dispersed recreation use, water yield, and natural wildlife habitat.

Table B-8 - Average Annual Resource Production Under Minimum Level Benchmark By Time Period

	1982-1985	1986-1990	1991-2000	2001-2010	2011-2020	2021 2030
Livestock Forage (MAUM)	12.8	0.5	0.5	0.5	0.5	0.5
Dispersed Recreation (MRVD)	1050	945	803	682	682	682
Developed Recreation (MRVD)	145	0	0	0	0	0
Allowable Sale Quantity (MMBF)	0	0	0	0	0	0
Water Yield (MM ac-ft)	3.4	3.4	3.4	3.4	3.4	3.4
Elk Net Habitat Productivity (% of Existing)	107	106	100	91	76	60
Elk Population Potential (M animals)	9.9	9.7	9.3	8.4	7.0	5.6
Aquatic Habitat/Fisheries Roads in Riparian (usable miles)	1435	1350	820	530	280	280
Change in Amount of Riparian Roaded from Existing (%)	+5	+2	-38	-60	-79	-79
Sediment Production (M tons)	27	24	22	47	27	22
Fish Population Potential (M fish > 6")	856	856	856	856	856	856
Prescribed Burning (M ac)	0	0	0	0	0	0
Access						
Roads Needed for Management						
Collector (Miles)	2540	0	0	0	0	0
Local (Miles)	1680	0	0	0	0	0
Roads Open for Use (Miles)	1750	1650	1000	650	650	650
Trails Open for Use (Miles)	1500	1000	500	300	300	300
Roadless Managment Areas (M ac)	375	375	375	375	375	375
Wilderness Managment Areas (M ac)	345	345	345	345	345	345
Visual Quality (% of) existing sensitive areas maintained	100	100	100	100	100	100
Total Budget (M-1978 dollars)	3199	2640	2615	2585	2585	2585

Present Net Value = $86,179,660

6. RPA Benchmark

This benchmark was developed to meet the Forest's share of the national RPA objectives as assigned by the Regional Forester, and is referred to as the RPA Alternative. The analysis made for this alternative is to the same level as that for the other alternatives except that the detailed mapping necessary to ground-truth the solution was not completed. In order to meet the RPA timber objective, departure from the base harvest schedule of the Proposed Action was necessary. The magnitude of this departure prevents the Forest from meeting all the RPA objectives simultaneously in one alternative.

Table B-9 shows a comparision of the RPA target levels. It is primarily in the non-market output areas such as wildlife and fish habitat, water quality, and elk populations, that the RPA alternative falls short of meeting the RPA targets for the Forest.

Table B-9 - Comparision of the Resource Planning Act Alternative with the Assigned RPA Targets

	1981-1990	1991-2000	2001-2010	2011-2020	2021-2030
Developed Recreation (thousand recreation visitor days)					
RPA Target	365.2	392.6	374.9	385.9	405.1
RPA Alternative	365.2	392.6	374.9	385.9	405.1
Dispersed Recreation (thousand recreation visitor days)					
RPA Target	1181	1283	1392	1478	1536
RPA Alterantive	1181	1283	1392	1478	1536
Wildlife and Fish Habitat Improvement (thousand acre equivalents)					
RPA Target	20.4	10.2	8.5	6.5	6.3
RPA Alternative	25.1	23.8	36.6	25.4	25.4
Allowable Sale Quantity (million board feet)					
RPA Target	138.7	155	175	193	215
RPA Alternative	137.2	157	175	193	214
Reforestation (acres)					
RPA Target	4373	4020	4020	4420	4930
RPA Alternative	11905	13408	20201	22670	15782
Timber Stand Improvement (acres)					
RPA Target	3802	4790	5060	5440	5940
RPA Alterantive	2624	4805	1328	5870	7660
Grazing Use Potential (Livestock-animal unit months)					
RPA Target	14360	15000	16000	18000	20000
RPA Alterantive	13015	13000	13000	13000	13000

Table B-9 continued

Water Meeting Quality Goals (thousand acre-feet)					
RPA Target	3350	3461	3463	3463	3463
RPA Alterantive	3197	3230	3253	3299	3298
Mineral Leases and permits (Number of cases)					
RPA Target	83	100	110	120	130
RPA Alternative	82	89	89	89	89
Human Resource Programs (number of enrollees)					
RPA Target	45	9	9	11	12
RPA Alternative	45	(- - - - not computed - - - - -)			
Soil & Water Resource Improvement (acres)					
RPA Target	256	250	240	230	220
RPA Alternative	106	66	36	24	24
Total Budget (thousand dollars)					
RPA Target	17956	17800	19400	19500	19600
RPA Alternative	22818	21164	21820	20550	22466
Population Targets to Meet State Fish and Wildlife Goals					
Elk Population (M animals)					
Regional Assignment	12.5	14.6	14.6	14.6	14.6
RPA Alternative	11.1	11.1	11.8	11.8	11.8
Catachable Trout Population (M fish)					
Regional Assignment	200	261	261	261	261
RPA Alternative	893	765	661	638	615

Present Net Value of the RPA Alternative is $152,344,000

7. Constrained Budget/Current Action (Benchmark m)

Benchmark m defined the current level of goods and services with a constrained budget. It results in the most likely amount of goods and services expected in the future with current management direction combined with budget restrictions. Table B-10 displays the resource outputs associated with Benchmark m.

Table B-10: Average Annual Resource Production Under the Constrained Budget/Current Action

	1982-1985	1986-1990	1991-2000	2001-2010	2011-2020	2021-2030
Livestock Forage (MAUM)	13.8	13.8	13.8	13.8	13.8	13.8
Dispersed Recreation (MRVD)	1181	1181	1181	1181	1181	1181
Developed Recreation (MRVD)	365	365	365	365	365	365
Allowable Sale Quantity (MMBF)	118	118	118	118	118	118
Water Yield (MM ac-ft)	3.2	3.2	3.2	3.2	3.2	3.2
Elk Net Habitat Productivity (% of Existing)	100	100	100	100	100	100
Elk Population Potential (M animals)	9.3	9.3	9.3	9.3	9.3	9.3
Aquatic Habitat/Fisheries						
Roads in Riparian (useable miles)	997	997	997	997	997	997
Change in Amount of Riparian Roaded from Existing (%)	+13	+13	+13	+13	+13	+13
Sediment Production (M tons)						
Fish Population Potential (M fish > 6")	905	904	903	901	900	899
Prescribed Burning (M ac)	0	0	0	0	0	0
Access						
Roads Needed for Management						
Collector (Miles)	3323	3323	3323	3323	3323	3323
Local (Miles)	9852	9852	9852	9852	9852	9852
Roads Open for Use (Miles)	2208	2208	2208	2208	2208	2208
Trails Open for Use (Miles)	1825	1825	1825	1825	1825	1825
Roadless Managment Areas (M ac)	179	179	179	179	179	179
Wilderness Managment Areas (M ac)	325	325	325	325	325	325
Visual Quality (% of existing sensitive areas maintained	100	100	100	100	100	100
Total Budget (M-1978 dollars)	11.3	11.3	11.3	11.3	11.3	11.3

Present Net Value = $170,000,000

D. Benchmark Analysis

Benchmark analyses were completed using one of three methodologies: 1) a single run of the FORPLAN model; 2) "rollover" runs using FORPLAN; or 3) calculation outside of the model.

1. Benchmark h was completed using a single run of the model, with the constraints discussed in section C.

2. Benchmark i was completed by first maximizing timber volume and then maximizing PNV with the maximum harvest volume constrained.

3. Benchmark j was completed by maximizing winter forage production and then maximizing PNV with forage constrained.

4. Benchmark k was completed by maximizing PNV, but constraining the allocation of all roadless areas to wilderness.

5. Benchmarks l and m were calculated outside the model.

E. Maximum Total versus Market PNV

Benchmark h establishes the mix of resouce uses and schedule of outputs and costs that maximizes the present net value using both market and non-market assigned values. This benchmark, as is the case with other benchmarks and alternatives (except the Minimum Level 1), provides recreation outputs in excess of the amount that is projected to be utilized. Livestock grazing remains at roughly the same level for all alternatives and benchmarks with the exception of the Minimum Level 1. In terms of allocation and schedule of resources, the Max PNV benchmark h with both market and non-market assigned values is the same as a Max PNV run with only market values. The only difference between the two is the value of the objective function which is $379 million with both market and non-market values, and $79 million with only market outputs valued. Since the output of non-market resources with assigned values exceeds the upper limit of projected demand, production of these resources has no impact on the allocation or schedule in the FORPLAN solution.

F. Summary of Benchmark Results

The results of the benchmark runs are summarized in Table B-11. Information on discounted benefits and costs is presented in Table B-15.

1. Resource Outputs and Effects. Priced outputs in the FORPLAN model were: (a) livestock forage (AUM's), (b) recreation visitor days, and (3) timber. Livestock forage and recreation outputs are generally in excess of demand. These two outputs are therefore only priced up to the demand level. All benchmark runs, except the minimum management (1), provide livestock forage and recreation supply which exceed demands. Levels of timber harvest vary widely.

Nonpriced outputs are produced as a consequence of management for other priced outputs (e.g., sediment results from timber management), and/or in order to meet minimum or maximum levels specified by constraints. Social/economic impacts are calculated as functions of priced outputs -- especially timber harvest volumes.

Table B-11 - Average Annual Total Resource Production by Benchmark

Values are shown for the end of the first decade unless otherwise noted.

Resource Use and Development Factors	Bench h	Bench i	Bench j	Bench k	Bench l	Bench m	RPA
1. Potential Livestock Forage (MAUM's)	15.9	18.1	15.8	11.3	.5	13.8	13.0
Anticipated Livestock Use (MAUM's)							
- 1981	13.8	13.8	13.8	13.8	13.8	11.0	13.8
- 1982 - 1985	13.6	14.7	14.7	14.7	12.8	11.0	13.0
- 1986 - 1990	13.5	15.7	15.7	15.7	0.5	11.0	13.0
3. Recreation Use Potential (M Visitor Days)							
- Type I	122	337	339	651	482	339	416
- Type II	430	620	620	503	284	657	747
- Type III & IV	1082	1816	2284	1084	189	2631	2041
4. Wilderness Management (M Acres)	130	0	344	906	345	325	342
5. Roadless Management (M Acres)	95	132	135	16	375	179	228
6. Timber							
- land suitable for timber Management (M Acres)	1320	1521	1335	979	0	1386	1207
- base harvest schedule (MMBF)							
- decade 1	123	217	147	92	0	111	124
- decade 2	154	217	147	122	0	111	144
- decades 3 thru 12	116-283	217	147	135	0	111	162
- unregulated volume (MMBF)	18	2	13	10	0	7	82-201
- long-term sustained yield (MMBF)	240	244	199	174	0	171	176

Table B-11 Continued

Resource Use and Development Factors	Bench h	Bench i	Bench j	Bench k	Bench l	Bench m	RPA
7. Expected Water Yield Increase							
- 1st decade (% change)	+9	+9	+8	<1	-3	<1	+8
- streams subject to channel disturbance							
- 1st decade (% of change)	56	56	<1	<1	<1	<1	<1

Resource Use and Development Factors	Alt h	Alt i	Alt j	Alt k	Alt l	Alt m	RPA
8. Elk (Big-Game)							
- winter range productivity (% of existing)	83	96	207	64	105	100	112
- summer range productivity (% of existing)	122	157	131	82	110	100	125
- net habitat productivity (% of existing)	88	101	131	69	105	100	119
- elk population potential (M number)	8.2	9.4	12.2	6.4	9.7	9.3	11.1
9. Animal Diversity-land available for maintaintenance of old-growth dependent species (M Acres)	440	519	512	922	720	520	605
10. Aquatic Habitat - fish pop. pot. (M no. >6") in streams	665	640	665	970	856	905	893
11. Minerals-lands with very high mineral potential in roadless management (M Acres)	20.0	15.2	14.5	198.4	38.0	26.2	22.8
12. Prescribed burning scheduled (M Acres)							
- 1st decade	20.7	15.5	22.0	10.9	0.0	11.1	11.3
- peak decade	27.6	23.1	29.1	10.9	0.0	12.0	25.9

Table B-11 Continued

Resource Use and Development Factors	Alt h	Alt i	Alt j	Alt k	Alt l	Alt m	RPA
13. Road Access							
- roads needed for mgmt. 3/	2758	3528	3110	2236	0	3323	2850
- collector (miles)	9260	9870	8728	10656	0	9852	8172
- local (miles)							
- collector roads open for public use (miles)	1440	798	1942	1750	1650	2208	1650
14. Visual Quality (% of inventoried visually sensitive areas maintained)	38	38	46	75	100	90	38
15. Social/Economic 4/							
- changes in area employment (Jobs)	+414	+1693	+856	+35	-2400	+313	+544
- changes in area income ($MM)	+6.2	+25.2	+12.8	+0.9	-42.6	+4.7	+8.1
- payments to countys ($MM)	2.6	4.4	3.2	2.1	0.9	2.5	2.8
16. Total Budget required to implement 4/ ($MM)	19.3	25.4	22.1	14.0	2.6	11.3	22.8
17. Present Net Value 4/ ($MM)	378.8	223.4	223.4	203.2	86.2	170.0	152.3

1/ The constraints applied to alternatives a through g and the proposed action are described in Section VII. ; those applied to the benchmarks are described in appendix B .
2/ The Maximum PNW benchmark level is unconstrained by sustained yield and vary significantly by decade. This benchmark should not be used comparatively with other alternatives to establish potential.
3/ Total System needs, 5 decades
4/ All dollar values are based on 1978 dollars.

VII. Formulation of Alternatives

A. Overview

A Forest plan alternative is a mix of management prescriptions applied in specific amounts and locations to achieve desired management goals and objectives. According to NFMA (36 CFR 219.12f) alternatives must:

-Be within the maximum and minimum resource potential of the Forest to provide a full range of resource outputs and expenditure levels.

-Be formulated to facilitate analysis of opportunity costs, resource use, and environmental tradeoffs among alternatives.

-Be formulated to facilitate evaluation of present net value, benefits, and costs of achieving various outputs and nonpriced benefits.

-Address and respond differently to major public issues, management concerns, and resource opportunities.

-Represent the most cost-efficient combination of management prescriptions to meet the objectives of the alternative.

-State the condition and uses that will result from long-term implementation.

-State what goods and services will be produced, including timing and flow of outputs, and the costs and benefits generated.

-State the resource management standards and guidelines.

-State the purposes of the proposed management direction.

Formulation of alternatives followed the analysis of the management situation. Benchmarks from this analysis defined the range within which alternatives were developed. In addition, an alternative was required which reflects current and future level of goods and services if current management was continued (the no-action alternative a).

Alternative goals and objectives were identified using expected use and demand for resources, supply potential (upper and lower limits), and public issues.

The FORPLAN model was used to determine the most cost efficient combination of outputs and costs for each alternative by reflecting the objective of the alternative through a given set of constraints. Results of the FORPLAN analysis for each alternative were evaluated to assure conformance with laws, policies, and guidelines. Refinements were made to ensure that each alternative could be achieved.

B. Common Constraints

1. Description

The constraints applied to all alternatives resulted from NFMA Regulations (36 CFR 219), Administration policy (Peterson, 1983 May 13), and management goals and objectives.

a. Constraint: Minimum levels of old growth in each habitat group are maintained across the Forest.

Purpose: Help maintain viable wildlife populations on traditional ranges.

Rationale: Populations of old-growth dependent species are especially sensitive to management activities, and are identified as requiring support to maintain viable population levels in accordance with NFMA regulations. These constraints produce minimum acceptable levels.

Trade-off: Old-growth retention reduces PNV by limiting the amount of timber harvest in otherwise efficient timber producing areas.

b. Constraint: Minimum levels of big-game winter range are managed to improve winter forage outputs.

Purpose: Provide winter forage for big-game species to maintain or increase populations.

Rationale: Big game are identified as a special group with elk selected as the indicator species because of its value. Managing for elk provides protection for other big game at least cost.

Trade-off: PNV is reduced as areas are scheduled to meet wildlife forage requirements rather than to optimize PNV.

c. Constraint: Minimum levels of essential grizzly habitat are managed to contribute to recovery of grizzly bear populations.

Purpose: Protect the areas that are most critical for the grizzly bear.

Rationale: In response to the Endangered Species Act of 1973 and NFMA regulations, timber management and access prescriptions are constrained to contribute to recovery of grizzly bear populations.

Trade-off: Timing of activities and types of harvest methods are more restrictive because of consideration for the grizzly which reduces PNV.

d. Constraint: Major travel corridors are allocated to partial retention or retention prescriptions.

Purpose: Provide visual protection to the most sensitive parts of the Forest.

Rationale: Provide basic visual resource protection along major travel routes.

Trade-off: Net timber values in areas with retention and partial retention prescriptions are lower because the cost of more expensive logging systems is not offset by a less expensive road system.

e. Constraint: Limit the amount of clearcut harvesting on the Forest.

Purpose: Model the social concerns regarding widespread use of clearcut harvesting.

Rationale: Affords accomplishment of landscape management objectives and provides protection against damage from excessive runoff.

Trade-off: In most areas on the Forest, clearcutting is the least cost silvicultural system in monetary terms. This constraint will reduce PNV although nonmonetary values will be enhanced.

f. Constraint: Insure an appropriate level of timber inventory at the end of the planning horizon.

Purpose: To assure that harvestable timber will be available in the decades immediately following the end of the planning horizon.

Rationale: The ending timber inventory constraint is set by Forest Service policy. It ensures that the total inventory volume left at conclusion of the planning horizon will equal or exceed the volume that would occur in a regulated forest managed in accordance with the prescriptions selected for regenerated timber. (Basis: Multiple Use-Sustained Yield Act of 1960; NFMA regulations.)

Trade-off: This constraint results in a lower PNV because it precludes liquidation of the mature timber resource during the 12 decade time horizon.

g. Constraint: All alternatives require that harvest flow is nondeclining.

Purpose: Provides for a sustained yield of wood products.

Rationale: Nondeclining flow of timber products from National Forests required by Forest Service policy. (Basis: Multiple Use-Sustained Yield Act of 1960; NFMA regulations.)

Trade-off: Nondeclining yield affects PNV by limiting the harvest in those decades when net timber values are highest.

h. Constraint: Fifteen hundred miles of Forest collector roads are kept open for unrestricted public use.

Purpose: Improve the habitat effectiveness for big game.

Rationale: The miles of road open for unrestricted public use influence the habitat effectiveness of big game and threatened and endangered species. The miles of open road are constrained to accomplish basic wildlife objectives.

Trade-off: Keeping roads open for public use lessens the effectiveness of habitat for big game, which increases the costs (lowers PNV) to achieve specified habitat output levels.

i. Constraint: The budget required to implement the alternative cannot exceed $17.5 million/year, exclusive of road construction costs.

Purpose: Insure that all alternatives are reasonable from a budget perspective.

Rationale: Reflects a reasonable financing level for the Forest and is based on Forest Service projections and historical trend.

Trade-off: The budget constraint was not binding on any of the alternatives, since the required budget remained below the constrained level.

2. Identification of Constraint Level

a. Wildlife

Old Growth and Snag Users - Minimum constraint levels are based on data pertaining to species' utilization of successional stages compiled by Frounfelker (USFS-Regional Office) from the following sources: Peterson's Field Guide; Thomas, et al., personal communications and consultations with ornithologists, mammologists, and other wildlife biologists . Data reviewed and adapted for use on the Lolo Forest by the Interdisciplinary Team. Additional information contained in the planning records.

Big Game/Winter Range - Minimum constraint level developed from the Montana Cooperative Elk-Logging Study and Forest guidelines. Reviewed by the Montana Department of Fish, Wildlife, and Parks, the Regional Office, and the Interdisciplinary Team. Additional information is found in the planning records.

Grizzly Bear - The boundary of the identified grizzly bear habitat is based on delineations by Mealey, Jonkel, and DeMarchi (1977); by Erickson (1974, 1976); and by McMurray and Madel (1980), and reviewed by the interdisciplinary team. Additional information is contained in the planning records.

b. Wilderness

The minimum level constraint includes Congressionally designated wilderness and the areas recommended for wilderness. Maps are on file at the National offices and in the planning records.

c. Visual

The minimum visual constraint was developed by the Interdisciplinary Team and includes the foreground and middleground viewing areas from Federal and State highways. The foreground and middleground are delineated following the direction in Volume 2, Chapter 1 of National Forest Landscape Management, The Visual Management System. Maps of these delineations are included in the planning records.

d. Clearcut Acre Limit

The minimum level for each alternative was developed by the Interdisciplinary Team to reflect the philosophy of the alternative and to afford protection to the soils resource.

e. Ending Inventory

Following Forest Service policy, the ending inventory was determined by an algebraic expression that ensured there would be an ending inventory adequate to continue timber management under each alternative's philosophy. The computations are incorporated in the linear program model.

f. Nondeclining Flow

The nondeclining flow constraint was determined by an algebraic expression developed in response to the definition of base timber harvest schedule (36 CFR 219.3(c)), and incorporated in the linear program model.

g. Open Road

The minimum level constraint was determined by wildlife biologists and the Interdisciplinary Team using the studies conducted under the Montana Cooperative Elk-Logging Study and the work of Jack L. Lyon. Additional information is contained in the planning records.

h. Budget

The budget level, which proved not to be a constraint, was determined by the interdisciplinary team and reflects a maximum level that could reasonably be expected to be authorized by Congress.

3. Alternative Constraints

Alternative a (No action) Constraints

The constraints and procedures used to reflect the "no action" alternative differ from the remaining alternatives. As this alternative reflects extension of current management direction and land allocations, the model was constrained to reflect these decisions. In other words, the existing allocation decisions were fed into the linear program and the model allowed to compute the outputs that would be realized from these predetermined land allocations.

Alternative b Constraints

The principle management goal for alternative b is to maintain the Forest system's balance in as natural an environment as possible, both in the way the Forest looks and in the way it functions. With this philosophy in mind, the following constraints were initiated by the interdisciplinary team for Alternative b.

Outputs

The following output controls placed on the computer model are in addition to the common constraints.

Roadless. A minimum roadless constraint of 375,000 acres was applied in this alternative, which represents approximately 75 percent of the roadless-nonwilderness resource on the Forest. The philosophy of alternative b reflected a concern for a large amount of roadlessness on the Forest. For this reason, the minimum roadless constraint placed on the model was relatively high.

Visual Quality. Controls were placed on the model to insure that the management prescriptions assigned to the analysis areas achieved the recommended visual quality objective. From interdisciplinary team discussions it was assumed that supporters of the alternative b philosophy would have a high concern for visual quality.

Grizzly Bear Habitat. All essential gizzly bear habitat was assigned either the HD (maintain grizzly habitat) or RA (roadless) prescriptions in accordance with the Endangered Species Act and NFMA regulation 219.12g(2). The occupied grizzly habitat was also assigned an HD or RA prescription in order to reflect the wildlife philosophy of alternative b.

Alternative c Constraints

The principle management goal of alternative c is to manage the Forest in an economically efficient manner. The advocates of alternative c equate Forest management with operating a successful business venture. The flow of services from the Forest should meet the national demand levels, while protecting the employment and economic stability of local communities. With this philosophy in

mind, the following constraints were identified by the interdisciplinary team for alternative c.

Outputs

The following output controls placed on the computer model are in addition to the common constraints.

Collector Roads Open. The philosophy of alternative c places emphasis on the maintenance of harvestable populations of deer and elk. The 1,850-mile control figure assigned to alternative c reflects this concern for big-game habitat management by reducing the roads-open mileage presently available on the Forest.

Big-game Winter Forage. The philosophy of alternative c emphasizes maintaining harvestable populations of big game. A big-game winter forage constraint of 17.9 thousand AUM's was placed on the computer model. This forage control affected the management prescription assignments to the winter range areas.

Visual Quality. In order to achieve a viable alternative solution, a "minimum visual" constraint was placed on the computer model. "Minimum visual" was a term developed by the interdisciplinary team to describe the foreground and middleground viewing from highways and other major paved roads. The major roads identified for "minimum visual" consideration were:

Interstate 90 (Missoula, Ninemile, Superior)
U.S. Highway 93 (Missoula)
Montana State Highway 200 (Missoula, Plains, Thompson Falls)
U.S. Highway 12 (Missoula)
Prospect Highway (Thompson Falls)
Montana State Highway 83 (Seeley Lake)
Montana State Highway 461 (Superior, Plains)

Grizzly Bear Habitat. All essential grizzly bear habitat was assigned either the HD (maintain grizzly habitat) or RA (roadless) prescriptions in accordance with the Endangered Species Act and NFMA Regulation 219.12g(2). The occupied grizzly habitat was not constrained in alternative c.

Alternative d Constraints (Proposed Action)

The principle management goals of alternative d are to maintain a balance between uses of the Forest and to manage the Forest in a cost effective manner, measuring environmental as well as dollar costs and benefits. The productivity potential of the environment and the management activities applied to it determine the amount of products available for a sustained period of time. The management or use of any one resource affects the potential to manage or use any other resource. The Forest Service has the responsibility to be "good hosts" to the publics whose lands it administers. With this philosophy in mind, the following output controls were initiated by the interdisciplinary team for the preferred alternative.

Outputs

The following output controls placed on the computer model are in addition to the common constraints.

Collector Roads Open. The 1,883-mile control figure represents a slight decrease from the alternative a (no action) roads-open mileage figure. This reduction reflects the preferred alternative's concern for big-game habitat management.

Big-Game Winter Forage. The preferred alternative places emphasis on maintaining harvestable populations of big game. A big-game winter forage constraint of 27 thousand AUM's was placed on the computer model. This forage control affected the management prescription assignments to the winter range areas.

Roadless. In order to provide recreation opportunity for both motorized and nonmotorized recreation, a minimum of 192,000 acres of roadless allocation was constrained in the computer model. The Forest recreation specialist recommended a minimum roadless allocation of 200,000 acres to maintain a minimum level of ROS Type II recreation opportunities on the Forest. The 4,000-acre difference between these two figures was balanced in alternative d by the assignment of the HB (maintain winter range habitat) management prescription. The Big Hole Face area on the Plains/Thompson Falls District, and the West Side of Dry Creek on the Superior District were both assigned the HB management prescription because treatment is needed to maintain winter range values. However, the management prescription will restrict roading in these areas and, therefore, actually increase the roadless allocation on the Forest.

Visual Quality. The "minimum visual" constraint assigned to alternative c was also utilized in alternative d. "Minimum visual" was a term developed by the interdisciplinary team to describe the foreground and middleground viewing from highways and other major travel routes. The routes identified for "minimum visual" consideration in the preferred alternative were:

Interstate 90 (Missoula, Ninemile, Superior)
U.S. Highway 93 (Missoula)
Montana State Highway 200 (Missoula, Plains, Thompson Falls)
U.S. Highway 12 (Missoula)
Prospect Highway (Thompson Falls)
Montana State Highway 83 (Seeley Lake)
Montana State Highway 461 (Superior, Plains)

Several additional foreground and middleground viewpoints were identified by the individual Ranger Districts for Partial Retention visual quality objectives. The areas recommended include additional trails, lake areas, and portions of roads. A color-coded map of these Partial Retention viewpoints is available in the Lolo National Forest Supervisor's Office.

Grizzly Bear Habitat. All essential grizzly bear habitat was assigned either the HD (maintain grizzly habitat) or other compatible management prescription, such as RA (roadless), in accordance with the Endangered Species Act and NFMA Regulation 219.12g(2).

Alternative e,f, and g Constraints

The principle management goals of alternatives e,f, and g are to examine alternative levels of wilderness. All other constraints are the same as those in alternative d.

Outputs

The following output controls placed on the computer model are in addition to the common constraints.

Big-Game Winter Forage. The philosophy of the alternatives is to maintain timber harvest at or near current levels. The amount of big-game winter forage produced without the constraint, at approximately two-thirds of the existing level in the first decade.

Timber Harvest. All three alternatives attempt to maintain the first decade timber harvest at current levels. Alternative g maximized wilderness and was not able to maintain first decade timber harvest, so the first decade constraint was reduced by 10 percent.

C. Development of Alternatives

1. Alternative a

The purpose of this alternative is to continue current management direction at existing output levels.

The criteria and assumptions underlying the development of this alternative are:

The NFMA and NEPA regulations require inclusion of a "no action" alternative. NFMA regulations define the no action alternative as that condition most likely to exist in the future if current management direction would continue unchanged (36 CFR 219.5(f)(1)(ii)). Projecting the effects of this direction on goods and services provided, the costs and benefits of management, and effects on the Forest environment and people is included. Unit Plans state current management direction for part of the Forest planned since passage of NEPA in 1969. Direction for the remainder of the Forest is under the District Multiple Use Plans, as amended by Part I of the Forest Multiple Use Plan. However, the above management direction has been modified to reflect legal changes (e.g., wilderness designation), the effects of RARE II, and the rapidly growing body of knowledge upon which management is based, which leads to more precise determinations of the land's capability and suitability.

Former planning procedures, while complying with NEPA and encouraging public participation, were not issue driven as is planning under the NFMA. In formulating the no action alternative, only those social variables evident in past planning decisions received attention (in that they set allocations); no emphasis was put on resolving emerging issues that played a major role in developing other alternatives.

2. Alternative b

The purpose of this alternative is to maintain the Forest system's balance in as natural an environment as possible, both in the way the Forest looks and in the way it functions.

The criteria and assumptions underlying the development of this alternative are:

Alternative b confines timber management to the most productive sites. Land is allocated for nonmotorized dispersed recreation opportunities with emphasis on simple, rustic facilities that require minimal development and disturbances of the Forest environment. Motorized access is limited. Land is allocated and managed to provide habitat for viable populations of all wildlife. Livestock grazing would be limited to areas with minimal potential for wildlife and recreation conflicts and water quality impacts. Retention and Partial Retention visual quality objectives are maintained on all identified visually sensitive areas of the Forest. Prescribed fires are used to promote vegetative diversity and enhance wildlife habitat. Labor intensive practices will be encouraged.

3. Alternative c

The purpose of this alternative is to manage the Forest in a manner that approximates running a business. Practices and principles that guide management stem from considering economic efficiency as well as direct and indirect environmental effects.

The criteria and assumptions underlying the development of this alternative are:

Alternative c emphasizes a high level of timber production with investments in cultural practices, primarily on sites with the highest potential rate of return. Expansion of recreation facilities will be confined to areas where demand exceeds supply; little used sites and facilities will be phased out or maintained at minimal service levels. A complete Forest road network will be developed to provide for resource access and cost efficient utilization of Forest products. Big-game habitat will be managed to optimize deer and elk numbers, maintaining harvestable populations. Livestock grazing will be present to the extent that allotments are economically feasible. Visual management objectives will generally not be used as constraints on other resource management activities. An aggressive program of fire suppression will be pursued except where suppression costs exceed values at risk.

4. Alternative d (Proposed Action)

The purpose of this alternative is to manage the Forest resources with recognition that costs and benefits should be measured by changes in the natural environment in addition to dollars, with public service a measurable objective.

The criteria and assumptions underlying the development of this alternative are:

Alternative d provides for increasing the existing volume of timber sold; increases elk habitat productivity over existing conditions; allocates the necessary acreage to provide for semiprimitive recreation opportunities, rounding out the spectrum of recreation opportunities; maintains the Retention and Partial Retention visual quality objectives from important visually sensitive areas of the Forest; including Forest trails; and provides habitat for viable populations of old-growth dependent species in most major drainages on the Forest.

The timber resource will be managed cost efficiently, measuring environmental as well as dollar costs and benefits. Big-game habitat supports an important commodity and provides many recreation opportunities. Other forms of wildlife and fish further serve recreational needs, and function as indicators of the "health" of Forest ecosystems. Riparian areas support water, fish and wildlife habitat, recreation, and visual objectives. Roadless, undeveloped parts of the Forest contribute to wildlife habitat and recreational objectives, and provide benchmarks against which to measure the effects of management.

5. Alternative e

The purpose of this alternative is to emphasize timber outputs and livestock use in the most cost effective manner, while not responding to the wilderness issue.

The criteria and assumptions underlying the development of this alternative are:

Alternative e emphasizes a high level of intensive timber management, increasing the existing volume sold, to maintain an nondeclining flow of sawtimber, intermediate and small-size products. Motorized dispersed recreation opportunities are encouraged, with a low level of construction for developed recreation. A complete Forest road network will be developed to provide for resource access, forest product utilization, and recreation. Forest road closures will be limited to critical big-game habitat areas. Big-game habitat will be managed to optimize deer and elk numbers as they are considered a commodity in this alternative. Livestock grazing is encouraged on National Forest lands. Modification of some visually sensitive areas seen from major trails and roadways are allowed, although the natural appearing landscape is generally retained for most travelers in and adjacent to the Forest.

6. Alternative f

The purpose of this alternative is to emphasize nonmarket uses especially wilderness, roadless recreation, and wildlife diversity and aquatic habitat.

The criteria and assumptions underlying the development of this alternative are:

Timber management is confined to sites that do not have soils, wildlife, or in most cases, visual constraints. Retention and Partial Retention visual quality objectives are maintained in most areas that are visually sensitive, including Forest trails. Habitat is provided for viable populations of old-growth dependent species in most major drainages on the Forest. Riparian areas support water, fish and wildlife habitat, recreation, and visual objectives. Roadless, undeveloped parts of the Forest contribute to wildlife habitat and recreational objectives. Off-road and over-snow vehicle use is confined to areas with open roads and trails with minimal potential for soil, vegetation, and watershed damage, and minimal potential for conflicts with other users.

This alternative was also developed to include roadless areas with particular public interest for wilderness, provide for geographical distribution of wilderness areas across the Forest, and provide for representation of major ecosystems found on the Lolo.

Labor intensive practices and activities are emphasized. Management efficiency is measured in terms of total resource costs and benefits rather than just dollars and benefits.

7. Alternative g

The purpose of this alternative is to maintain or increase market outputs from currently roaded lands and respond to nonmarket issues on roadless areas.

The criteria and assumptions underlying the development of this alternative are:

All inventoried roadless acreage remains unroaded and recommended for wilderness. Timber management is confined to presently developed sites, displaying the least acreage available for timber harvest of all the alternatives. These developed areas represent actual and potential products, and the goal of management should be to maintain productivity by emphasizing management of the resource for which a given part of the Forest is best suited.

D. Summary of Alternative Outputs

Table B-12 summarizes significant resource outputs associated with alternatives a through g, the Max PNV, Min Level and RPA runs.

Table B-12 - Average Annual Total Resource Production by Alternative and Selected Benchmarks 1/

Values are shown for the end of the first decade unless otherwise noted.

RESOURCE USE AND DEVELOPMENT FACTORS	Alt. a	Alt. b	Alt. c	Alt. d	Alt. e	Alt. f	Alt. g	MAX. PNV 2/	MIN. LEVEL	RPA RUN
Potential Livestock Forage (MAUM's)	13.8	15.1	16.8	14.3	12.4	13.3	11.3	15.9	0.5	13.0
Anticipated Livestock Use (MAUM's)										
- 1981	13.8	10.1	10.9	13.8	13.8	13.8	13.8	13.8	13.8	13.8
- 1982 - 1985	13.8	10.6	11.5	14.0	13.1	13.5	12.6	14.7	12.8	13.0
- 1986 - 1990	13.8	11.9	13.0	14.3	12.4	13.3	11.3	15.7	0.5	13.0
Recreation Use Potential (M Visitor Days)										
- Type I	339	531	359	394	454	504	651	122	482	416
- Type II	657	1023	620	724	392	402	503	430	284	747
- Type III & IV	2631	2139	2543	2193	1182	1076	1084	1082	189	2041
Wilderness Management (M acres)	352	352	352	363	146	539	916	130	345	342
Roadless Management	165	379	145	181	300	77	21	95	375	228
Timber										
- Land Suitable for Timber Management (M acres)	1402	1099	1420	1239	1326	1204	956	1320	0	1207
- Base Harvest Schedule (MMBF)										
- decade 1	111	104	130	107	107	107	90	123	0	124
- decade 2	133	125	156	131	140	107	120	154	0	144
- decade 3	133	125	156	131	140	129	120	193	0	162
- decade 4 through 10	133	125	156	131	140	129	126	116-234	82 - 201	
- decade 11-12	133	125	156	177	191	171	174	226-283	153 - 176	
- Unregulated Volume (MMBF)	7	17	9	15	15	15	12	18	0	13
- Long-term Sustained Yield (MMBF)	201	173	211	178	191	171	174	240	0	176

Table B-12 Continued

RESOURCE USE AND DEVELOPMENT FACTORS	Alt. a	Alt. b	Alt. c	Alt. d	Alt. e	Alt. f	Alt. g	MAX. PNV 2/	MIN. LEVEL	RPA RUN
Expected Water Yield Increase										
- Streams Subject to Channel Disturbance										
- 1st decade (% of change)	<1	56	56	<1	<1	<1	<1	56	<1	<1
Elk (Big-Game)										
- Winter Range Productivity (% of existing)	100	75	85	129	73	67	64	83	105	112
- Summer Range Productivity (% of existing)	100	150	135	125	113	107	82	122	110	125
- Net Habitat Productivity (% of existing)	100	80	90	125	78	72	69	88	105	119
- Elk Population Potential (M number)	9.3	7.4	8.3	11.6	7.2	6.7	6.4	8.2	9.7	11.1
Animal Diversity-Land Available for Maintenance of Old-Growth Dependent Species (M acres)	520	853	595	595	483	659	960	440	720	605
Aquatic Habitat										
- Roaded Riparian acres (Mi)	997	864	1012	839	861	781	671	---	750	---
- Change in Amount of Riparian Area Roaded (%)	+13	-2	+15	+4	-2	-11	-24	---	-15	---
- Fish Population Potential (M no. >6") in Streams	905	868	823	964	966	968	970	665	856	893
Minerals-Lands with Very High Mineral Potential in Roadless Management (M acres)	26.2	46.0	31.9	27.9	24.0	102.1	198.4	20.0	38.0	22.8
Prescribed Burning Scheduled (M acres)										
- 1st decade	11.1	9.8	11.8	6.5	8.3	10.6	6.9	13.1	0	11.3
- peak decade	19.7	20.7	22.3	20.1	24.1	20.6	10.9	27.6	0	25.9

Table B-12 Continued

RESOURCE USE AND DEVELOPMENT FACTORS	Alt. a	Alt. b	Alt. c	Alt. d	Alt. e	Alt. f	Alt. g	MAX. PNV 2/	MIN. LEVEL	RPA RUN
Road Access										
- Roads Needed for Mgmt. 3/										
- Collector (miles)	3925	3405	3925	3852	4371	3727	2996	4567	0	4013
- Local (miles)	9250	7164	8667	7257	7217	7136	8112	5901	0	7009
- Collector Roads Open for Public Use (miles)	2208	1500	1850	1883	1584	1425	1750	1440	1650	1650
Visual Quality (% of Inventoried Visually Sensitive Areas Maintained)	90	97	61	74	67	74	75	38	100	38
Social/Economic 4/										
- Changes in Person-Year Area Employment	+316	+246	+527	+344	+358	+330	+35	414	-2400	+544
_ Changes in Area Income ($MM)	+4.7	+3.7	+7.9	+5.6	+5.7	+5.4	+0.9	+6.2	-26	8.1
_ Payments to Counties ($MM)	2.5	2.5	2.8	2.4	2.4	2.4	2.1	2.6	.9	2.8
Total Budget Required to Implement 4/ ($MM)	18.7	19.4	21.6	19.7	16.2	18.1	14.0	19.3	2.6	22.8
Present Net Worth 4/ ($MM)	175.9	173.5	205.6	173.5	221.0	135.0	203.2	378.8	86.2	152.3

1/ The constraints applied to alternatives and benchmarks are described in Appendix B.
2/ The Maximum PNV benchmark level is unconstrained by sustained yield and varied significantly by decade. This benchmark should not be used comparatively with other alternatives to establish potential.
3/ Total System needs, 5 decades.
4/ All dollar values are based on 1978 dollars.
*Present model formulation does not allow for comparable calculations with the alternatives.

VIII. Summary of Effects of Constraints, Benchmarks, and Alternatives

A. Overview

The purpose of estimating and displaying these effects is to provide a means to compare social and economic consequences, outputs of goods and services, and overall protection and enhancement of environmental resources. This comparative analysis is the basis for evaluating alternatives and selecting a preferred alternative which maximizes net public benefit (planning steps 7 and 8). This section focuses on the economic consequences of Forest Service managment for alternatives and benchmarks. The constraints are discussed in detail in Appendix B, Section VII, economic impacts are discussed in Appendix B, Section V, and social and environmental effects are discussed in Chapters II and IV of the FEIS

B. Process for Evaluating Significant Constraints

Managment objectives of benchmarks and alternatives were achieved by constraining FORPLAN as described in Section VII. The efficiency tradeoffs of individual objectives can be determined by comparing the PNV of a FORPLAN solution which meets the objective against one which does not. The change in PNV is a measure of efficiency for the achievement of a specific objective if both solutions have efficient prescriptions, both solutions maximize PNV, and the constraints are cost efficient. The efficiency tradeoff of every objective within an alternative has not been determined because of the prohibitive analysis costs.

A major factor in the economic tradeoff analysis is the order in which the objectives are analyzed. For example, the economic tradeoff of meeting managment objectives A and B can be determined by comparing FORPLAN solutions with various combinations of the two objectives. The change in PNV due to meeting only A may be $5 MM, and the change due to meeting only B may be $11 MM. However, the change due to meeting both A and B will probably be less than $16 MM. In addition, the cost of meeting objective A in one alternative will not necessarily be the same as meeting the same objective in another alternative.

Thus an estimate of the cost associated with a specific constraint is valid only for a given alternative and only with the given set of other constraints in the alternative.

Sensitivity analysis refers to determining the cost of a constraint by varing the level of the constraint of interest while holding all other constraints constant. It is necessary to note the change not only in PNV but other outputs as well to get a clear indication of the constraint cost.

A key indicator of the need for sensitivity analysis was the magnitude of "shadow prices" on constraints reported in the FORPLAN solution output. The shadow price is the marginal cost of a constraint. Depending on the sensitivity of the solution, the marginal cost will change by varying amounts as the constraint is relaxed. During

development of the preferred alternative, shadow prices were monitored and adjustments were made in constraints when it was possible to do so while still maintaining the objectives of the alternative. By observing the magnitude of the shadow prices, it was possible to develop a preferred alternative which provided the largest volume of multiple resource outputs possible while doing so at a reasonable cost. For example, Table B-13 displays the change in shadow prices and output levels for several wildlife outputs as successive runs were made with the FORPLAN model. After the second run to develop the preferred alternative, shadow prices indicated that the marginal cost of winter forage was $1106/AUM, the marginal cost of quality summer elk habitat was $9,045/unit, effective big-game winter range was at 264,500 acres, and collector roads kept open for travel had a marginal cost of $6,370/mile for 1,850 miles. Between run two and run three, the constraint for open collector roads was reduced 11 percent from 1,850 miles to 1,650 miles, and the amount of required elk forage was reduced 10 percent from 300,000 AUM's to 270,000 AUM's. Shadow prices and output levels with these constraints for run three show a significant sensitivity of the solution to these changes. The marginal cost of winter elk forage dropped 87 percent, while the marginal cost of keeping the collector roads open dropped to $0, with a reduction of less that 3 percent in the number of miles kept open. With fewer miles of road kept open for recreation and other uses, the marginal cost of quality summer elk habitat dropped to $0 while the absolute level remained constant. The amount of effective big-game winter range declined, but it was still above the minimal level needed to achieve the goals of the alternative. This is but one example of the interrelationships that exist within the programming model and the methods used to monitor shadow prices to indicate when there was a need to make adjustments in coefficents and constraint levels.

Culmination of Mean Annual Increment. Another sensitivity analysis was done by changing the earliest period of initial final harvest entry on all existing stands to be the same as that on regenerated stands. This implies a reduction in the time necessary for culmination of mean annual increment (CMAI), since NFMA regulations generally prohibit final harvest entry on timber stands prior to CMAI. As expected, Table B-13 shows that shortening the allowable rotation period results in a higher timber harvest, higher present net worth, and larger regulated timber acreage from the same natural resource base.

Alternative Discount Rate. Forest Service Manual direction specifies using an alternative discount rate of 7-1/8 percent on the preferred alternative to test the sensitivity of the solution to the discount rate. Results of this model run (Table B-13) show that the solution, particularly the timber volume, is quite sensitive to the higher discount rate. Timber volume drops significantly as much less acreage is economically suitable for timber harvest. Shadow prices on constraints in both models are roughly equivalent.

Only PNV and timber related values were displayed in Table B-13 because they were most sensitive to the changes made. All sensitivity runs contained the same constraints that assured levels of other outputs consistant with the preferred alternative.

Table B-13 - Comparision of Model Solutions Using Alternative CMAI and Discount Rates

	Run 1 Proposed Action	Alternative CMAI	Alternative Discount Rate 7 1/8%
Present Net Value- $/YR.	250	294	228
1st Decade Timber- MMBF/YR.	119	119	111
3rd-12th Decade Timber-MMBF/YR.	137	148	111
Long Run Sustained Yield-MMBF/YR.	153	190	115
Regulated Acres - M Acres	1196	1236	1045

Table B-14 - Output Levels and Shadow Prices for Selected Constraints Alternative d (Proposed Action)

Output Level / Shadow Price		Run 1	Run 2	Run 3	Run 4	Run 5
Elk Winter Forage	MAUM	300	300	270	270	270
	$/AUM	413	1106	145	41	40
Quality of Summer Elk Habitat	M Units	2632	2632	2632	2632	2632
	$/Unit	6.5	9.0	0	0	0
Effective Big Game Winter Range	M Acres	264	265	244	225	246
	$/Acre	0	0	0	0	0
Collector Roads Open	Miles	1850	1850	1801	1685	1898
	$/Mile	4582	6370	0	0	0

Summary

The magnitude of shadow prices associated with constraints in the FORPLAN model was an important consideration in developing alternatives. Shadow prices were closely monitored during all stages of analysis of the Lolo Forest Plan. True sensitivity analysis, where one input or constraint was changed, and the model run again, was limited to the three cases already presented. Although there are other sensitivity runs that would be interesting, the time and computer cost of $500 to $800 per run limit the number of runs to those which appear to have a high probability of significant impact on the solution. The three runs presented here satisfy this criteria.

C. Trade-offs Among Alternatives

1. Response to Issues

Alternatives were designed to address the major issues as discussed in detail in Appendix A. Table B-15 compares the response of each alternative to the major issues in terms of non-priced benefits.

Table B-15: Alternatives and Benchmarks Ranked by PNV. Selected Priced and Nonpriced Outputs.

	Benchmark	Alternatives							Benchmarks	
	MAX PNV	e	c	g	a	b	d	f	RPA RUN	MIN LVL
Present Net Value (MM$)	379	221 (1)	206 (2)	203 (3)	176 (4)	174 (5)	174 (6)	135 (7)	152	86
Reduction in PNV from Max PNV Benchmark (MM$)	0	158 (7)	173 (6)	176 (5)	203 (4)	205 (3)	205 (3)	244 (1)	227	293
Wilderness Management (M Acre)	130	140 (7)	352 (4)	916 (1)	352 (4)	352 (4)	363 (3)	539 (2)	342	345
Roadless Management (M Acre)	95	300 (2)	145 (5)	21 (7)	165 (4)	379 (1)	181 (3)	77 (6)	228	375
Dispersed Recreation Potential (MRVD's/Yr.)	1634	2028 (6)	3522 (3)	2238 (5)	3627 (2)	3693 (1)	3311 (4)	1987 (7)	3204	955
Total Rds. Needed for Management (Miles)	10468	11588 (3)	12592 (2)	11108 (5)	13175 (1)	10569 (7)	11109 (4)	10863 (6)	11022	0

Table B-15 continued

	Benchmark	Alternatives							Benchmarks	
	MAX PNV	e	c	g	a	b	d	f	RPA RUN	MIN LVL
Change in Area Income Associated with Forest Activities (MM$/Yr.)	+6.2	+5.7 (2)	+7.9 (1)	+0.9 (7)	+4.7 (5)	+3.7 (6)	+5.6 (3)	+5.4 (4)	+8.1	-26.0
Changes in Person-Year Area Employment (Jobs/Yr.)	+414	+358 (2)	+527 (1)	+35 (7)	+316 (5)	+246 (6)	+344 (3)	+330 (4)	+544	-2400
Elk Winter Range Productivity (% of Existing)	83	73 (5)	85 (3)	64 (7)	100 (2)	75 (4)	129 (1)	67 (6)	112	105
Diversity--Land for Old Growth Dependent Species (M Acre)	440	464 (7)	595 (4)	923 (1)	521 (6)	853 (2)	595 (4)	661 (3)	671	720
Aquatic Habitat--Fish Population Potential (M Nos. > 6")	665	966 (3)	823 (7)	970 (1)	905 (5)	868 (6)	964 (4)	968 (2)	893	856
Visual Quality (% of Inventoried Visually Sensitive Areas Maintained)	38	67 (6)	61 (7)	75 (3)	90 (2)	97 (1)	74 (4)	74 (4)	38	100
Land Suitable for Timber (M Acre)	1320	1326 (3)	1420 (1)	956 (7)	1402 (2)	1099 (6)	1239 (4)	1204 (5)	1207	0
Allowable Sale Quantity (MMBF/Yr.)	123	107 (3)	130 (1)	92 (7)	111 (2)	104 (6)	107 (3)	107 (3)	124	0
Long-Term Sustained Yield (MMBF/Yr.)	240	191 (3)	211 (1)	174 (5)	201 (2)	173 (6)	178 (4)	171 (7)	176	0
Annual Budget to Implement (MM$)	19.3	16.2 (6)	21.6 (1)	14.0 (7)	18.7 (4)	19.4 (3)	19.7 (2)	18.1 (5)	22.8	2.6
Annual Returns to Treasury (MM$)	10.4	9.6 (4)	11.2 (1)	8.4 (7)	10.0 (2)	10.0 (2)	9.6 (4)	9.6 (4)	11.2	3.6

( ) Denotes ranking among alternatives for this output.

2. Economic Trade-offs

The following section discusses the major economic tradeoffs among the alternatives and selected benchmarks and issues addressed by each alternative. The alternatives are listed in order of decreasing PNV.

Maximize Present Net Value

The Max PNV Benchmark was used to provide an indication of the tradeoffs necessary to achieve a high level of PNV. This run achieves the highest PNV ($379 million) and associated employment levels at a high environmental cost as reflected by having the lowest level of old-growth and diversity acres, visually sensitive area maintained, and fish population potential of all alternatives and benchmarks. Roadless management is also at very low levels, and only existing wilderness is maintained as wilderness. Wilderness proposals identified in the alternative areas are made available for timber harvest. This and all other alternatives and benchmarks have an ending inventory constraint which assures that timber volume will remain at the end of the analysis period. The first three decades are constrained to limit variation in timber volume between an increase of 25 percent and a decrease of 10 percent. From the 4th decade through the 12th, the variation was limited to a plus or minus change of 25 percent. Allowing this variation, rather than a constrained even flow of timber volume, results in a higher PNV for the benchmark. This is the only alternative or benchmark without the nondeclining even flow constraint. While the long-term sustained yield is the highest at 240 MMBF/year, the combined wilderness and roadless acres are the lowest of any alternative or benchmark and the potential for dispersed recreation is also at the lowest level with the exception of the Minimum Level Benchmark. Compared to the alternatives, the acreage of land determined to be suitable for timber harvest is at the fourth highest level, and the amount of roads needed for management is at the lowest level. Both of these factors indicate that the constraints used to protect multiple resource values and provide for an even flow of timber necessitate an increase in both the amount of land and roads needed for timber management. This alternative ranks second in allowable sale quantity and is surpassed only by Alternative c. The increase in both local income and employment is also one of the highest, ranking only behind Alternative c. Elk forage potential, at 83 percent, is only slightly less than the 85 percent potential of Alternative c, which is the third highest of all alternatives.

Alternative e

Alternative e is a modification of Alternative d and is designed to respond to the issue of roadless management for the inventoried roadless areas. Only legislated wilderness areas are maintained as wilderness. All other roadless areas, including the proposed wilderness areas under Alternative d, are made available for timber harvest. As a result, it is easier to maintain an even flow of timber than it would be under alternatives with greater amounts of wilderness, and a relatively high present net value. Alternative e

has the highest PNV of any alternative. All areas, except those assigned to wilderness in Alternative d, are managed in the same manner. The output differences between Alternatives d and e can be primarily attributed to this difference in wilderness assignment. Both visual quality and elk winter forage are reduced relative to the proposed action with the acreage of roadless and wilderness management at the lowest level of any alternative. The first decade budget at $16.2 million is the second lowest of all alternatives, which is partly a result of the fact that with a larger land area to choose from there is less road construction necessary in the first decade. Total discounted benefits for Alternative e are $1,334 million, the fifth highest of any alternative. Discounted costs are $1,113 million and the net result is that the PNV of $221 million is the highest of any alternative. The change in area income (+$5.7 million/year) and the increase in area employment (+358 jobs/year) are both the second highest of any alternative, lower only than Alternative c which also emphasizes high commodity outputs. Annual returns to the Treasury of $9.0 million are the fourth highest of any alternative. The amount of land available for old-growth dependent species is the lowest of any alternative, and the proportion of visually sensitive areas maintained is the second lowest of any alternative. The potential for dispersed recreation is only slightly higher than Alternative f, which is the lowest of all alternatives. Both the allowable sale quantity and long-term sustained yield are the third highest of the alternatives. Fish habitat potential is at a relatively high level, very close to the highest level achieved in Alternative g. The reduction of PNV from the Max PNV with this alternative is $158 million. Much of the reduction in PNV relative to the Max PNV Benchmark is a result of reduced flexibility in scheduling timber harvests; the Max PNV Benchmark has no nondeclining even flow constraint.

Alternative c

The emphasis of this alternative is high commodity production. The reduction in PNV from the Max PNV ($173 million) is less than all but one other alternative, e, principally because the large land base suitable for timber management allows more flexibility in scheduling harvests. The emphasis on commodity outputs, primarily timber, requires a high budget, the highest of all alternatives at $21.6 million, but the change in area income and employment is also the highest of all alternatives at +$7.9 million/year and +527 jobs/year respectively. Returns to the Treasury, which are highly influenced by timber harvests, are the highest of all alternatives at $11.2 million/year, and the timber output of this alternative is the highest of all alternatives. Higher timber outputs come at the expense of a lowered level of protection for inventoried visually sensitive areas, which is at the lowest level of all alternatives. Elk productivity potential is at 85 percent due to the relatively high level of timber harvest that had an impact on cover/forage ratios. The amount of land available for old-growth dependent species is reduced because of the timber harvest emphasis, resulting in 27 percent of the drainages not having an adequate level of old-growth. Constraints were required to assign the 94,000 acres of

old-growth included in the alternative. In addition, constraints were required as in all alternatives to maintain the visual quality along the major Interstate 90 travel corridor. This results in higher timber harvest costs because of the more expensive methods necessary to reduce visual impacts. The higher timber outputs also require the highest level of road construction costs of all alternatives during the first decade, at $5.2 million/year. All the development activities have an impact on expected fish populations since Alternative c has the lowest fish population potential of all alternatives. Both the first decade allowable sale quantity and the long-term benefits at $1,387 million are the highest of any alternative. The discounted total costs, at $1,181, are the second highest of any alternative, resulting in a PNV of $206 million. Thus, Alternative c is the alternative that shows the effects of extremes, with timber harvest levels, returns to the Treasury, community jobs and income, and PNV on the positive side; budget to implement, required road construction, visual quality, fish population potential, old-growth habitat and elk forage on the negative side. Wilderness acreage is the same as Alternatives a and b and roadless management is the fifth highest of all alternatives. The potential for dispersed recreation is the third highest of the alternatives, 6 percent higher than the potential of the proposed action, Alternative d.

Alternative g

Alternative g is designed to respond to the issue of roadless management for inventoried roadless areas. All inventoried roadless areas are assigned to wilderness management; thus, this alternative has 916,000 acres of wilderness, the highest wilderness acreage of all alternatives or benchmarks. It also has the lowest acreage of roadless management, since almost all roadless areas are assigned to wilderness management. With so much area removed from timber harvest, it was necessary to constrain a floor on timber harvest to maintain a first decade harvest level of 92 MMBF/year, which is approximately equal to current levels. Without this constraint, the alternative would have an adverse impact on community stability. As it now stands, Alternative g has the smallest increase of any alternative in area income at +$0.9 million/year and area jobs at +35/year. Returns to the Treasury at $7.4 million/year are also the lowest of all alternatives. The amount of land available for old-growth habitat is the highest of all alternatives. Fish habitat is well protected in this alternative with such a large area removed from commodity production. The impact of wilderness on elk winter range productivity is evident by productivity at 64 percent of the current level, the lowest of any alternative. It is necessary to have vegetative manipulation in winter range areas in order to increase productivity on winter range. The present value of benefits for this alternative at $1,242 million is 21 percent below Max PNV and the lowest of all alternatives. The present value of costs at $1,039 million is 12 percent below Max PNV and also the lowest of all alternatives. Although benefits and costs are both at low levels, the Present Net Value is third highest after Max PNV at $203 million. The reduction of PNV of this alternative relative to Max

PNV is $176 million. The land base suitable for timber production is the lowest of all alternatives at 956,000 acres and the long-term sustained yield is only 3 MMBF/year higher than the lowest of all alternatives. The proportion of visually sensitive areas maintained is relatively high at 75 percent, the third highest of all alternatives. Both the dispersed recreation potential and the total mileage of roads needed for management are the fifth highest of all alternatives. The relatively low road mileage limits the amount of road-oriented recreation that is available. Similar to Alternative c, this alternative is also an example of the effects of extreme positions on both commodity outputs and nonmarket resource outputs. While this alternative has the highest levels of wilderness acreage, fish population potential, and old-growth habitat of any alternative, it also has the lowest level of elk forage productivity, allowable sale quantity, income and jobs for local communities, and annual budget requirements of $14.0 million/year.

Alternative a

Alternative a continues direction from the existing Forest Multiple-Use Plan (1972) and planning unit plans. It provides a relatively high level of market resources with high visual management and elk winter range productivity. The elk winter range productivity level of this alternative is considered a base from which to compare other alternatives; thus, this alternative is at 100 percent of the current productivity level, the second highest of any alternative. Alternative a assumes that total wilderness will be at 352,000 acres which is the total of both existing and currently proposed wilderness. This level of wilderness is the next to the lowest of all alternatives, and the roadless acreage is 165,000 acres, third from the lowest of all alternatives. Road construction under this alternative is expected to be the third highest of all alternatives in the first decade, $4.6 million/year, and the total mileage needed for management is higher than any other alternative with 13,175 miles. The level of animal unit months (AUM's) for livestock in this, and all other alternatives except Alternative b, will meet expected use in all decades. Potential RVD's are available in excess of projected use in all alternatives, in all decades. The potential for dispersed recreation is the second highest of all alternatives in Alternative a. The reduction in PNV with Alternative a, relative to the Maximum PNV Benchmark, is $203 million. The PNV of this alternative is the fourth highest of the alternatives and is within 2 percent of the PNV for Alternatives b and d, so these three alternative are essentially equal relative to the PNV. Annual returns to the Treasury are the third highest of all alternatives in the first decade at $9.5 million/year. The annual budget required to implement this alternative is $18.7 million, the fourth highest of all alternatives. One objective of this alternative is to protect the visually sensitive areas, and 90 percent of such areas are protected, the second highest percentage of any alternative. Fish population potential is the fifth highest at 905,000. In terms of economic impacts on local communities, this alternative is roughly midway between Alternatives b and d, with additional income estimated at $4.7 million/year and 316 jobs/year above the current level. With

the exception of Alternative c, this alternative has the largest land area assigned to timber management, 1,402 M acres, but the fourth highest level of discounted timber costs. This alternative also has the second highest level of allowable sale quantity and long-term sustained yield of any alternative, meeting the objective of relatively high commodity outputs. The 521,000 acres of land assigned to old-growth dependent species in Alternative a is the lowest level with the exception of Alternative e.

Alternative b

Alternative b has a strong environmental emphasis with both roadless and wilderness acreage increased compared to the Max PNV Benchmark. This alternative has the highest acreage allocated to roadless use of all alternatives. The reduction in PNV of this alternative, at $205 million, is similar to Alternatives a and d. The aquatic habitat benefits from the relatively low level of road building in the riparian zone and timber harvest activities are constrained to meet visual quality objectives. The total mileage of roads needed for management is the least of any alternative, and has the lowest discounted cost of road construction. Ninety-seven percent of the visually sensitive areas is maintained, which is the highest proportion of any alternative. Although the low level of road building in the riparian zone is beneficial to the aquatic habitat, the potential fish population is relatively low because this alternative does not emphasize fish habitat improvement which other alternatives do, such as Alternative d. The total of roadless and wilderness management is at the second highest level of all alternatives and leads to the highest potential for dispersed recreation.

The amount of land suitable for timber harvest is lower than all alternatives with the exception of Alternative g. In addition, both the allowable sale quantity and the long-term sustained yield are at the next to lowest level of all alternatives. Economic impacts are tied primarily to harvest levels and both the $3.7 million/year and 246 additional jobs/year compared to the current situation are at the lowest level with the exception of Alternative g. There is a relatively large unregulated timber component associated with timber harvest that increases returns to the Treasury. Returns to the Treasury are estimated at $9.7 million, which is greater than all alternatives except for Alternative c. The amount of land available for old growth dependent species is higher than all alternatives except for Alternative g. The productivity of elk winter range is relatively low (at 75 percent) because of the reduced level of habitat manipulation through timber harvest and habitat burning. The annual budget to implement this alternative is $19.4 million, approximately the same as Alternative d. Total discounted costs, $1,006 million, are the lowest of any alternative, but the discounted revenues are fifth highest, $1,280 million. The PNV of $174 million puts Alternative b at the same level as both Alternatives a and d. Although the base harvest schedule drops relative to Alternative a, the PNV changes very little, indicating that the timber that is

deleted is not economical. An even timber flow and ending inventory constraint are used in this and all other alternatives.

Alternative d

This alternative is the proposed action for the Forest. The objective of this alternative is to balance commodity production and environmental protection. It provides for output levels of resources such as timber, range, recreation, wildlife and wilderness that support rather than impact base employment, income, and job distribution in local communities. Increasing big-game winter forage is also a significant objective. The reduction in PNV of this alternative relative to Max PNV is $205 million, the same as Alternative b. Unlike Alternative b, this alternative accomplishes a more balanced situation among the various forest resources. Elk winter forage at 129 percent of existing production would have the potential to allow increased elk numbers over the current situation. This is the highest level of elk forage produced by any alternative, which results in higher timber costs on winter range due to higher proportions of shelterwood harvest systems. There is a reduction in the proportion of visually sensitive areas maintained (to 74 percent) which is the fourth highest of the alternatives. Wilderness areas in this alternative include the same areas as Alternatives a, b and c plus an additional 11,670 acres in Lolo Creek and Irish Basin. A total of 363,000 acres is assigned to wilderness management, which is the third highest of all alternatives. Areas assigned to roadless management are selected to provide roadless recreation throughout the Forest. There are an additional 103,000 acres of roadless management compared to the Max PNV, which brings the total roadless management to 181,000 acres, the third highest of the alternatives. Adequate levels of old-growth habitat are maintained in 79 percent of the drainages through the addition of 44,000 acres of old-growth management areas. The total area of old-growth management for this alternative is 595,000 acres. The level of timber harvest and associated road construction is restricted in riparian areas, which leads to both higher costs and higher levels of aquatic habitat protection. Compared to the current action, the level of timber harvest is approximately the same. The total mileage of roads needed for management is the fourth highest of all alternatives and the same as Alternative g. The discounted costs of road construction are approximately the same as Alternatives a and b, which have the lowest road costs of all alternatives. The combination of a moderate level of road construction and riparian habitat improvement projects results in a potential fish population of 964,000 which is only 0.6 percent different than the highest population potential of Alternative g. The change in area income associated with Forest activities is an increase of $5.6 million, only slightly less than Alternative e, which is the second highest of all alternatives. The change in area employment is the third highest of all alternatives as is the level of allowable sale quantity. This alternative is the next to lowest in terms of both total discounted benefits and discounted costs.

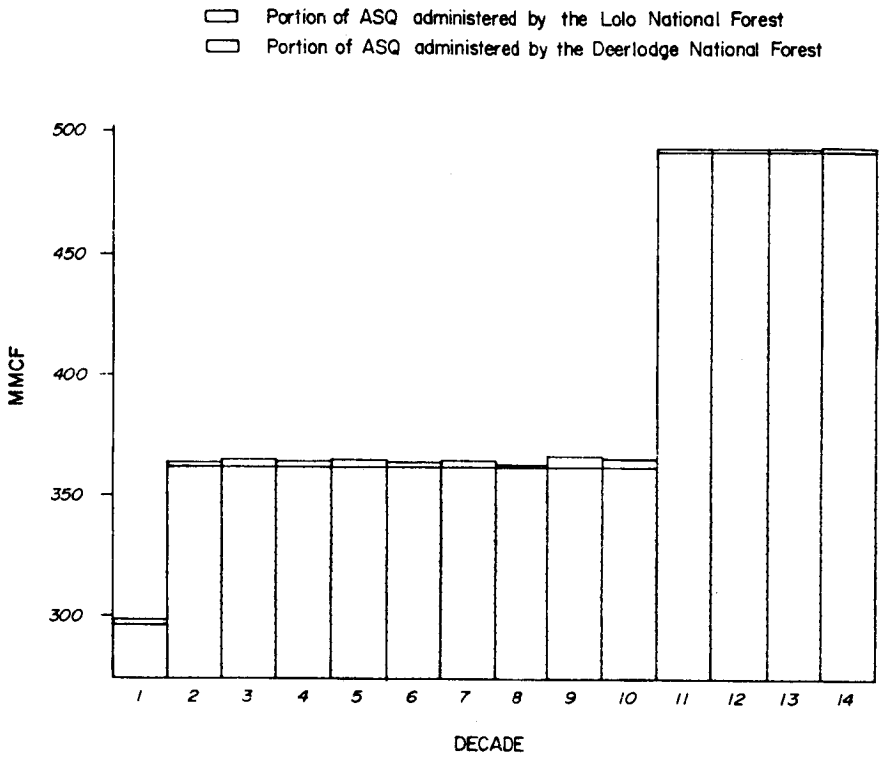
Section 13(a) of the National Forest Management Act of 1976 requires the calculation of sustained yield on individual proclaimed National Forests. This analysis was performed for the proposed action and the details of this analysis are available in the Forest planning records. Table B-16 displays long term sustained yield, suitable acres and allowable sale quantity for the proclaimed Lolo National Forest and that portion of the Lolo administered by the Deerlodge National Forest

Table B-16 - Proclaimed National Forest and Administrative National Forest Long-term Sustained Yield, Suitable Acres (M acres) and Allowable Sale Quantity in Millions of Cubin Feet by Decade.

PROCLAIMED FOREST	ADMIN FOREST	SUITABLE ACRES	LYSY MMCF/DECADE
Lolo	Lolo	1239.0	494.0
Lolo	Deerlodge	9.0	2.4
	SUM	1248.0	496.4

	Lolo Proclaimed National Forest	Portion Administered By the Lolo Forest	Portion Administered By the Deerlodge Forest
Decade 1	299.1	297.0	2.1
2	365.7	364.0	1.7
3	366.4	364.0	2.4
4	365.9	364.0	1.9
5	366.9	364.0	2.9
6	365.8	364.0	1.8
7	366.4	364.0	2.4
8	364.7	364.0	.7
9	368.1	364.0	4.1
10	367.2	364.0	3.2
11	494.5	492.0	2.5
12	494.4	492.0	2.5
13	494.5	492.0	2.5
14	494.8	492.0	2.8
15	494.3	492.0	2.3

FIGURE B-1 ALLOWABLE SALE QUANTITY (ASQ)



The figures displayed for the Lolo proclaimed National Forest appear as departures. This happens because the Lolo proclaimed Forest figures are the sum of the two portions administered by the Deerlodge and Lolo. The suitable acres on each portion were included in separate FORPLAN models. The administrative Lolo Forest allowable sale quantity does not depart from a base sale schedule. The administrative Deerlodge allowable sale quantity was done on a Forest-wide basis that included the Lolo portion and the Deerlodge Forest. The administrative Deerlodge portion of the Lolo was separated from the Deerlodge model and displayed here. When a portion is separated from the total Forest acres modeled, it is expected to show departures. This is because of the multiple use considerations such as soil, water, and wildlife. For example, a large land mass with several drainages will provide more area to distribute timber harvest, maintain a long term sustained yield, and provide for the multiple use considerations. In comparision, a small land mass such as a single drainage limits opportunity to distribute timber harvest or maintain a long-term sustained yield when the limits to provide for soil, water and wildlife are quickly reached. The Lolo portion when separated from the administrative Deerlodge is comparable to a small land mass.

The amount of departure occuring has little significance and is in the public interest when considering the net public benefits of the

proposed actions on the Deerlodge and Lolo administrative Forests. The sum of the two Forest parts of the administrative Deerlodge Forest does not depart from a base harvest schedule and does not exceed long term sustained yield.

RPA Run

This run was an alternative considered but eliminated from further analysis because a departure from even flow was necessary, as well as significant environmental and economic impacts. Outputs were assigned by the Region. The departure necessary to meet the RPA timber objective is expensive in terms of PNV, ranking second from the lowest, although employment is second only to the Max PNV Benchmark. This alternative also has high levels of roadless management and elk winter range productivity. Visual quality protection and aquatic habitat are at very low levels. The reduction in PNV of this run relative to Max PNV is $227 million, greater than any other alternative or benchmark except for Minimum Level. The impacts on the community are higher than any other alternative with an assumed increase in community income of $8.1 million/year and an additional 544 jobs/year relative to the current level of harvest from the Lolo. Only 38 percent of the visually sensitive areas is maintained in this alternative, which is the same as the Max PNV Benchmark. Fish population potential of this alternative is between the levels of Alternatives a and b. The annual budget required to implement is estimated at $22.8 million, which is higher than any alternative or benchmark. The annual returns to the Treasury are almost as high as Alternative c, which is the highest of all alternatives.

Alternative f

Alternative f is a modification of Alternative d that is designed to respond to the issue of roadless management for inventoried roadless areas. The change in assignments between this alternative and Alternative d is in the wilderness acreage. This alternative assigns the inventoried roadless areas to wilderness that were recommended by public interest groups advocating wilderness during the public review process. The total area assigned to wilderness in this alternative is the second highest, at 539,000 acres. Only Alternative g which assigned all roadless areas to wilderness has a larger wilderness component. Alternatives f and g are also similar in that they have the lowest levels of roadless management since a large proportion of roadless areas went to wilderness. In terms of dispersed recreation potential, Alternative f has the lowest level of all alternatives due to the lack of road-orientated opportunities. Total roads needed for management is next to the lowest, but the total discounted costs are the highest of all alternatives at $1,209 million. This indicates that with less land area to choose from for timber harvest, it is necessary to go to more expensive areas if timber volume is maintained close to the current level. In Alternative f the first decade harvest volume is held to at least 107 MMBF/year which is the same as Alternatives d and e. Because changes in area income and jobs associated with forest activities are primarily influenced by

harvest volume, those factors are essentially the same in Alternatives d, e and f, at a level lower only than Alternative c. Productivity of elk winter range at 67 percent is higher only than Alternative g. High levels of roadless and wilderness which preclude habitat manipulation for wildlife have an impact on the winter range potential of these alternatives. The amount of land suitable for timber management is very similar to Alternative d, as is the proportion of visually sensitive areas that is maintained. The amount of land for old-growth dependent species is exceeded only by Alternatives b and g, while the fish population potential is exceeded only by Alternative g. The annual budget required to implement this alternative is relatively low at $18.1 million, the fifth highest, and the annual returns to the Treasury are the same as Alternatives d and e, $9.0 million. Alternative f has a high level of wilderness and many environmental outputs, while at the same time maintaining a timber output level that is exceeded by only two alternatives. However, there is a cost associated with this alternative in that the PNV of $135 million is the lowest of all alternatives, and the reduction in PNV from the Max PNV Benchmark is also the most extreme of all alternatives at $244 million.

Min Level

As the name indicates, this benchmark has the lowest PNV and employment outlook. This benchmark assumes that the Forest would cease all commercial operations, so any output associated with these operations will be very low. Environmental outputs, such as visual quality protection, roadless management, and old-growth species diversity, are at very high levels. The reduction in PNV associated with this benchmark relative to the Max PNV Benchmark is $293 million. The present value of costs to implement is the lowest of all alternatives or benchmarks at $101 million. Once existing contracts expire, there would be no further returns to the Treasury and all community impacts for job and income would be negative relative to the current level since timber harvest and all other income-producing resources would drop to zero.

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TABLE OF CONTENTS

APPENDIX C - ROADLESS AREA EVALUATION

The following is a compilation of descriptions of the roadless areas on the Lolo National Forest. They display the description of the area, the analysis of wilderness suitability, and the impacts of the management emphases. There is a general description of the area, the capability of the attributes, and the potential of the resources found in the area.

The Forest had many different management prescriptions applied to these roadless areas in various alternatives. The management prescriptions are displayed as Management Areas in the Forest Plan. These areas were grouped into seven separate management emphases categories for analysis in the EIS and are shown below.

This grouping will show how the wilderness attributes (natural integrity, natural appearance, opportunities for solitude, and opportunities for primitive recreation) are affected by each management emphasis. The seven emphases are listed below.

Wilderness - Management Area 12 - Includes wilderness management.

Timber/Range - Management Areas 16 and 17 - Includes management activities where roads and timber removal are scheduled. Timber management may not be the only intent of the prescription; wildlife management prescriptions may involve timber harvesting but with constraints. Management prescriptions include timber management, timber/wildlife management, riparian timber management, mule deer and elk management, and whitetail deer management. Includes management activities where investments are made for range management. Management activities such as prescribed burning, watering tanks, and fencing would be evident.

Wildlife - Management Areas 18, 19, 21, 22, 23, 26 - Includes management activities where investments are made for wildlife, such as prescribed burning. Management prescriptions include wildlife management and grizzly bear management (Management Area 20).

Visual - Management Areas 24 and 25 - Includes management activities where roads and timber removal are scheduled. Investments are made to maintain the visual quality objectives identified for the area.

Roadless - Management Areas 6, 10, 11, 28 - Includes management activities where the intent is to preserve the roadless resource. Some roading may occur due to development of mineral resources such as oil and gas. Management prescriptions include dispersed recreation management.

Riparian - Management Areas 13 and 14 - Includes management activities where the intent is to preserve the riparian areas according to policy and guidelines. Management prescriptions include riparian area management.

Miscellaneous - Management Areas 1 through 5, 7 through 9, 15 and 27 - Includes management of administrative sites, recreation sites, and so forth, according to Forest guidelines and policies.

The following tables displayed in this section exhibit Wilderness Allocation for Roadless Areas, Adjustments to the Roadless Inventory, and Management Emphasis by Alternative for Lolo Roadless Areas.

SUMMARY OF MANAGEMENT AREA DESCRIPTION AND MANAGEMENT DIRECTION

MANAGEMENT AREA 1

Description

Management Area 1 consists of scattered parcels of nonforest or noncommercial forest land in Habitat Groups 0 and 6.

Direction

Management Goals:

Maintain near-natural conditions, but allow roads to cross to provide access to other management areas, consistent with protection of basic soil and water values.

The management area is classified as unsuitable for timber production. Management directed toward wildlife habitat, livestock use, dispersed recreation, and these uses will be compatible with the visual quality objective for each parcel comprising this management area.

NOTE: This management direction includes a brief of the most significant management prescriptions. Rules for assigning management prescriptions are in Appendix B. Chapter II of the Forest Plan contains the complete listing of management prescriptions by management area and the management prescriptions and effects of implementation are included in the planning records.

MANAGMENT AREA 2

Description

These sites include Ranger Stations, work centers, lookouts, and other sites throughout the Forest used in the administration of National Forest lands. They will be maintained according to administrative need.

Direction

Management Goals:

Provide sites for facilities necessary for the administration of Lolo National Forest lands.

The management area is classified as unsuitable for timber production and any tree removal will be under administrative use rather than commercial timber sale authority. Most resources would be allowed as long as they do not interfere with administrative functions. Lands within this area will be evaluated for mineral withdrawal.

MANAGEMENT AREA 3

Description

Management Area 3 consists of scattered sites within the Forest boundary that are protected because of historical and/or cultural significance. These include Halfway House, Fort Fizzle, and Mountain House. (The total acreages in this management area will increase as additional areas are identified and approved. There will be a corresponding decrease in the acreage of management areas within which new sites are discovered.)

Direction

Management Goals:

Insure that historic and/or cultural sites are preserved and protected.

The management area is classified as unsuitable for timber management and any tree removal will be under administrative rather than commercial authority. Road construction, livestock grazing, day use activities, and certain recreational developments will be permitted as long as site protection and integrity is assured.

MANAGEMENT AREA 4

Description

Management Area 4 consists of active or recently active mineral extraction and processing operations. (Total acreages in this management area will increase as other mining operations are identified. There will be a corresponding decrease in the acreages of whatever management areas within which these operations occur.)

Direction

Management Goals:

Encourage responsible development of the mineral resource in a manner that recognizes National and local need and provides for economically and environmentally sound exploration, development, production, and reclamation.

Mineral operating plans will meet State and Federal standards. Management practices emphasize visual screening and a cooperative working relationship with the mineral operator. The management area is classified as unsuitable for timber production, but timber salvage may occur as a result of clearing for

mining-related activities. Roads may be permitted based on justified need. Livestock grazing, if consistent with adjacent area management may be allowed.

MANAGEMENT AREA 5

Description

This management area consists of potential transportation and utility corridors that may be identified on the Lolo Forest. Existing and potential rights-of-way will be evaluated to determine if they are compatible with other facilities or uses. If they are determined to be capable of accommodating more than one facility they will be designated a right-of-way corridor.

The management area will consist of the land directly under and adjacent to the facility such as a pipeline or powerline. As these corridors are identified, the acreages within them will be deleted from the management areas they cross.

Direction

Management Goals:

Provide for corridors on Lolo National Forest land appropriate to the facility and provide for other resources in corridor areas.

The management area is classified as unsuitable for timber production. Livestock grazing, dispersed recreation and other activities that do not interfere with operation and maintenance of the facility will be permitted.

MANAGEMENT AREA 6

Description

Management Area 6 contains the proposed Research Natural Areas (RNA) identified on the Lolo National Forest to meet Regional targets for examples of major forest ecosystems in western Montana. To date, seven areas have been selected to maintain undisturbed ecosystems for future observation and study: Plant Creek, Missoula District - warm to cool Douglas-fir site; Pyramid Peak, Seeley Lake District - cool Douglas-fir-subalpine fir site; Barktable Ridge, Plains/Thompson Falls District - moist subalpine fir site; Carlton Ridge, Missoula District - cold, subalpine fir site; Petty Creek, Ninemile District - cool, moist Douglas-fir site; Deep Mountain Bog, Missoula District - bog, wet meadow site; and Council Grove, Missoula District - cottonwood bottom. An eighth area, Squaw Creek, Plains District, has been identified for further consideration as a possible scree site.

An additional three areas may be required to complete the Lolo portion of the Regional targets. (The total acreages in this managment area will increase as additional areas are identified and approved. There will be a corresponding decrease in the acreage of management areas within which new RNA's are located.)

Direction

Management Goals:

Provide areas for nonmanipulative research, observation, and study of undisturbed ecosystems which typify important forest, shrubland, grassland, alpine, aquatic, and geologic types on the Lolo National Forest.

The management area is classified as unsuitable for timber production, road construction, livestock grazing, prescribed burning, and specific improvements may be allowed if they are necessary to meet Research Natural Area objectives. These lands will remain in National Forest ownership with no allowance for permitting special uses. Research activities will be of a nondestructive and nonmanipulative nature.

MANAGEMENT AREA 7

Description

This management area consists of 29 campgrounds and/or picnic areas located throughout the Forest. Development ranges from an essentially natural environment with minimal facilities to a high degree of site modification with comfort and convenience facilities including paved roads, water systems, flush toilets, and boat launches. All of these sites contain sanitation facilities, picnic tables, and fireplaces.

Direction

Management Goals:

Maintain the present range and quality of developed recreation sites to contribute to the public's enjoyment of the National Forest.

Sites will be maintained to protect existing values. Rehabilitation will consider cost effectiveness based on use, location, and ability to provide for a wide range of public needs. Priorities will be based on health, safety, site protection, interpretative potential, and user convenience. Access by the elderly and handipcapped is emphasized. The management area is classified as unsuitable for timber production. Grazing is not permitted; however, tree removal, prescribed burning, and road construction to enhance area values may be allowed.

MANAGEMENT AREA 8

Description

This management area consists of portions of three local ski areas: Marshall, Snowbowl, and Lookout Pass. Areas on National Forest land contain ski runs, ski lifts, and lodges. These areas are under special use permits issued to private operators to provide downhill skiing opportunities for the public.

Direction

Management Goals:

Provide opportunities for developed facilities to accommodate downhill skiing.

Management of these areas will be based on special use permit plans and directives contained in the Forest Service Manual. Additional facility construction will be considered on an individual basis. The management area is classified as unsuitable for timber production. No mineral material permits are allowed. Grazing may be compatible if meeting area management goals.

MANAGEMENT AREA 9

Description

This management area includes parts of the Forest that receive concentrated public use. They are located throughout the Forest near population centers, popular streams and lakes and their associated riparian zones, or along major highways where a wide variety of developed and dispersed recreation opportunities, including trail- and road-related activities, are encouraged. Examples are the Blue Mountain Recreation Area; Pattee Canyon Recreation Area; Valley of the Moon Recreation Area; and the Clearwater Chain of Lakes area, which includes summer home and resort special uses. A proposed expansion of the Lookout Pass Ski Area is in this management area.

Direction

Management Goals:

Provide for a wide variety of dispersed recreation opportunities in a forest setting available to a wide segment of society. Other resource management will be consistent with providing for acceptable levels of water quality, fisheries habitat, and dispersed recreation.

Recreation area planning will emphasize reducing user conflicts while providing increased recreation potential, safety, and site opportunities. The management area is classified as unsuitable for timber production. Wildlife and fish habitat improvements, road access, and acquisition of small parcels of land will be utilized to provide overall improvement of the area. Livestock grazing may be permitted.

MANAGEMENT AREA 10

Description

This management area consists of small, unroaded parcels of land scattered throughout the Forest. They are generally unproductive for timber or have severe physical constraints for management such as steep rocky slopes and/or erosive soils.

Direction

Management Goals:

Maintain these areas in a natural condition to protect basic soil and water resources and provide for activities that meet other resource objectives if they are appropriate without developing the area.

The management area is classified as unsuitable for timber production. There will be no surface management road construction but roads needed for mineral activities may be permitted if adequately justified by approved operating plans. The Retention visual quality objective and activities compatible with maintaining the natural appearances of the landscape are allowed.

MANAGEMENT AREA 11

Description

This management area consists of large, roadless blocks of land distinguished primarily by their natural environmental character. They are located throughout the Forest in a variety of terrain and vegetative habitat types.

A potential botanical area, Shoofly Meadow, is within this area. This area contains Sphagnum riparium, the only place in Montana where this species has been found.

Portions of this management area on the Plains/Thompson Falls and Seeley Lake Ranger Districts are within essential grizzly bear habitat.

Direction

Management Goals:

Provide opportunities for a wide variety of dispersed recreation activities in a near-natural setting and provide for old-growth dependent wildlife species.

The management area is classified as unsuitable for timber production. No developed recreation facilities or surface management road construciton will take place, but mineral activity roads will be constructed if adequately justified through approved operating plans. Livestock grazing, trailhead construction, prescribed burning, insect control and a proposed botanical study area may be permiited if compatible with habitat management for the grizzly bear and the overall management objectives of these areas.

MANAGEMENT AREA 12

Description

This management area consists of the portions of the Forest that have been clssified for wilderness or are recommended for wilderness classification. It contains portions of the Selway Bitterroot and Scapegoat Wildernesses and all of the Welcome Creek and Rattlesnake Wildernesses. Also included are areas

recommended for wilderness during the Forest Planning process: Great Burn, Bob Marshall addition, Sliderock, Selway-Bitterroot addition.

Direction

Management Goals:

Manage existing wildernesses in accordance with the Wilderness Act of 1964. Proposed wilderness areas will be managed to protect their wilderness characteristics pending a decision as to their classification.

Wilderness areas will be managed according to the Wilderness Act of 1964, and implemented through regulations in the Forest Service Manual. Individual wilderness management plans containing directives for fire management, visitor use, livestock grazing, and insect control are available upon request. Generally only the effects of natural processes will be evident. The visual quality objective is preservation. The management area is classified as unsuitble for timber production; timber harvest is not permitted.

MANAGEMENT AREA 13

Description

This management area consists of lakes, lakeside lands, major second-order and larger streams, and the adjoining lands that are dominated by riparian vegetation. The width of the components of this management area varies and is detemrined by riparian vegetation and valley bottom width but is a minimum of 100 feet each side of the associated water body. The area is often nearly flat and is subject to varying degrees of flooding. This management area lies outside of existing grazing allotments.

Direction

Management Goals:

Provide for management of streamside areas to meet water quality standards and protect the stream and its adjacent environment. Provide opportunities to improve water quality, fisheries and wildlife habitat, minimize erosion, and strengthen or protect streambanks through specifically prescribed vegetation manipulation and/or structural means.

Water quality preservation and enhancement is of prime importance along with the maintenance and restoration of natural aquatic habitats, riparian vegetation, channel condition, and fishery values. The acres designated as suitable/unsuitable for timber production will vary by alternative, depending on the philosophy of the alternative. Livestock grazing is prohibited. Generally, road construction will be minimized with those constructed meeting design and location requirements associated with the management of sensitive areas. Dispersed recreation is encouraged with all management activities geared toward meeting the visual quality objectives of retention.

MANAGEMENT AREA 14

Description

This management area contains the same kind of lands as Management Area 13 except that it is within existing livestock grazing allotments.

Direction

Management Goals:

Manage riparian areas in a near-natural condition for their value to wildlife, recreation, forage, fishery and aquatic habitat, and water quality, while maintaining livestock grazing that is compatible with the above resources. Provide opportunities to improve water quality, fisheries and wildlife habitat, minimize erosion, and strengthen or protect streambanks through specifically prescribed vegetation manipulation and/or structural means. The acres designated as suitable/unsuitable for timber production will vary by alterantive, depending on the philosophy of the alternative.

All grazing systems within these areas will consider, through the use of allotment management plans, the multi-resource value of riparian vegetation and the effects of grazing on this vegetation. Concentration of livestock in these areas will be prevented through developed range systems and structural improvements.

MANAGEMENT AREA 15

Description

This management area consists mainly of lands that are Habitat Group type 0 and have slopes less than 40 percent. Most of this management area occurs within livestock grazing allotments and currently provides livestock grazing opportunities.

Direction

Management Goals:

Provide for increasing or at least maintaining available forage for livestock grazing while providing for other resource values.

Livestock improvements and rehabilitation of damaged areas is emphasized. Road construction through the area is allowed. The management area is classified as unsuitable for timber production.

MANAGEMENT AREA 16

Description

Management Area 16 consists of lands of varying physical environments as determined by soil, slope, aspect, elevation, physiographic site, and climatic

factors, which are suitable for timber management. Habitat Groups 1 through 5 with sensitive to nonsensitive soils are represented in this management area.

Within this area are the channels, banks, and lands immediately adjacent to first- and some second-order streams. These streams are recognized as having generally intermittnt flow and the drainage being relatively narrow with a characteristic "V" shape cross section as opposed to the wider bottomed, higher order streams. While they provide limited, if any, fish habitat, they are the headwater streams where high quality water first surfaces to be transmitted through the entire stream system.

Direction

Management Goals:

Provide for healthy stands of timber and optimize timber growing potential. Develop equal distribution of age classes to optimize sustained timber production. Provide for dispersed recreation opportunities, wildlife habitat, and livestock use, and maintain water quality and stream stability.

The management area is classified as suitable for timber production. Commercial forest land will be harvested by prescribed methods based on habitat group, physical site conditions, and silvicultural objectives with managment practices following guidelines for the modification visual quality objective. Roads will be constructed to meet the management objectives of the area with emphasis given to minimizing roads in riparian zones and utilizing design standards that provide low sedimentation hazard and risk to fishery values. Mineral material and livestock grazing permits may be issued. A variety of dispersed recreation activities is permitted.

MANAGEMENT AREA 17

Description

Management Area 17 consists of lands like those in Management Area 16 except that slopes are generally over 60 percent.

Direction

Management Goals:

Provide for healthy stands of timber and optimize timber growing potential and provide for maintenance of soil productivity and other resource values.

The management area is classified as suitable for timber production with managment practices establishing direction for silvidultural practices, road densities, elk summer habitat, winter range, prescribed fire and other resource values. Road construction activities will be directed toward dealing with the steeper slopes not found in Managment Area 16. Construction techniques will provide for low sedimentation and construction held to a minimum in riparian areas. A variety of dispersed recreation activities are permitted and may be supported by construction of trails and trailhead facilities.

MANAGEMENT AREA 18

Description

Management Area 18 consists of lands primarily located at elevations below 5,000 feet on south-facing slopes. These lands are winter range for deer, elk, and bighorn sheep, generally including Habitat Groups 1, 2, and 3 with inclusions of Habitat Group 4. These lands will be managed to attain optimal cover/forage ratios through timber harvest.

Direction

Management Goals:

Optimize forage production and cover for deer, elk, and bighorn sheep on winter range. Considering the needs of big game, maintain healthy stands of timber and optimize timber growing potential.

The management area is classified as suitable for timber production and timber harvest will be employed to improve or maintain big-game winter range with a goal of maintaining a 50:50 cover:forage ratio. Precommercial thinning may be used during the first decade to provide rapid growth for replacement thermal cover or increased forage. Visual quality will follow modification objectives with roadside vegetation maintained especially at established game crossings. Livestock grazing may be acceptable if surplus forage exists beyond the needs of deer, elk, and bighorn sheep. Roads will be constructed for management needs, minimized in the riparian areas, and have a low sediment risk design criteria. Prescribed burning will be used to maintain or enhance winter range values and dispose of slash. Dispersed recreation and riparian habitat improvements are permitted.

MANAGEMENT AREA 19

Description

The management area consists of lands primarily located at elevations below 5,000 feet on south-facing slopes. These generally include Habitat Groups 0, 1, 2, and 3 with inclusions of Habitat Group 4, and are identified as being important as deer, elk, and sheep winter range.

Direction

Management Goals:

Optimize deer, elk, and sheep winter range and provide opportunities for dispersed recreation.

The management area is classified as unsuitable for timber production. No road construction for surface management objectives. Roads may pass through to achieve management objectives in other areas. Practices will be compatible with the visual quality objective for each parcel comprising this management area. Maintenance of roadside vegetation, prescribed burning, and dispersed

nonmotorized recreation are encouraged. Livestock may graze if surplus forage exists. All prescriptions will be compatible with the needs of the grizzly bear.

MANAGEMENT AREA 20

Description

Management Area 20 consists of a mixture of mid- to high-elevation lands on the Seeley Lake and Plains/Thompson Falls Ranger Districts. Specific components include avalanche chutes, wet meadows, sidehill parks, stream bottoms, grassy balds, and criques. Habitat Groups 4, 5, and 6 are found on this management area. These areas provide critical summer and winter grizzly bear habitat and represent the Forest Service designated essential grizzly habitat.

Direction

Management Goals:

Provide sufficient habitat to encourage an increasing grizzly bear population trend in this area and maintain healthy stands of timber and optimize timber growing potential consistent with grizzly bear habitat management requirements.

The commercial forest land is classified as suitable for timber production; noncommercial forest land (subalpine fir/woodrush habitat type) is classified as unsuitable. Retention, through modified harvest prescriptions, of optimal cover/feeding area relationships near preferred feeding areas. Minimum levels of road construction with the timing of necessary management activity coordinatd with bear use patterns. Dispersed recreation use is permitted if not detrimental to bear populations. Grazing is not permitted.

MANAGEMENT AREA 21

Description

This management area consists of a variety of forested lands representing all elevations, aspects, habitat groups, and growing site conditions. They are located throughout the Forest in such a way as to evenly distribute old-age stands of timber for wildlife species dependent on old growth for habitat. Wildlife species are represented by species such as the pileated woodpecker, pine marten, hermit thrust, and goshawk.

Direction

Management Goals:

Provide for old-growth succession in timber stands with an optimum arrangement of habitat components to maintain viable populations of old-growth species. Provide opportunities for nonmotorized dispersed recreation.

The acres designated as suitable/unsuitable for timber production will vary by alternative, depending on the philosophy of the alternative; timber harvest will

be employed to improve or maintain old-growth habitat. Road construction activities will not be permitted between March 15 and July 15. Grazing, prescribed burning, and dispersed recreation are permitted.

MANAGEMENT AREA 22

Description

Management Area 22 consists of lands located primarily at elevations below 5,000 feet on south-facing slopes with high visual sensitivity. Habitat Groups 2, 3, and 4 are represented. These lands are adjacent to or visible from major roads, trails, communities, and other high-use areas and are inventoried as big-game winter range.

Direction

Management Goals:

Achieve the visual quality objective of Retention. Provide optimal cover:forage ratios for deer, elk, and bighorn sheep winter range within the constraints imposed by the VQO, and maintain healthy stands of timber within the constraints imposed by the VQO and the needs of big game.

The management area is classified as suitable for timber production; timber harvest will be employed to improve or maintain big-game winter range values with the area managed to meet a visual quality objective of Retention. Maintenance of roadside vegetation, prescribed burning, and minimum levels of road construction are encouraged. Livestock grazing is permitted after big-game forage needs have been fully met.

MANAGEMENT AREA 23

Description

Management Area 23 consists of lands located primarily at elevations below 5,000 feet on south-facing slopes with medium visual sensitivity. Habitat Groups 2, 3, and 4 are represented. These lands are visible from or adjacent to major roads, trails, communities, and other high-use areas and are inventoried as big-game winter range.

Direction

Management Goals:

Achieve the visual quality objective of Partial Retention. Within the constraints of the VQO, provide optional cover/forage ratios for deer, elk, and bighorn sheep winter range and maintain healthy stands of timber within the constraints imposed by goals 1 and 2.

The management area is classified as suitable for timber production; timber harvest will be employed to improve or maintain big-game winter range. Commercial forest land is classified as suitable with the area managed to meet a

visual quality objective of partial retention. Rehabilitation measures will be taken where the visual objectives are not being met. Road construction will be at a minimum standard to meet the objectives of the area. Prescribed burning and dispersed recreation are permitted with livestock grazing allowed after big-game needs are fully met.

MANAGEMENT AREA 24

Description

Management Area 24 consists of lands with high visual sensitivity and which are available for varying degrees of timber management. These lands have a range of physical environments as determined by soil, slope, aspect, elevation, physiographic site, and climatic factors. Habitat Groups 1 through 5 with sensitive to nonsensitive soils are represented in these lands which are visible from or adjacent to major roads, trails, communities, and other high use areas.

Direction

Management Goals:

Achieve the visual quality objective of Retention. Provide for healthy stands of timber and optimize timber growing potential within the constraints imposed by the VQO, while providing for dispersed recreation use opportunities, wildlife habitat, and livestock use.

The management area is classified as suitable for timber production; commercial timber harvest with road construction techniques that provide low sedimentation hazard are prescribed. Wildlife habitat, livestock use, dispersed recreation, and prescribed burning practices will be compatible with Retention visual quality objectives.

MANAGEMENT AREA 25

Description

Management Area 25 consists of lands with a moderate degree of visual sensitivity and which are available for varying degrees of timber management. These lands have a range of physical environments as determined by soil, slope, aspect, elevation, physiographic site, and climatic factors. Habitat Groups 1 through 5 with sensitive to nonsensitive soils are represented in these lands which are located along major roads, trails, communities, other high use areas, and a small number of less sensitive viewpoints.

Direction

Management Goals:

Achieve the visual quality objective of Partial Retention. Provide for healthy stands of timber and optimize timber growing potential within the constraints imposed by the VQO, while providing for dispersed recreation opportunities, wildlife habitat, and livestock use.

The management area is classified as suitable for timber production; timber harvest and partial retention visual quality objectives are emphasized with road construction activities designed to provide low sediment hazard. A variety of dispersed recreation activities are permitted as is prescribed burning that meets established visual quality objectives.

MANAGEMENT AREA 26

Description

This management area consists of relatively small parcels of the Forest at mid- to high-elevations that receive concentrated elk use. These lands are the important summer range units for elk, generally including cirque basins and forested situations containing desirable mixes of riparian habitats, moist to wet meadows, heavy cover, and foraging areas in close proximity.

Some of the specific features found within this management area include wallows, trampled areas, mineral licks, and important forage units in close proximity that tend to concentrate animals in a small area. Generally, these areas are on gentle topography in the heads of drainages or other mesic areas. The Habitat Groups generally represented include 0, 3, 4, 5, and 6.

A potential bonatical area, Mary's Frog Pond, is within this area. It contains Sphagnum mendocinum and other species very uncommon in Montana.

Direction

Management Goals:

Manage these areas to maintain or improve elk habitat through specifically prescribed vegetation manipulation and provide for other resource objectives if they are appropriate with little or no development of the area.

The acres designated as suitable/unsuitable for timber production will vary by alternative, depending on the philosophy of the alternative. Road construction may be permitted to meet area wildlife habitat objectives or to provide access to adjacent areas. Maintenance of roadside screening vegetation, prescribed burning, and nonmotorized recreation are encouraged. Livestock may graze if surplus forage exists. Management pracatices will meet modification visual quality objectives except in areas specifically defined as sensitive.

MANAGEMENT AREA 27

Description

Management Area 27 consists of scattered parcels of commercial forest land in Habitat Groups 2, 3, 4, and 5, and are generally steep and rocky. Timber management is not economically or environmentally feasible at this time due to the physical features of the parcels. Other resource values such as old-growth habitat exist, but are not needed to meet resource production goals.

Direction

Management Goals:

Provide for soil and water resource protection and allow for timber management opportunities when economically feasible or when practices are developed that provide for environmentally acceptable activities.

The management area is classified as unsuitable for timber production until the above conditions are met. Road construction may be permitted to access other management areas. Interim management will be directed toward maintaining the naturally occurring resource values.

MANAGEMENT AREA 28

Description

This management area consists of the nonwilderness portion of the Rattlesnake National Recreation Area which was established by the 96th Congress under Senate Bill S. 3072 on October 1, 1980. The area includes the land extending from the city limits of Missoula, north to Stuart Peak and Mineral Peak and includes a travel corridor extending up Rattlesnake Creek to the vicinity of the mouth of Wrangle Creek. In addition to approximately 14,146 acres of National Forest System lands, the area contains an additional 13,854 acres on intermingled private lands belonging to the Montana Power Co., Plum Creek Timber Company, Inc., State of Montana, and several private individuals. These lands are to be acquired and placed in the National Forest System by October 19, 1983.

The area is important for its value as a portion of Missoula's municipal watershed, a dispersed recreation area, an environmental education area, and habitat for a wide variety of wildlife.

Management prescriptions for the wilderness portion of the Rattlesnake National Recreation Area is contained under Management Area 12.

Direction

Mangement Goals:

Provide for a wide variety of dispersed recreation opportunities in a forest setting available to a wide segment of society and acceptable levels of water quality in the municipal watershed.

Provide opportunities for environmental education and for management of wildlife habitat, historical, scientific, ecological, and other values in a manner consistent with the recreational objectives.

While comprehensive management direction is being developed for the Rattlesnake National Recreation Area, interim direction will be supplied through the Forest Plan. The management area is classified as unsuitable for timber production. Minimum disturbance levels of recreational access, trail improvements, and limited tree removal will be allowed to maintain or improve recreational values. The location, timing, and extent of management activities will not conflict with the recreational, wildlife, or municipal watershed values of the area. Livestock grazing is limited to recreation and administrative packstock. Prescribed fire may be used to reduce hazards and improve big-game forage.

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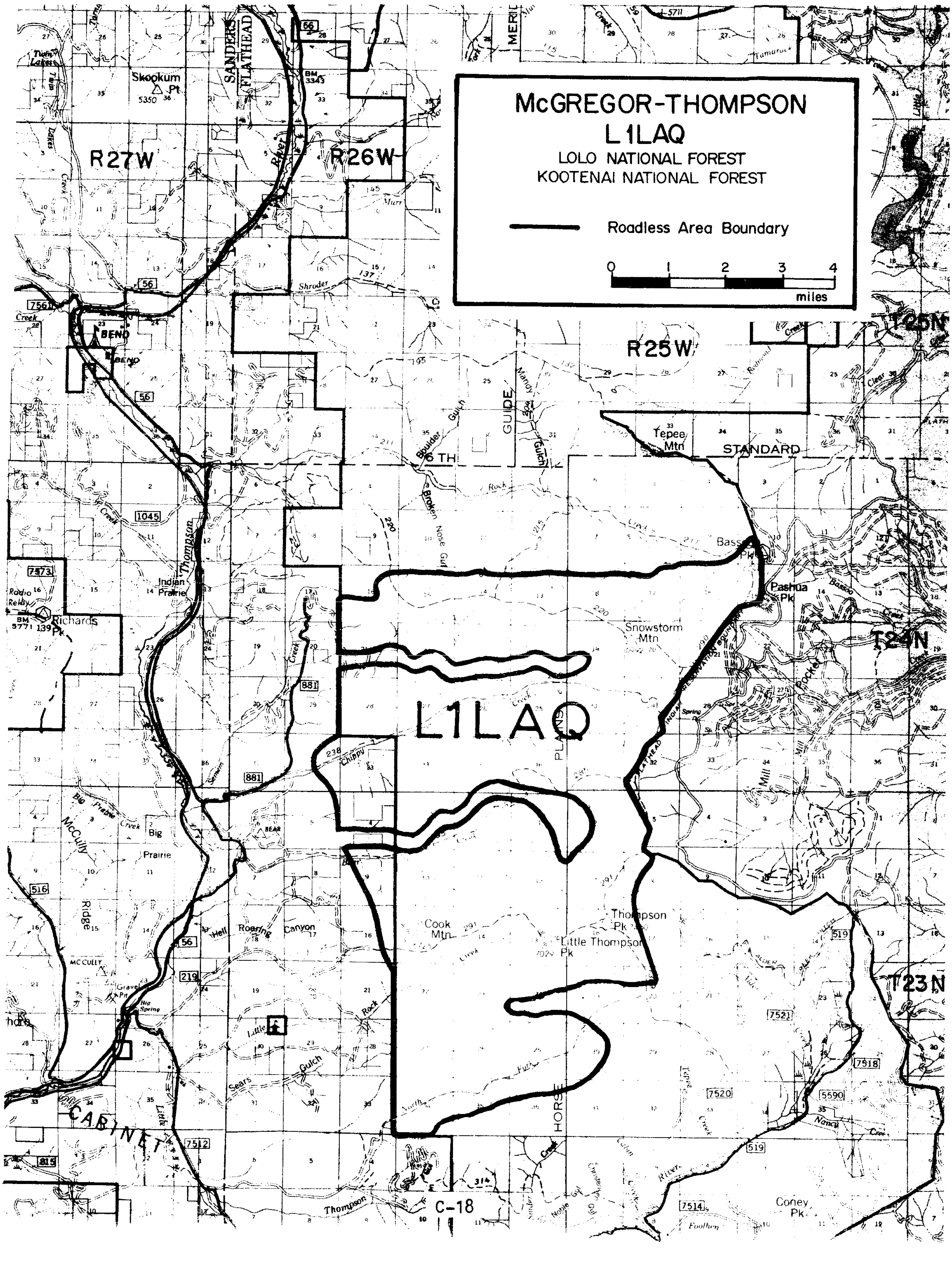
McGREGOR-THOMPSON
L1LAQ
LOLO NATIONAL FOREST
KOOTENAI NATIONAL FOREST
Roadless Area Boundary
0 1 2 3 4
miles
R27W
R26W
R25W
T25N
T24N
T23N
L1LAQ
Skookum Pt
Tepee Mtn
Snowstorm Mtn
Bassoo Pk
Pashua Pk
Richards Pk
Indian Prairie
Big Prairie
Cook Mtn
Thompson Pk
Little Thompson Pk
Coney Pk
STANDARD
CABINET
Hell Roaring Canyon
McCully Ridge
Thompson
C-18

McGREGOR-THOMPSON #L1LAQ

Acreage:

Gross Acres: 30,300
Net Acres: 27,850

I. Description

A. Location and Access

The original RARE II area was 76,000 gross acres and 54,000 net acres. Road and timber sale activity through Fiscal Year 1982 have reduced the area by 41,960 gross acres and 22,630 net acres. An additional 2,600 gross and net acres were deleted as a result of road construction during Fiscal Year 1983 and 1,140 gross and 920 net acres will be deleted during Fiscal Year 1984.

This roadless study unit lies approximately 20 miles north of the town of Plains. Much of the eastern side is adjacent to the Flathead Indian Reservation. From this side, a complex of logging roads provide access near or up to the boundary. Several logging roads access this area from the west. One follows the Big Rock Creek-Chippy Creek Divide and another accesses the south ridge of the North Fork of Thompson River. There is also a total of 33 miles of Forest System Trails in the McGregor-Thompson Roadless Area. (Refer to Table C-4 for proximity information).

B. General Description

A north-to-northeast trending ridge line forms the eastern margin of this area. From it, a series of streams flow to the west down valleys which cut deeply into the surrounding rock strata. As a result, the McGregor-Thompson unit consists of generally parallel east-west divides and valleys connected on the east by a single ridgeline, much like teeth on a comb.

Precambrian Age Ravalli Group rocks occur within the McGregor-Thompson Roadless Area. Argillites and quartzites comprise the more dominant rock types. Some of the larger valleys contain thick deposits of Tertiary and Quaternary alluvial sediments.

Most of this area is classified as commercial timber land. The most common habitat types are subalpine fir/beargrass, subalpine fir/menziesia, and Douglas-fir/blue huckleberry with a wide variety of other habitat types represented in small amounts.

Oil and gas interest is high in the region. About 20 miles to the north, a wildcat oil well is currently being drilled. As a result of this activity, the entire roadless area is under lease.

The McGregor-Thompson Roadless Area provides habitat for a variety of game and nongame wildlife species commonly found in western Montana including moose, marten, pileated woodpecker, and dark eyed junco. Game fish include rainbow, cutthroat, and eastern brook trout. These game fish species are popular with sport fishing recreationists.

Currently, the most popular activities include big game hunting, stream fishing, viewing, camping, berry picking, and ski touring.

II. Analysis of Wilderness Suitability

A. Capability

1. Wilderness Attributes

a. Naturalness - Generally, the area is undisturbed within its boundaries. There are, however, seven helispots, each with a small amount of disturbance. One area of timber harvest is separable; however, roads for other timber harvests are under construction in the unit. Because of the ongoing road construction, the natural appearance of the unit is deemed moderate.

Major fires which occured in the area in the early 1900's are considered part of the natural process and result in the present vast expanses of lodgepole pine stands. These stands contain an active infestation of mountain pine beetle which accounts for the continuing road building activity. The area contains checkerboard ownership with Federal lands and Plum Creek Timber Company lands and both landowners are trying to salvage the infested timber.

While most of the animal species native to the area are found in this roadless unit, none is particularly dependent on wilderness for viability or survival. The area does not contain either summer or winter range for big game.

Air and water quality are considered good in the area.

Grazing has impacted a small portion of the ecological process and natural landscape in the area. Three percent of the Little Thompson Grazing Allotment is contained within the unit.

b. Inspirational Values - The topography of the area with deeply cut valleys radiating from a single ridge provide the hiking visitor with interesting views of strata and rock formations.

c. Recreational Values - Because of road building, topographic screening is lessened as is the distance from outside activities. Also, solitude is not outstanding. Road activity on the ridges diminish these resources.

Roads which are being built into the area are providing easier visitor access to the core of the unit, but also decrease the possibilities for solitude. There are 23.5 miles of fishery

streams and 22 acres of fishery habitat available to the recreationist.

The 33 miles of trail in the area provide the day-hiker or the backpacker a variety of hiking experiences.

d. Cultural/Historical Values - No historic or prehistoric sites have been identified in the area.

e. Educational/Scientific Values-Uniqueness - There are no known endangered species of animals or plants in the area. Neither is the area recognized as having unique vegetative communities to be used as benchmarks or unusual or scarce ecosystem representatives. The ecosystems in this area are well represented in existing wildernesses. Gene pools in the unit do not differ appreciably from the surrounding area.

2. Manageability and Boundaries

Logging roads in the northern and central portions of this study unit extend well into the interior and form intrusions. Another road cuts off a large portion of the southeast corner. The presence of these roads, while affording much greater vehicle access, also serve to lessen the ability to manage for wilderness values. Most of the southern and western boundaries do not follow easily descernible features and will be hard to define on the ground. Private land along the western margin will need to be excluded from the unit.

B. Other Resources Found in the Area

1. Potential

The area provides habitat for a wide variety of game and nongame wildlife species commonly found in western Montana (see Appendix B-2, Proposed Lolo Forest Plan, RDEIS). Most of the streams are tributary to the Thompson River which has State-wide significance as a fishery. There are about 514 riparian acres in the unit.

All of the area has been leased for oil and gas. All or parts of eight different leases are involved. No mining claims are located within the roadless unit. No acres of high to very high mineral potential lands are known to occur in the area.

The McGregor-Thompson Roadless Area contains 1,180 acres classed as nonstocked, 395 acres of seedlings and saplings, 1,334 acres of poles, 5,829 acres of immature sawtimber, 18,700 acres of mature sawtimber. Of this, 22,976 acres are classified as commercial timber land. The suitable lands presently support a standing timber inventory of 181.5 MMBF with a long-term sustained yield in the area of 5.1 MMBF annually.

About three percent of the Little Thompson Range Allotment of 320 acres is included within the area. The last permitted use of the

allotment was in 1983 with 118 cow/calf pairs for 413 AM's. The 320 acres included some acres which are unsuitable for grazing.

The area is currently considered 100 percent semiprimitive nonmotorized.

2. Resource Summary

L1LAQ - McGreggor-Thompson Roadless Area

Category		
Gross Acres	Acres	30300
Net Acres	Acres	27850
Recreation		
Primitive	RVD's	0
Semi. Nonm.	RVD's	27850
Semi. Motor.	RVD's	0
Rd. Natural	RVD's	0
Range		
Existing Obligated		
Suitable	Acres	0
Allotments	No.	0
AUMs	AUMs	0
Existing Vacant		
Suitable	Acres	0
Allotments	No.	0
AUMs	AUMs	0
Proposed		
Suitable	Acres	0
AUMs	AUMs	0
Timber		
Ten.Suitable	Acres	22976
Stand. Vol.	MMBF	181.5
Corridors		
Exist. & Pot.	No.	0
Wildlife - T&E		
Grizzly Bear		
Hab. Sit. 1	Acres	0
Hab. Sit. 2	Acres	0
Hab. Sit. 3	Acres	0
Bald Eagle Hab.	Acres	0
Gray Wolf Hab.	Acres	0
Peregrin Fal. Hab.	Acres	0
Wildlife - Big Game		
Summer Habitat	Acres	0
Winter Habitat	Acres	0
Significant Fisheries		
Stream Miles	Miles	23.5
Stream Habitat	Hab. Ac	22.8
Lakes	No.	0
Lake Habitat	Hab. Ac	0
Water Develop.		
Existing	No.	0
Hardrock Potential		
Very High	Acres	0
High	Acres	0
Moderate	Acres	17941
Low	Acres	9909
Mining Claims	No.	0
Oil and Gas Potential		
Very High	Acres	0
High	Acres	0
Moderate	Acres	27850
Low	Acres	0
Oil & Gas Leases	No.	8
Leased Area	Acres	27850

3. Management Considerations

Present lodgepole pine stands are susceptible and infested by the mountain pine beetle. There are also 2,450 acres of non-Federal lands.

4. Public Involvement

During the public reveiw period for the DEIS, there were few additional comments on the Macgregor-Thompson Area. Several comments favored wilderness designation for all existing roadless areas. Other responders opposed further additions to the wilderness system.

III. Impacts

Designation: Wilderness
Management Emphasis: Wilderness

McGregor Thompson is allocated to wilderness in Alternative g but this is the only alternative that the total area or any portion is allocated to wilderness.

Wilderness allocation can enhance the area's wilderness attributes since there are existing uses and facilities not usually associated with wilderness allocation. Any existing motorized activities could be eliminated.

The approximately 23,000 acres of land tentatively suitable for timber production would not be available. About 181 MMBF including a significant area of lodgepole pine which may be infested by mountain pine beetle would not be available for timber harvest.

Big-game or elk management would not change much since the area does not contain significant summer or winter habitat. Cover/forage relationships should not change much over time except as influenced by wildfire control.

Under wilderness allocation recreation use would continue to be dominated by hunting and hiking.

The nonpriced effects are:

- Visual quality would be preserved.
- Wilderness area would increase.
- Diversity would tend toward old-growth without wildfire but could be improved depending on the control policy.
- Water quality and fisheries would be maintained at their present natural levels.
- Local employment may decrease slightly due to the unavailability of timber and minerals.

Economic effects would be reflected in the area which represents less than 1 percent of the land base suitable for timber. The loss in timber volume can be mitigated by practicing intensive forestry elsewhere. Other resource values would be retained, precluding mineral exploration. Recreation use would not change.

Designation: Nonwilderness
Management Emphasis: Timber/Range

All alternatives except g allocate some of this area to timber prescriptions. Alternatives a through f allocate from a trace to 65 percent of the area to these prescriptions.

Allocation to either prescription will forego the possibility of wilderness allocation by the end of the first decade. The infested lodgepole pine stands will continue to be accessed with roads and harvest will be scheduled up to the limit of constraints for these prescriptions.

The nonpriced effects are:

- Visual quality would be at its lowest level, Maximum Modification.
- Semiprimitive recreation potential would be foregone by the end of the first decade.
- Wilderness characteristics would be compromised in a short time.
- Diversity would tend towards younger age classes with minimum old growth.
- Water quality and fisheries affects would be mitigated.
- The greatest number of jobs, mainly in the wood products industry, would be provided.

Under this emphasis, social effects would be reflected in the recreationists' loss of the roadless characteristic. Salvaging the infested lodgepole pine is probably the most significant economic factor.

Designation: Nonwilderness
Management Emphasis: Wildlife

The main emphasis in this prescription is oldgrowth. Alternative a allocates 4 percent, alternatives b and c provide a trace amount of acres for this prescription, and Alternatives d, e, and f allocate about 10 percent of the area to this emphasis.

Old-growth preservation in this area would be difficult in view of the active mountain pine beetle infestation. Whether or not the area is entered for salvage harvesting, the stands will deteriorate as a result of the beetle kill. There are no identified acres of winter or summer wildlife habitat in the area. Effects do not differ appreciably from the timber management emphasis. There would be no wildlife habitat improvement planned.

Designation: Nonwilderness
Management Emphasis: Visual

Alternative a allocates 13 percent of the area to this emphasis. Alternatives d, e, and f allocate 6 percent of the area to this prescription, and none of the other alternatives utilize this emphasis. Visuals are retained in the roadless management emphasis. Visual quality resource will be managed according to the management area classification. Effects are the same as displayed in the timber management emphasis with visual objectives maintained.

Designation: Nonwilderness
Management Emphasis: Riparian

All alternatives contain inclusions of riparian zones and recognize the need to manage these areas according to policy and guidelines. Alternative g is the wilderness alternative and would not impact the riparian areas. Effects are displayed under roadless emphasis.

Designation: Nonwilderness
Management Emphasis: Roadless

Alternative a allocates 67 percent of the area, Alternative b allocates 99 percent of the area, Alternatives d, e, and f allocate 1 percent and Alternatives c and g do not manage for roadless allocation.

The nonpriced effects are:

- Visual quality will be maintained at a very high level, retention; timber harvest would not be evident.
- Semiprimitive and wilderness attributes can be retained for a long period.
- Age-class distribution and diversity would be dominated by old growth; young age classes would be minimal.
- Water quality and fisheries would not be affected.
- Few wood products related jobs would be added to the industry.

The economic impacts would be reflected in the timber volume lost. This loss could be mitigated by practicing intensive forestry elsewhere.

Designation: Nonwilderness
Management Emphasis: Miscellaneous

Miscellaneous management emphases include non-forest land, administrative sites, historical or cultural sites, mineral extraction sites, transportation and utility corridors, campgrounds, picnic areas, ski areas, and areas with concentrated public use.

Alternative a allocates nearly 2 percent of the area to this prescription, Alternative c allocates 42 percent of the area, Alternatives d, e, and f allocate 16 percent of the area and Alternatives b and g do not manage for this emphasis.

ACRES OF AREA UNDER MANAGEMENT FOR EACH EMPHASIS BY ALTERNATIVE
(Refer to Appendix C Introduction for Management Areas under each emphasis.)

Management Emphasis	Alternatives a	b	c	d	e	f	g
NONWILDERNESS							
Timber/Range	3983	139	15317	18187	18187	18187	-
Wild life							
Grizzly bear	-	-	-	-	-	-	-
Other	1059	111	836	2632	2632	2632	-
Visual	3676	-	-	1724	1724	1724	-
Miscellaneous	501	-	11697	4476	4476	4476	-
Riparian	*	*	*	549	549	549	-
Roadless	18631	27600	-	282	282	282	-
WILDERNESS							
Wilderness	-	-	-	-	-	-	27850
Total	27850	27850	27850	27850	27850	27850	27850

* Small inclusions occur in other management emphasis items

SUMMARY OF MANAGEMENT EMPHASIS (acres managed by decade)

Developed							
Decade 1	9219	250	27850	27568	27568	27568	-
Decade 5	9219	250	27850	27568	27568	27568	-
Roadless							
Decade 1	18631	27600	-	282	282	282	-
Decade 5	18631	27600	-	282	282	282	-
Wilderness							
Decade 1	-	-	-	-	-	-	27850
Decade 5	-	-	-	-	-	-	27850

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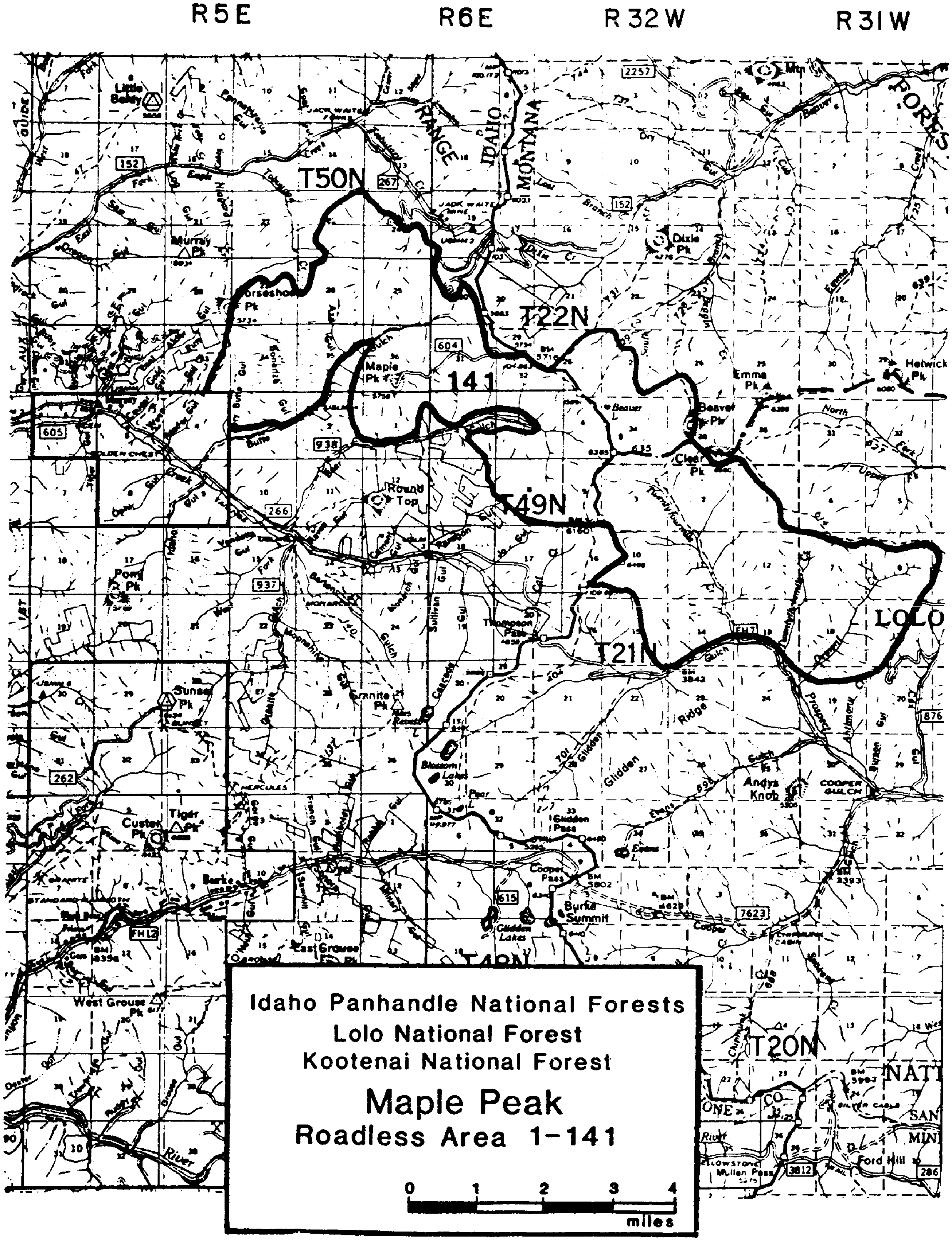

R5E
R6E
R32W
R31W
T50N
T22N
141
T49N
T21N
T20N
IDAHO
MONTANA
LOLO
Maple Pk
Round Top
Thompson Pass
Granite Pk
Blossom Lakes
Glidden Lakes
Glidden Pass
Cooper Pass
Burke Summit
Andys Knob
Emma Pk
Beaver Pk
Clear Pk
Dixie Pk
Helwick Pk
Little Baldy
Murray Pk
Horseshoe Pk
Pony Pk
Sunset Pk
Custer Pk
Tiger Pk
West Grouse Pk
East Grouse Pk
Burke
Ford Hill
Mullan Pass
Idaho Panhandle National Forests
Lolo National Forest
Kootenai National Forest
Maple Peak
Roadless Area 1-141
0 1 2 3 4
miles

MAPLE PEAK #01141

Acreage	Gross Acres	Net Acres
Idaho		
Idaho Panhandle NF	8,952	8,434
Montana		
Lolo NF	6,960	6,960
Kootenai NF	900	900
Total	16,812	16,294

I. Description

A. Location and Access

This roadless area is located about 10 miles north of Mullan, Idaho, in Shoshone County, Idaho, and Sanders County, Montana. This roadless area is shared by three National Forests: the Idaho Panhandle, Kootenai, and Lolo National Forests. Access to the Idaho side is gained by exiting I-90 at Kingston, Idaho; traveling the paved Coeur d'Alene River Road to Prichard; then following Forest Highway 9 to the periphery of the area where access to the area is gained by trails. Access to the Montana side is gained by exiting State Highway 200 at the Thompson Pass road (maintained gravel road) which leads to trailhead access to the area.

B. General Description

Topographically, the area consists of an east-west ridge which crosses the drainages. Slopes are moderate, except near the State divide. Smaller drainages are wholly included. The boundary irregularly traverses ridges, streams, and cross slopes. Two small lakes are found within this area; neither is considered a significant fishery.

About 90 percent of the vegetation is a result of the 1910 fire which left large areas of brush fields and timber stands which are now pole-size lodgepole, Douglas-fir, larch, and white pine. Subalpine vegetation is found at the highest elevations .

Hunting big game during September and October is the current predominant use. The area also receives light use by berrypickers, hikers, and stream fishing enthusiasts.

Most wildlife species found in northern Idaho also find habitat in this area. Unusual species include bobcat and lynx.

II. Analysis of Wilderness Suitability

A. Capability

1. Wilderness Characteristics

a. Natural Integrity. Impacts from human activity in the Maple Peak area have resulted primarily from mining. This activity will probably continue into the future, further modifying the natural integrity.

b. Natural Appearance. A person visiting this area would find it difficult to view any substantially large areas of natural appearing landscape.

c. Solitude. Opportunity for solitude in the Maple Peak area will be greatly influenced by the level of mining activity in the area on patented and unpatented claims.

d. Primitive Recreation Opportunities. Private inholdings in the form of patented mining claims cover most of the lower elevations in Butte Gulch. The only opportunities for recreation associated with water are in Bear Gulch. An existing mining road accesses all of Bear Gulch, precluding any primitive recreation experience.

Opportunities for primitive recreation in the Maple Peak area would primarily consist of hunting and hiking along the Idaho-Montana Divide, use of two alpine lakes, rock climbing, and cross-country travel. These opportunities are more prevalent in the Montana portion due to the absence of mining there.

e. Other Features. In 1904 the Idaho-Montana boundary was resurveyed. Rock cairns and chiseled rock mile markers can be found along the divide.

In the 1930's, the Maple Peak Lookout was constructed by the Civilian Conservation Corps (CCC). This was removed in the mid-1950's.

Some sources have suggested that much of the area is potentially suitable habitat for grizzly bear.

2. Wilderness Manageability and Boundaries.

This area was inventoried during RARE II; boundary changes since RARE II have added 6,700 acres. Due to the present and expected future mineral activity in the Maple Peak area, maintenance of an essentially roadless character will be difficult. Boundaries will be hard to manage, as they currently follow clearcuts and roads.

Table 1

Lolo, Idaho Panhandle, and Kootenai National Forests Total

Selected Resource Values

Category	Unit	01141
Gross Acres	Acres	16,812
Net Acres	Acres	16,294
Range		
Existing Obligated		
Suitable	Acres	0
Allotments	No.	0
AUMs	No.	0
Existing Vacant		
Suitable	Acres	0
Allotments	No.	0
AUMs	No.	0
Proposed		
Suitable	Acres	0
AUMs	No.	0
Timber		
Tentative		
Suitable	Acres	10,321
Standing Volume	MMBF	114
Minerals Potential		
Very High	Acres	7,599
High	Acres	9,001
Moderate	Acres	0
Low	Acres	0
Mining Claims	No.	792
Oil and Gas Potential*		
Very High	Acres	0
High	Acres	0
Moderate	Acres	0
Low	Acres	16,294
Oil and Gas Leases		
Leases	No.	3
Leased Area	Acres	3,480

Category	Unit	01141
Corridors		
Existing and Potential	No.	1
Wildlife-Threatened and Endangered-Habitat		
Grizzly Bear		
Situation 1	Acres	0
Situation 2	Acres	0
Situation 3	Acres	0
Bald Eagle	Acres	0
Mountain Caribou	Acres	0
Gray Wolf	Acres	0
Wildlife-Big Game		
Summer Habitat	Acres	900
Winter Habitat	Acres	141
Specific-Elk		
Summer Habitat	Acres	0
Winter Habitat	Acres	0
Specific-Deer		
Summer Habitat	Acres	0
Winter Habitat	Acres	0
Significant Fisheries		
Stream Miles	Miles	0
Stream Habitat	Acres	0
Lakes	No.	0
Lake Habitat	Acres	0
Water Developments		
Existing	No.	1
Recreation		
Primitive	RVDs	270
Semiprimitive		
Nonmotorized	RVDs	4,872
Motorized	RVDs	1,000
Roaded Natural	RVDs	1,000

* Rating also includes uranium, geothermal, and other energy resources.

Table 1

Idaho Panhandle National Forests Portion

Selected Resource Values

Category	Unit	01141
Gross Acres	Acres	8,952
Net Acres	Acres	8,434
Range		
Existing Obligated		
Suitable	Acres	0
Allotments	No.	0
AUMs	No.	0
Existing Vacant		
Suitable	Acres	0
Allotments	No.	0
AUMs	No.	0
Proposed		
Suitable	Acres	0
AUMs	No.	0
Timber		
Tentative		
Suitable	Acres	4,851
Standing Volume	MMBF	74
Minerals Potential		
Very High	Acres	7,460
High	Acres	1,280
Moderate	Acres	0
Low	Acres	0
Mining Claims	No.	663
Oil and Gas Potential*		
Very High	Acres	0
High	Acres	0
Moderate	Acres	0
Low	Acres	8,434
Oil and Gas Leases		
Leases	No.	0
Leased Area	Acres	0

Category	Unit	01141
Corridors		
Existing and Potential	No.	0
Wildlife-Threatened and Endangered-Habitat		
Grizzly Bear		
Situation 1	Acres	0
Situation 2	Acres	0
Situation 3	Acres	0
Bald Eagle	Acres	0
Mountain Caribou	Acres	0
Gray Wolf	Acres	0
Wildlife-Big Game		
Summer Habitat	Acres	0
Winter Habitat	Acres	141
Specific-Elk		
Summer Habitat	Acres	0
Winter Habitat	Acres	0
Specific-Deer		
Summer Habitat	Acres	0
Winter Habitat	Acres	0
Significant Fisheries		
Stream Miles	Miles	0
Stream Habitat	Acres	0
Lakes	No.	0
Lake Habitat	Acres	0
Water Developments		
Existing	No.	1
Recreation		
Primitive	RVDs	0
Semiprimitive		
Nonmotorized	RVDs	500
Motorized	RVDs	0
Roaded Natural	RVDs	500

* Rating also includes uranium, geothermal, and other energy resources.

Table 1

Lolo National Forest Portion

Selected Resource Values

Category	Unit	01141
Gross Acres	Acres	6,960
Net Acres	Acres	6,960
Range		
Existing Obligated		
Suitable	Acres	0
Allotments	No.	0
AUMs	No.	0
Existing Vacant		
Suitable	Acres	0
Allotments	No.	0
AUMs	No.	0
Proposed		
Suitable	Acres	0
AUMs	No.	0
Timber		
Tentative		
Suitable	Acres	5,470
Standing Volume	MMBF	40
Minerals Potential		
Very High	Acres	139
High	Acres	6,821
Moderate	Acres	0
Low	Acres	0
Mining Claims	No.	129
Oil and Gas Potential*		
Very High	Acres	0
High	Acres	0
Moderate	Acres	0
Low	Acres	6,960
Oil and Gas Leases		
Leases	No.	3
Leased Area	Acres	3,480

Category	Unit	01141
Corridors		
Existing and Potential	No.	1
Wildlife-Threatened and Endangered-Habitat		
Grizzly Bear		
Situation 1	Acres	0
Situation 2	Acres	0
Situation 3	Acres	0
Bald Eagle	Acres	0
Mountain Caribou	Acres	0
Gray Wolf	Acres	0
Wildlife-Big Game		
Summer Habitat	Acres	0
Winter Habitat	Acres	0
Specific-Elk		
Summer Habitat	Acres	0
Winter Habitat	Acres	0
Specific-Deer		
Summer Habitat	Acres	0
Winter Habitat	Acres	0
Significant Fisheries		
Stream Miles	Miles	0
Stream Habitat	Acres	0
Lakes	No.	0
Lake Habitat	Acres	0
Water Developments		
Existing	No.	0
Recreation		
Primitive	RVDs	0
Semiprimitive		
Nonmotorized	RVDs	4,872
Motorized	RVDs	1,000
Roaded Natural	RVDs	0

* Rating also includes uranium, geothermal, and other energy resources.

Table 1

Kootenai National Forest Portion

Selected Resource Values

Category	Unit	01141
Gross Acres	Acres	900
Net Acres	Acres	900
Range		
Existing Obligated		
Suitable	Acres	0
Allotments	No.	0
AUMs	No.	0
Existing Vacant		
Suitable	Acres	0
Allotments	No.	0
AUMs	No.	0
Proposed		
Suitable	Acres	0
AUMs	No.	0
Timber		
Tentative		
Suitable	Acres	0
Standing Volume	MMBF	0
Minerals Potential		
Very High	Acres	0
High	Acres	900
Moderate	Acres	0
Low	Acres	0
Mining Claims	No.	0
Oil and Gas Potential*		
Very High	Acres	0
High	Acres	0
Moderate	Acres	0
Low	Acres	900
Oil and Gas Leases		
Leases	No.	0
Leased Area	Acres	0

Category	Unit	01141
Corridors		
Existing and Potential	No.	0
Wildlife-Threatened and Endangered-Habitat		
Grizzly Bear		
Situation 1	Acres	0
Situation 2	Acres	0
Situation 3	Acres	0
Bald Eagle	Acres	0
Mountain Caribou	Acres	0
Gray Wolf	Acres	0
Wildlife-Big Game		
Summer Habitat	Acres	900
Winter Habitat	Acres	0
Specific-Elk		
Summer Habitat	Acres	0
Winter Habitat	Acres	0
Specific-Deer		
Summer Habitat	Acres	0
Winter Habitat	Acres	0
Significant Fisheries		
Stream Miles	Miles	0
Stream Habitat	Acres	0
Lakes	No.	0
Lake Habitat	Acres	0
Water Developments		
Existing	No.	0
Recreation		
Primitive	RVDs	270
Semiprimitive		
Nonmotorized	RVDs	0
Motorized	RVDs	0
Roaded Natural	RVDs	0

* Rating also includes uranium, geothermal, and other energy resources.

B. Resource Values

1. Recreation. Current recreation use is light--mostly hunting. Light off-road vehicle use is present.

2. Wildlife. Most species found in northern Idaho are also found here. There is no habitat for threatened and endangered species. Water from this area feeds into Big Beaver Creek, a well known fishery.

3. Timber. About 10,000 acres are tentatively suitable for timber management. Some of these suitable sites are now brush fields which may be costly to reforest.

4. Minerals. Hardrock mineral potential is high. There are several patented mining claims and 792 unpatented mining claims. Minerals have been and are currently being extracted. Most of the area is under oil and gas lease application.

5. Range. None

C. Other Management Considerations

1. Fire. The number of fires occurring annually is small; the 1910 fire is an example of the potential for a periodic large fire.

D. Need

1. Contribution to National Wilderness Preservation System. Maple Peak can contribute opportunities for solitude in an alpine lake setting, roadless elk hunting, rugged cross-country travel, and watershed protection for downstream fisheries.

2. Public Interest and Concerns. Public response during RARE II indicated that among respondents 10 percent favored inclusion into the National Wilderness System; 90 percent favored a non-wilderness designation. During public reveiw of the DEIS, few specific comments were received concerning this area either for inclusion into the Wilderness System or favoring non-wilderness designation. Several comments were received favoring wilderness designation for all roadless areas. Some respondents expressed their concern that there should be no additional wilderness created on the Lolo National Forest.

E. Proximity to Designated Wilderness and to Population Centers. Table C-4 displays wilderness opportunities and proximity to roadless areas on the Idaho Panhandle National Forests. The closest wilderness area is the Cabinet Wilderness in western Montana, approximately 100 miles to the northeast. There is access to 1.6 million acres of wilderness located within 200 miles of Coeur d'Alene, as well as an additional 5.8 million acres within 300 miles (northern Idaho, eastern Washington and Oregon, and western Montana).

F. Alternatives and Environmental Consequences

1. Management Emphasis Assignment by Alternatives. Management emphasis indicates which resource activity is highlighted. If the emphasis is timber, most of the activity on those acres would be for timber management. Resource activities which are compatible with the emphasis would continue, but with less intensity. Table 2 lists the acres of each management emphasis by alternative.

Table 2

Maple Peak Roadless Area (01141)
Management Emphasis by Alternative

Management Emphasis	Alternatives 1/											
IPNF	1	2	3	4	5	6	7	8	9	10	11	12
Kootenai	(D)	(A)	(H)	(B)	(E)	(C)	(E)	(I)	(C,O)	(G,H)	(J)	(K)
Lolo	(a)	(c)	(g)	(c)	(d,e,f)	(-)	(e,f,g)	(-)	(g)	(d,e,f)	(d,e,f)	(d,e,f)
	(Thousand Acres)											
Wilderness	0	0	16.3	0	0	0	0	0	0	0	0	0
Non-wilderness												
No Tbr. Harvest	0.6	0.6	0	0.6	0.6	0.6	0.3	0.6	0.3	0.6	0.3	0.3
Timber/Wildlife	8.0	8.0	0	8.0	8.0	8.0	4.0	8.0	4.0	4.0	4.0	4.0
Wildlife/Visual	0	0	0	0	0	0	0	0	0	0	0	0
Special Areas	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Level	7.7	7.7	0	7.7	7.7	7.7	12.0	7.7	12.0	12.0	12.0	12.0
Total	16.3	16.3	16.3	16.3	16.3	16.3	16.3	16.3	16.3	16.3	16.3	16.3
Summary of Management Emphasis:												
Developed												
Decade 1	3.0	1.0	0	2.0	2.0	2.0	2.0	1.0	2.0	2.0	4.0	6.0
Decade 5	14.0	14.0		14.0	14.0	14.0	5.0	12.0	5.0	14.0	14.0	12.0
Roadless 2/												
Decade 1	13.3	15.3	0	14.3	14.3	14.3	14.3	15.3	14.3	14.3	12.3	11.3
Decade 5	0	0	0	0	0	0	11.3	0	11.3	0	0	0
Wilderness	0	0	16.3	0	0	0	0	0	0	0	0	0

1/ Alternative clarification:

1 - Regional Goals
2 - High Market
3 - High Nonmarket
4 - High Timber, Fish
5 - Moderate All Resources
6 - High Timber, Wildlife
7 - High Nonmarket, Stable Timber
8 - Current Program
9 - High Recreation
10 - High Wildlife, Moderate Timber
11 - Preferred Alternative
12 - Preferred w/Departure

2/ Roadless is defined as 5,000 acres or greater in size or any acreage if contiguous to existing wilderness.

III. Impacts

The management emphasis for the Maple Peak Roadless Area is a combination of management prescriptions and alternatives from three National Forests, the Kootenai, Lolo, and Idaho Panhandle. Because resources, uses, and land conditions are somewhat different on each Forest, neither the alternatives nor the management emphasis are fully integrated. Because the Idaho Panhandle Forest is the lead Forest for this roadless area, for purposes of this evaluation, the alternatives and management emphasis from the other two Forests have been integrated into those of the Idaho Panhandle Forest as close as possible on the basis of goals and objectives common to each Forests alternatives and management emphasis.

Further information on the specific alternatives and management emphasis for the Kootenai and the Lolo National Forest's areas can be found in these Forest's Draft Environmental Impact Statements for the Forest Plans.

The proposed wilderness/nonwilderness designation for area 1141 is made and documented in the Idaho Panhandle Enviromental Impact Statement. This proposed designation has priority over all other land designations and none of the three Forests can undertake any management activity other than current direction until such time that a record of decision is issued in conjunction with this document.

Designation: Wilderness
Management Emphasis: Wilderness

This management emphasis occurs in Alternative 3.

Low standard roads could be obliterated and mining activities would be curtailed--both would enhance wilderness values. Land exchange or purchase would consolidate ownership control and also improve wilderness values.

The 10,000 acres of suitable timber land would not be available. Minerals, oil, and gas, if found, may not be available.

Motorized use would likely be curtailed.

The nonpriced benefits or costs would be:

- Most wildlife species would be favorably or neutrally impacted. Species found in disturbed areas could be adversely impacted, depending on the degree and timing of natural disturbances.
- The national wilderness system area would increase.
- Visual quality would be retained.
- Water quality and fisheries would be preserved.
- Natural ecosystem would be protected.
- Opportunity for solitude would increase.
- Diversity would tend toward old growth.
- Big-game security would increase.
- Recreational opportunities would be mostly semiprimitive.
- Off-road vehicle use would be eliminated.

Social and economic effects center on the resource values of timber, minerals, wildlife, recreation, and wilderness. Since wilderness precludes timber harvest

and mineral development, the related industries would not be supported by this emphasis. From a social aspect, the publics valuing wilderness would be supported as well as those people who desire to view the area in its unaltered state.

Designation: Nonwilderness
Management Emphasis: No Timber Harvest

All alternatives would designate from 2 to 4 percent of the Maple Peak area for this emphasis. This proportion of the area is characterized by islands of old-growth timber left from the great 1910 fire.

Due to the size of designations for this emphasis, no significant impacts to wilderness suitability, market resources, non-priced components, or socioeconomic concerns are anticipated.

Designation: Nonwilderness
Management Emphasis: Timber/Wildlife

All nonwilderness alternatives would designate some portion of this area for the timber/wildlife management emphasis.

Alternatives 7, 9, 10, 11, and 12 designate 24 percent of the area for timber/wildlife.

Alternatives 1, 2, 4, 5, 6, and 8 would designate approximately 49 percent of the area for this emphasis. These alternatives would differ only in the methodology utilized for timber harvest.

The timber/wildlife emphasis, in itself, would not preclude further consideration of the Maple Peak area for wilderness designation at the end of the first decade. In all non-wilderness alternatives the area would be open to minerals exploration. Recent interest in the area for strata-bound deposits of gold and copper will probably result in extensive roading for exploration prior to entry for timber management, rendering the area unsuitable for further wilderness consideration. As demonstrated in the previous narrative discussion, opportunities for wilderness experience, even at the present time, are marginal at best.

Impacts on market resources, in the area of wood products, would be more significant in the later decades of the planning cycle. Predominately much of the tenatively suitable timber areas are presently in the pole-size class. The availability of minerals in the area could have a significant impact on these markets.

The nonpriced benefits or costs would be:

- Wilderness values would eventually be foregone.
- Visual quality will decline.
- On 50 percent of the area diversity would tend toward younger, even-aged stands; the balance would tend towards old-growth.
- Security for big-game animals would decline.
- Semiprimitive recreation opportunities would decline.
- Water quality and fisheries would decline.
- Opportunities for solitude will decline.
- Quality hunting experiences will decline.

Social and economic effects center on the resource values of timber, minerals, wildlife, recreation, and wilderness. Timber and mineral resources would be available, thus supporting the wood products and minerals industries. The change in recreation setting could be disruptive to those publics using the area for primitive or semiprimitive recreation as well as publics viewing the area.

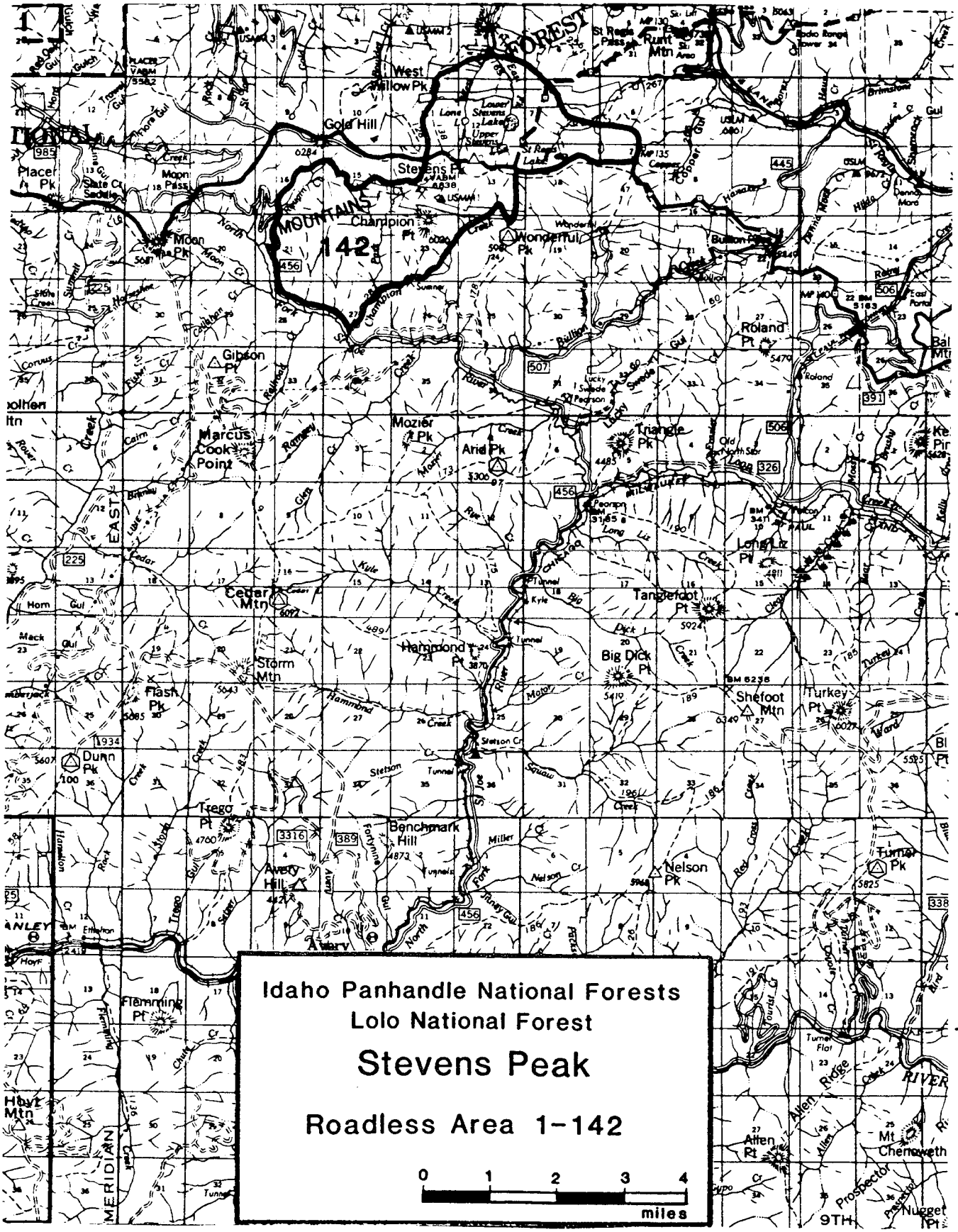
Designation: Nonwilderness
Management Emphasis: Minimum Level

All nonwilderness alternatives would designate a significant portion of the area for the minimum level emphasis.

Alternatives 1, 2, 4, 5, 6, and 8 would designate 47 percent of the area for this emphasis.

Alternatives 7, 9, 10, 11, and 12 would designate 74 percent to the Minimum Level emphasis.

Areas designated for this management emphasis under the above alternatives are predominately high elevation areas and rock outcrops which are unproductive sites. These areas could be impacted, dependent upon alternative selection, by the need to access other adjacent productive areas and mineral exploration. Consequently, impacts would be similar to those described in the timber/wildlife discussion previous.


R. 5 E.
R. 6 E.
R32W
T19N
T46N
T45N
Idaho Panhandle National Forests
Lolo National Forest
Stevens Peak
Roadless Area 1-142
0 1 2 3 4
miles

STEVENS PEAK #01142

Acreage	Gross Acres	Net Acres
Idaho - Idaho Panhandle NF	4,831	4,370
Montana - Lolo NF	700	600
Total	5,531	4,970

I. Description

A. Location and Access

The Stevens Peak Roadless Area is situated on both sides of the Idaho-Montana State line about 4 miles south of Mullan, Idaho, and 9 air miles north of Avery, Idaho. The Idaho portion lies within Shoshone County on the Avery and Wallace Ranger Districts of the Idaho Panhandle National Forests; the Montana portion lies in Mineral County on the Superior Ranger District of the Lolo National Forest. Approximately 600 acres of private land are included within the area--all patented mining claims. The most popular access is on trails which originate at the Lookout Pass overpass on Interstate 90. Other access is provided by low standard mining roads entering at several locations into the unit.

B. General Description

Stevens Peak, with an elevation of 6,838 feet, dominates the topography of this irregularly-shaped unit. Several features of alpine glaciation, including cirques, alpine lakes, and moraines, typify the area lying north of Stevens Peak. Steep slopes dissected by tributaries of the North Fork of the St. Joe characterize the southern half. The lowest elevation of the unit is 3,600 feet along the North Fork of the St. Joe River.

A majority of the area burned in 1910 and reburned in 1928. One area of old-growth mountain hemlock remains in the upper reaches of Rougin and Park Creek drainages, with isolated residual trees scattered elsewhere in the unit. The lower elevations on both the St. Joe and Lolo portions were planted following the 1928 fire with off-site ponderosa pine or eastern white pine. Several areas, however, remain in a nonstocked brush field condition. The higher elevations now support relatively sparse vegetation, generally subalpine, with some rockland and talus slopes present. The more productive slopes generally are covered by pole-sized stands of mixed species composition. Habitat-types range from cedar/clitonia at the lower elevations to mountain hemlock/menziesia or mountain hemlock/beargrass at the higher elevations.

The area provides summer range for a variety of big game, including elk, whitetail deer, mule deer, and black bear. Cougar, bobcats, lynx, pine marten, and several small mammals also inhabit the area.

The Stevens Peak area exists as a popular recreational area, receiving about 6,500 recreation visitor days use per year. The greatest attractions are the alpine lakes--Upper and Lower Stevens and Lone Lake on the Idaho side and the St. Regis Lakes on the Montana portion, which provide fishing, swimming, and floating opportunities. The St. Regis Basin is an especially popular destination for both cross-country skiers in the winter and backpackers and hikers in the summer. Other forms of outdoor recreation include horseback riding, mountain climbing (limited), and pleasure driving with motorbikes or four-wheel drive vehicles on several of the mining access roads. The area also receives moderate hunting pressure in the fall.

II. Analysis of Wilderness Suitability

A. Capability

1. Wilderness Characteristics

a. Natural Integrity. With the exception of a few old mining roads, the area has qualities predominantly influenced by nature rather than by man.

b. Natural Appearance. The size of the area results in a relatively limited opportunity to view large areas of natural appearing landscape; however, the landscape within the area is virtually all natural appearing. Views from some of the higher elevations reveal logging activities such as clearcuts and roads outside the Stevens Peak Roadless Area.

c. Solitude. Feelings of solitude for individuals are induced under a wide array of stimuli and vary greatly among persons of different backgrounds.

Opportunities for solitude for a significant number of visitors is hampered by the rugged terrain and high elevations which tend to concentrate use around the lakes during July and August.

d. Primitive Recreation Opportunities. Opportunities for a primitive recreation experience in the Stevens Peak Roadless area are fairly good. Most of the lakes in the area have suitable sites for primitive camping; however, some of these sites are showing signs of over-use. There is a good system of trails in the area, but many of them are in need of reconstruction.

e. Other Features. During the 1910 fires, one person is known to have perished within this roadless area. Cultural sites related to this event may still exist.

The area provides opportunities to view glaciated peaks, cirques, and cirque lakes, affording the viewer a high degree of visual quality which is unavailable in the more or less uniform landscape in the surrounding areas.

Though none have been located, there is a strong possibility that remains of single dwelling miners' cabins, primitive rock monuments and cairns, and rock markers from the 1904-1905 resurvey of the Idaho-Montana border may exist in the area.

The Stevens Peak Roadless Area is contiguous with the 5,070-acre Wonderful Peak Roadless Area to the southeast.

This area is also one of the few roadless areas where high elevation winter access is relatively easy. The area can be reached from Interstate 90 within 1 hour when traveling on cross-country skis. This value is offset somewhat by the high natural avalanche hazard in the St. Regis Basin.

On the Lolo, there are old mining cabins, two lookout sites, and two mineral development areas. There also is a 1,200-acre plantation of off-site species of eastern white pine and ponderosa pine, an old mining road, and 4-wheel drive roads along ridges that all impact the area.

Some sources have suggested that much of the area is potentially suitable habitat for grizzly bear.

2. Wilderness Manageability and Boundaries. This area was inventoried during RARE II; no boundary changes have occurred since then. The boundaries of the Coeur d'Alene portion would be somewhat indistinguishable in the north end of the area. Boundaries on the south end follow Champion Creek and the North Fork of the St. Joe River.

   The Stevens Peak area does not pose any substantial limitations in regard to management for wilderness, should it be so designated, with the exception of private land inholdings.

   The area would be highly accessible to the public, since it lies adjacent to Interstate 90 about halfway between Spokane and Missoula.

III. Wilderness Availability

Table 1

Total Stevens Peak Roadless Area

Category	Unit	01142
Gross Acres	Acres	5,531
Net Acres	Acres	4,970
Range		
Existing Obligated		
Suitable	Acres	0
Allotments	No.	0
AUMs	No.	0
Existing Vacant		
Suitable	Acres	0
Allotments	No.	0
AUMs	No.	0
Proposed		
Suitable	Acres	0
AUMs	No.	0
Timber		
Tentative		
Suitable	Acres	2,538
Standing Volume	MMBF	19
Minerals Potential		
Very High	Acres	3,200
High	Acres	1,770
Moderate	Acres	0
Low	Acres	0
Mining Claims	No.	347
Oil and Gas Potential*		
Very High	Acres	0
High	Acres	0
Moderate	Acres	0
Low	Acres	4,970
Oil and Gas Leases		
Leases	No.	2
Leased Area	Acres	600
Corridors		
Existing and Potential	No.	0
Wildlife-Threatened and Endangered-Habitat		
Grizzly Bear		
Situation 1	Acres	0
Situation 2	Acres	0
Situation 3	Acres	0
Bald Eagle	Acres	0
Mountain Caribou	Acres	0
Gray Wolf	Acres	0
Wildlife-Big Game		
Summer Habitat	Acres	0
Winter Habitat	Acres	0
Specific-Elk		
Summer Habitat	Acres	0
Winter Habitat	Acres	0
Specific-Deer		
Summer Habitat	Acres	0
Winter Habitat	Acres	0
Significant Fisheries		
Stream Miles	Miles	0
Stream Habitat	Acres	0
Lakes	No.	0
Lake Habitat	Acres	0
Water Developments		
Existing	No.	0
Recreation		
Primitive	RVDs	0
Semiprimitive		
Nonmotorized	RVDs	150
Motorized	RVDs	4,000
Roaded Natural	RVDs	1,000

* Rating also includes uranium, geothermal, and other energy resources.

Idaho Panhandle Portion

Category	Unit	01142
Gross Acres	Acres	4,831
Net Acres	Acres	4,370
Range		
Existing Obligated		
Suitable	Acres	0
Allotments	No.	0
AUMs	No.	0
Existing Vacant		
Suitable	Acres	0
Allotments	No.	0
AUMs	No.	0
Proposed		
Suitable	Acres	0
AUMs	No.	0
Timber		
Tentative		
Suitable	Acres	2,390
Standing Volume	MMBF	18
Minerals Potential		
Very High	Acres	3,200
High	Acres	1,170
Moderate	Acres	0
Low	Acres	0
Mining Claims	No.	300
Oil and Gas Potential*		
Very High	Acres	0
High	Acres	0
Moderate	Acres	0
Low	Acres	4,370
Oil and Gas Leases		
Leases	No.	0
Leased Area	Acres	0
Corridors		
Existing and Potential	No.	0
Wildlife-Threatened and Endangered-Habitat		
Grizzly Bear		
Situation 1	Acres	0
Situation 2	Acres	0
Situation 3	Acres	0
Bald Eagle	Acres	0
Mountain Caribou	Acres	0
Gray Wolf	Acres	0
Wildlife-Big Game		
Summer Habitat	Acres	0
Winter Habitat	Acres	0
Specific-Elk		
Summer Habitat	Acres	0
Winter Habitat	Acres	0
Specific-Deer		
Summer Habitat	Acres	0
Winter Habitat	Acres	0
Significant Fisheries		
Stream Miles	Miles	0
Stream Habitat	Acres	0
Lakes	No.	0
Lake Habitat	Acres	0
Water Developments		
Existing	No.	0
Recreation		
Primitive	RVDs	0
Semiprimitive		
Nonmotorized	RVDs	150
Motorized	RVDs	1,000
Roaded Natural	RVDs	1,000

* Rating also includes uranium, geothermal, and other energy resources.

Lolo Portion

Category	Unit	01142
Gross Acres	Acres	700
Net Acres	Acres	600
Range		
Existing Obligated		
Suitable	Acres	0
Allotments	No.	0
AUMs	No.	0
Existing Vacant		
Suitable	Acres	0
Allotments	No.	0
AUMs	No.	0
Proposed		
Suitable	Acres	0
AUMs	No.	0
Timber		
Tentative		
Suitable	Acres	148
Standing Volume	MMBF	1
Minerals Potential		
Very High	Acres	0
High	Acres	600
Moderate	Acres	0
Low	Acres	0
Mining Claims	No.	47
Oil and Gas Potential*		
Very High	Acres	0
High	Acres	0
Moderate	Acres	0
Low	Acres	600
Oil and Gas Leases		
Leases	No.	2
Leased Area	Acres	600

Category	Unit	01142
Corridors		
Existing and Potential	No.	0
Wildlife-Threatened and Endangered-Habitat		
Grizzly Bear		
Situation 1	Acres	0
Situation 2	Acres	0
Situation 3	Acres	0
Bald Eagle	Acres	0
Mountain Caribou	Acres	0
Gray Wolf	Acres	0
Wildlife-Big Game		
Summer Habitat	Acres	0
Winter Habitat	Acres	0
Specific-Elk		
Summer Habitat	Acres	0
Winter Habitat	Acres	0
Specific-Deer		
Summer Habitat	Acres	0
Winter Habitat	Acres	0
Significant Fisheries		
Stream Miles	Miles	0
Stream Habitat	Acres	0
Lakes	No.	0
Lake Habitat	Acres	0
Water Developments		
Existing	No.	0
Recreation		
Primitive	RVDs	0
Semiprimitive		
Nonmotorized	RVDs	0
Motorized	RVDs	3,000
Roaded Natural	RVDs	0

* Rating also includes uranium, geothermal, and other energy resources.

B. Resource Values

1. Recreation. This area receives a wide variety of year-round use. Use is concentrated on the trails which access the lakes and areas near the lakes.

2. Wildlife. The wide variety of animals found in northern Idaho is also found in this area.

3. Timber. Future development of the timber resource would involve the management of 2,500 acres within the area.

4. Minerals. This roadless area contains 347 mining claims, both patented and unpatented. Numerous old prospects are prevalent. A major exploration company has an active diamond drill program on both patented and unpatented claims. Seventy-three percent of the area is rated as having very high mineral potential, with the remainder rated as high.

   Oil and gas potential is estimated to be low. In Idaho, the entire area is covered by a lease application. In Montana, the entire area is presently under lease.

5. Range. None.

C. Other Management Considerations

1. Fire. Although the entire area burned in the catastrophic 1910 fire, the number of fires occurring annually is low.

D. Need

1. Contribution to National Wilderness Preservation System (NWPS). The main attributes and contributions of this area are the display of successional vegetative changes resulting from the 1910 fire and the alpine characteristics of the peaks and lakes associated with the Idaho-Montana Divide. It would also provide winter recreation opportunities.

2. Public Interest and Concerns. Public responses during RARE II indicated that among respondents less than 9 percent favored inclusion in the wilderness system and over 91 percent favored a non-wilderness designation. During the public comment period for the DEIS, there were few additional comments on the Stevens Peak Area. Several comments favored wilderness designation for all existing roadless areas. Other responders opposed further additions to the wilderness system.

3. Proximity to Designated Wilderness and to Population Centers. Table C-4 displays wilderness opportunities and proximity to roadless areas on the Idaho Panhandle National Forests. The closest wilderness area is the Cabinet Wilderness in western Montana, approximately 100 miles to the northeast. There is access to 1.6 million acres of wilderness located within 200 miles of Coeur d'Alene, as well as an additional 5.8 million acres within 300 miles (northern Idaho, eastern Washington and Oregon, and western Montana).

E. Alternatives and Environmental Consequences

1. Management Emphasis Assignment by Alternatives. Management emphasis indicates which resource activity is highlighted. If the emphasis is timber, most of the activity on those acres would be for timber management. Resource activities which are compatible with the emphasis would continue, but with less intensity. Table 2 lists the acres of each management emphasis by alternative.

Table 2

Stevens Peak Roadless Area (01142)
Management Emphasis by Alternative

Management Emphasis	Alternatives 1/											
IPNF	1	2	3	4	5	6	7	8	9	10	11	12
Lolo	(a)	(c)	(g)	(c)	(d, e,f)	(-)	(d,e f,g)	(-)	(g)	(d e,f)	(d e,f)	(d e,f)
								(Thousand Acres)				
Wilderness	0	0	5.0	0	0	0	0	0	0	0	0	0
Non-wilderness												
No Tbr. Harvest	0.9	0	0	0	1.0	0	1.0	0.9	1.0	0	1.1	1.1
Timber/Wildlife	1.1	1.4	0	1.4	1.2	1.2	1.1	1.4	1.0	1.4	0.7	0.7
Wildlife/Visual	0	0	0	0	0	0	0.2	0	0	0	0	0
Special Areas	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Level	3.0	3.6	0	3.6	2.8	3.8	2.7	2.7	3.0	3.6	3.2	3.2
Total	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Summary of Management Emphasis												
Developed												
Decade 1	3.5	0.3	0	0.2	0	0	0	0.3	0.2	0.1	0.1	0.1
Decade 5	4.4	1.4	0	1.0	1.2	2.1	2.4	0.5	1.7	0.8	0.1	0.1
Roadless 2/												
Decade 1	0	0	0	0	0	0	0	0	0	0	0	0
Decade 5	0	0	0	0	0	0	0	0	0	0	0	0
Wilderness	0	0	4.4	0	0	0	0	0	0	0	0	0

1/ Alternative clarification -

1 - Regional Goals
2 - High Market
3 - High Nonmarket
4 - High Timber, Fish
5 - Moderate All Resources
6 - High Timber, Wildlife
7 - High Nonmarket, Stable Timber
8 - Current Program
9 - High Recreation
10 - High Wildlife, Moderate Timber
11 - Preferred Alternative
12 - Preferred w/Departure

2/ Roadless is defined as 5,000 acres or greater in size or any acreage if contiguous to existing wilderness.

IV. Impacts

The management emphasis for the Stevens Peak Roadless Area is a combination of management prescriptions and alternatives from two National Forests, the Lolo and Idaho Panhandle. Because resources, uses, and land conditions area somewhat different on each Forest, neither the alternatives nor the management emphasis are fully integrated. Because the Idaho Panhandle Forest is the lead Forest for this roadless area, for purposes of this evaluation, the alternatives and management emphasis from the other Forest has been integrated into those of the Idaho Panhandle Forest as close as possible on the basis of goals and objectives common to each Forest's alternatives and management emphasis.

Further information on the specific alternatives and management emphasis for the Lolo National Forest's areas can be found in this Forest's Draft Environmental Impact Statement for the Forest Plan.

The proposed wilderness/nonwilderness designation for area 1142 is made and documented in the Idaho Panhandle Environmental Impact Statement. This proposed designation has priority over all other land designations and none of the Forests can undertake any management activity other than current direction until such time that a record of decision is issued in conjunction with this document.

Designation: Wilderness
Management Emphasis: Wilderness

This area is designated wilderness in Alternative 3. This designation would preserve the existing attributes as well as enhance others since there are uses and facilities on the area not usually associated with wilderness. The activities associated with mining have had the greatest impact. Patented claims, exploration disturbances, mining roads, and cabins are known to exist in this area. The entire area is highly mineralized. Recreational uses such as snowmobiling, motorbiking, and four-wheel pleasure driving are now permitted on the area. Under wilderness designation all or most of these activities would be restricted or prohibited. The estimated 19 MMBF of standing timber would not be available for processing.

The nonpriced benefits or costs would be:

- The national wilderness system area would increase.
- Visual quality would be retained.
- Natural ecosystem would be protected.
- Water quality and fisheries would be preserved.
- Opportunities for solitude would increase.
- Diversity would tend toward old growth.
- Big-game security would be assured.
- Recreational opportunities would remain mostly primitive.
- Off-road vehicle use would be eliminated.

Social and economic effects center on the resource values of timber, minerals, wildlife, recreation, and wilderness. Since wilderness precludes timber harvest and mineral development, the related industries would not be supported by this emphasis. From a social aspect, the publics valuing wilderness would be supported as well as those people who desire to view the area in its unaltered state.

Designation: Nonwilderness
Management Emphasis: No Timber Harvest

Alternatives 1, 5, 7, 8, 9, 11, and 12 would designate approximately 20 percent of the area to this emphasis. These alternatives would manage this area for roadless recreation.

As these areas comprise only 1,000 acres, more or less, leaving these in an unroaded state would not affect future consideration of the area for wilderness designation.

The areas designated for roadless recreation are mostly unproductive (high elevation, rocky) and would not significantly affect the availability of wood products to the market. This emphasis would not materially affect the availability of mineral resources.

The nonpriced benefits and costs would be:

- Visual quality for these areas could be maintained, in the absence of further mineral activity.
- Species diversity for the overall area could increase.
- Some security for big game in the area would be maintained.
- Some semiprimitive recreation would be maintained.
- Quality hunting and fishing opportunities would be lessened due to overcrowding.
- A very popular winter sports destination area could be protected.

The effects on the socioeconomic component would be similar to those outlined in the discussion of same in the timber/wildlife emphasis, which follows.

Designation: Nonwilderness
Management Emphasis: Timber/Wildlife

In all nonwilderness alternatives some designation is made for this emphasis. Percentages range from a low of 14 percent for Alternatives 11 and 12 to a high of 28 percent in Alternatives 2, 4, 8, and 10.

Any designation for this emphasis will forego a wilderness designation in time. Barring any additional roading for minerals access, Alternatives 5, 6, and 7 would allow reconsideration at the end of the first decade. As the Stevens Peak area is contiguous to the Wonderful Peak Roadless Area (01152), any adjacent areas left unroaded could be included in the Wonderful Peak Roadless Area, regardless of size, should it be designated as wilderness.

On the acres classified as suitable for timber management, a very low volume figure (7.5 MBF/acre) is estimated. The maximum designated for this emphasis (under all alternatives) is 1,400 acres. Given the average volume and the

number of acres designated, approximately 10 MMBF will be made available to the market during this planning cycle; therefore, a significant impact on the timber market is not expected. This emphasis would not affect the availability of mineral resources under any nonwilderness alternative.

The nonpriced benefits and costs would be:

- Visual quality may decline, proportionate to harvest level.
- Diversity would tend toward younger, even-aged stands where timber harvest takes place.
- Security for big game animals would be slightly lower.
- Recreation opportunities would continue to be semiprimitive.
- Water quality and fisheries may be adversely affected.
- Opportunities for solitude will be less.
- Quality hunting experiences will decline.

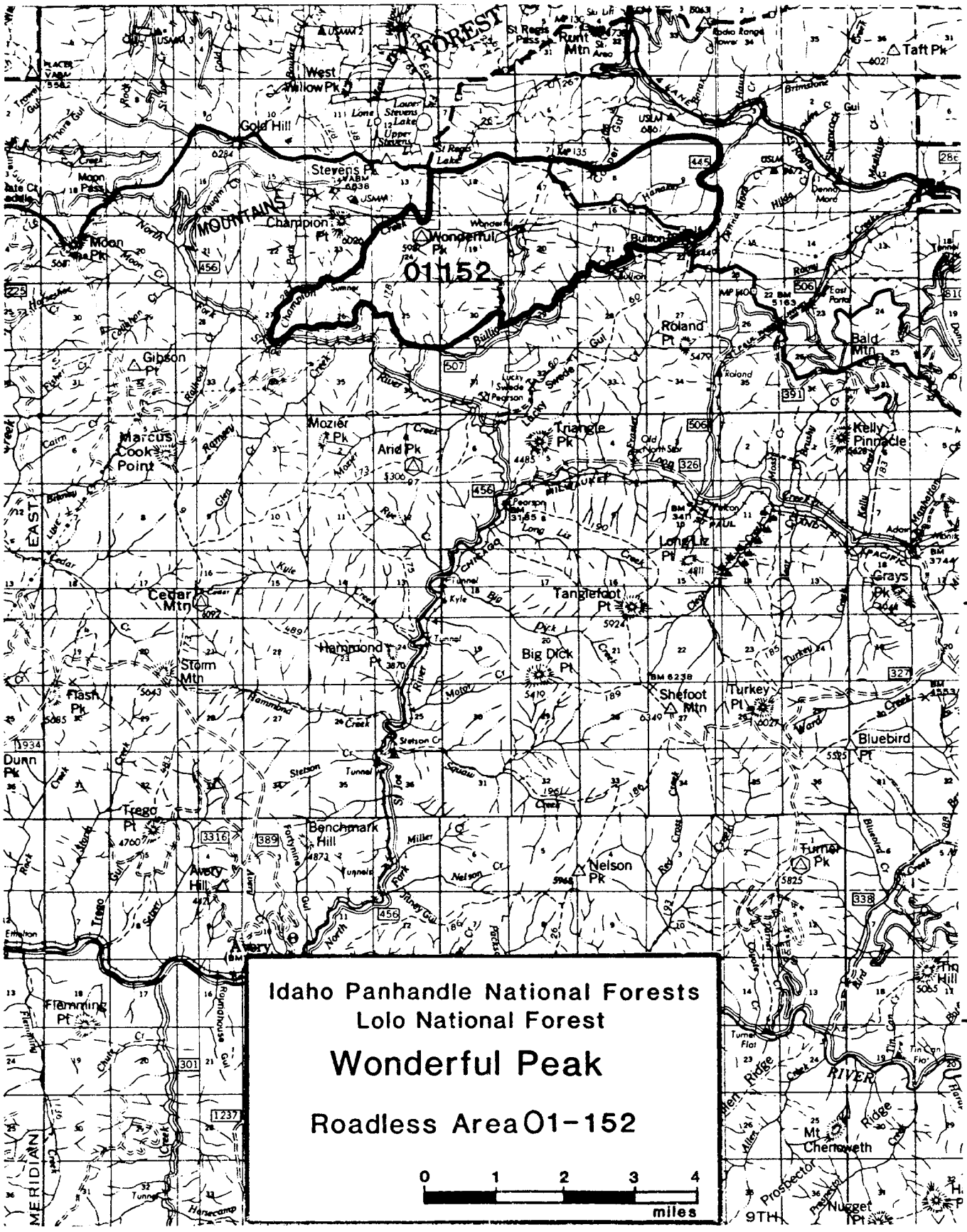
Social and economic effects center on the resource values of timber, minerals, wildlife, recreation, and wilderness. Timber and mineral resources would be available, thus supporting the wood products and minerals industries. The change in recreation setting could be disruptive to those publics using the area for primitive or semiprimitive recreation as well as publics viewing the area.

Designation: Nonwilderness
Management Emphasis: Minimum Level

All nonwilderness alternatives would designate a significant portion of the area to this emphasis. No alternative would have less than 54 percent of the Stevens Peak area designated for the minimum level emphasis.

Areas designated for this management emphasis under the above alternatives are predominately high elevation areas and rock outcrops which are unproductive sites. These areas could be impacted, dependent upon alternative selection, by the need to access other adjacent productive areas. Consequently, impacts would be similar to those described in the timber/wildlife discussion previous.

R. 5 E. R. 6 E. R32W


T19N
T46N
T45N
011152
Wonderful Pk
Champion Pt
Moon Pk
Gibson Pt
Marcus Cook Point
Mozier Pk
Arid Pk
Triangle Pk
Roland Pt
Bald Mtn
Kelly Pinnacle
Long Liz Pt
Grays Pk
Tanglefoot Pt
Cedar Mtn
Storm Mtn
Hammond Pt
Big Dick Pt
Shefoot Mtn
Turkey Pt
Bluebird Pt
Flash Pk
Dunn Pk
Trego Pt
Benchmark Hill
Avery Hill
Nelson Pk
Turner Pk
Framming Pt
Mt Chenoweth
Nugget Pt
Idaho Panhandle National Forests
Lolo National Forest
Wonderful Peak
Roadless Area 01-152
0 1 2 3 4
miles

WONDERFUL PEAK ROADLESS AREA #01152

Acreage	Gross Acres	Net Acres
Idaho - Idaho Panhandle NF's	5,549	5,070
Montana - Lolo	1,600	1,600
Total	7,149	6,670

I. Description

A. Location and Access

The Wonderful Peak Roadless Area is located on both sides of the Idaho-Montana border about 4 air miles southeast of Mullan, Idaho, and 9 air miles north of Avery, Idaho. The Idaho portion lies within Shoshone County on the Avery Ranger District of the Idaho Panhandle National Forests, with the Montana portion contained in Mineral County on the Superior Ranger District of the Lolo National Forest.

B. General Description

About 500 acres of patented mining claims are contained within the unit. Bonneville Power Administration (BPA) tower-access roads, the Bullion Creek Road, and Hanakar Creek Road provide motorized access to the eastern and southern boundaries. Low standard mining roads, the State Line Trail, Wonderful Peak Trail, and Copper Gulch Trail offer interior access.

The roughly diamond-shaped unit rises in elevation from 3,400 feet on the North Fork of the St. Joe River to over 6,500 feet on the Bitterroot Divide. Terrain is precipitous with generally steep, rocky slopes. Alpine glaciation occurred along the State line, being most evident on the Montana portion. The Montana portion contains one alpine lake, Copper Lake, and drains northward via Copper Gulch and Hanakar Creek into the St. Regis River. The Idaho segment flows southward into the St. Joe River system.

Existing vegetation resulted from the 1910 and successive fires which consumed the entire unit. Extensive nonstocked brush fields remain on the more exposed southern aspects, with immature sapling or small sawtimber stands of mixed composition on the cooler north aspects. Additionally, portions of the area were planted with off-site ponderosa pine or western white pine. Little old-growth timber remains anywhere within the unit.

The Bitterrot Divide is characterized by open subalpine vegetation. Habitat varies from cedar/clintonia at the lower elevations to mountain hemlock or subalpine fir types on the higher slopes.

The unit receives only light recreational use, with Copper Lake being the most popular destination, providing water-oriented activities. The primary activity throughout the unit, however, centers upon big-game hunting. Pleasure-driving with motorbikes and four-wheel drive vehicles also occurs on existing mining roads and maintained trails. Hiking/backpacking, horseback riding, and other activities remain limited.

The area serves as big-game summer and winter range for elk, whitetail deer, mule deer, and black bear. Other game and nongame species common to northern Idaho and western Montana also populate the unit. Little fisheries resources, however, exist within the unit.

II. Analysis of Wilderness Suitability

A. Capability

1. Wilderness Characteristics

a. Natural Integrity. In the Idaho portion, the impact of past human activity in this area is moderate. Mining activity first began in the early 1900s. Nearly 500 acres are patented and under private ownership. Anaconda Mineral Company has leased a number of patents and is pesently carrying out exploratory operations. There are numerous unpatented claims scattered throughout the planning area. There is a road accessing the Old Wonderful Mine. An existing trail accesses Wonderful Peak. Existing roads completely encircle the Wonderful Peak area. On the Montana portion, impacts include a developed road with earthworks, cut and fill slopes, the one-quarter mile long Copper Lake Road, a dam which forms Copper Lake, a mining excavation area, dozer trenches and trails, exploratory pits, and 140 acres of thinning and pruning on a white pine plantation.

b. Natural Appearance. The Wonderful Peak area does not lend itself to the solitude normally attributed to natural or wilderness areas because of the topography. The Bonneville Power Administration (BPA) powerline and surrounding roads and activity become dominant features of the landscape. Interstate 90 is visible from some places. The Milwaukee Road Railroad, which is now abandoned, is partially visible and a BPA powerline will be constructed within 3 miles of the northeast corner of the area.

c. Solitude. The area offers little opportunity for solitude because of its size and surrounding developments. There is little in terms of topographic or vegetative screening. The distance from its core to the perimeter is 1.5 miles from east to west and less than 1 mile from north to south. The area consists of the Bitterroot Crest to the north with two major ridge lines radiating southward. Wonderful Creek is the only well defined creek which would screen any of the surrounding intrusions. Human use is concentrated along the surrounding road system.

d. Primitive Recreation Opportunities. Opportunities for primitive recreation experiences are greatly limited. The size and shape of this area provide little opportunity to actually be isolated from evidence of man and his activities. With much of the area having similar topographic and vegetative features, there is little diversity of recreation opportunities. Primitive recreation experiences are further limited by motorized use of the trail and road intruding into the area. Opportunities do exist for big game and hunting (elk, deer, bear, and mountain lion), while horseback riding, hiking, and backpacking experiences are limited.

e. Other Features. A high percentage of the Wonderful Peak area was influenced by the 1910 fire. Eight firefighters perished inside the Bullion Mine just outside the boundary of the unit where they had taken refuge from the fire. They were eventually buried in the Wallace Cemetery.

Vegetative conditions which developed as a result of that fire have created the sort of habitat which is ideal for big-game species. There is a high level of public interest in roadless elk hunting as evidenced by the survival of a commercial outfitter/guide operation in this general area.

2. Wilderness Manageability and Boundaries - This area was inventoried during RARE II; no boundary changes have occurred since then. Existing boundaries are not well defined. The southern and eastern boundaries do not follow topographic features but, rather, are located so that roads and powerline corridors would not be incorporated within the boundaries. Approximately 15 percent of the area is in private ownership under patented mining claims. There is active exploration being carried out at three locations within the area boundary. The road accessing the Wonderful Mine is being used for this activity. Additional road construction will continue to be required for access to future drill sites.

This area will be difficult to manage as wilderness because of the continuous minerals exploration work and the associated required access.

Table 1

Selected Resource Values
Total Wonderful Peak Roadless Area

Category	Unit	01152
Gross Acres	Acres	7,149
Net Acres	Acres	6,670
Range		
Existing Obligated		
Suitable	Acres	0
Allotments	No.	0
AUMs	No.	0
Existing Vacant		
Suitable	Acres	0
Allotments	No.	0
AUMs	No.	0
Proposed		
Suitable	Acres	0
AUMs	No.	0
Timber		
Tentative		
Suitable	Acres	4,796
Standing Volume	MMBF	38
Minerals Potential		
Very High	Acres	80
High	Acres	6,590
Moderate	Acres	0
Low	Acres	0
Mining Claims	No.	425
Oil and Gas Potential*		
Very High	Acres	0
High	Acres	0
Moderate	Acres	0
Low	Acres	6,670
Oil and Gas Leases		
Leases	No.	1
Leased Area	Acres	1,600

Category	Unit	01152
Corridors		
Existing and Potential	No.	0
Wildlife-Threatened and Endangered-Habitat		
Grizzly Bear		
Situation 1	Acres	0
Situation 2	Acres	0
Situation 3	Acres	0
Bald Eagle	Acres	0
Mountain Caribou	Acres	0
Gray Wolf	Acres	0
Wildlife-Big Game		
Summer Habitat	Acres	0
Winter Habitat	Acres	0
Specific-Elk		
Summer Habitat	Acres	0
Winter Habitat	Acres	0
Specific-Deer		
Summer Habitat	Acres	0
Winter Habitat	Acres	0
Significant Fisheries		
Stream Miles	Miles	1
Stream Habitat	Acres	1
Lakes	No.	0
Lake Habitat	Acres	0
Water Developments		
Existing	No.	0
Recreation		
Primitive	RVDs	0
Semiprimitive		
Nonmotorized	RVDs	0
Motorized	RVDs	850
Roaded Natural	RVDs	16,150

* Rating also includes uranium, geothermal, and other energy resources.

Table 1

Idaho Portion

Category	Unit	01152
Gross Acres	Acres	5,549
Net Acres	Acres	5,070
Range		
Existing Obligated		
Suitable	Acres	0
Allotments	No.	0
AUMs	No.	0
Existing Vacant		
Suitable	Acres	0
Allotments	No.	0
AUMs	No.	0
Proposed		
Suitable	Acres	0
AUMs	No.	0
Timber		
Tentative		
Suitable	Acres	3,828
Standing Volume	MMBF	30
Minerals Potential		
Very High	Acres	80
High	Acres	4,990
Moderate	Acres	0
Low	Acres	0
Mining Claims	No.	362
Oil and Gas Potential*		
Very High	Acres	0
High	Acres	0
Moderate	Acres	0
Low	Acres	5,070
Oil and Gas Leases		
Leases	No.	0
Leased Area	Acres	0

Category	Unit	01152
Corridors		
Existing and Potential	No.	0
Wildlife-Threatened and Endangered-Habitat		
Grizzly Bear		
Situation 1	Acres	0
Situation 2	Acres	0
Situation 3	Acres	0
Bald Eagle	Acres	0
Mountain Caribou	Acres	0
Gray Wolf	Acres	0
Wildlife-Big Game		
Summer Habitat	Acres	0
Winter Habitat	Acres	0
Specific-Elk		
Summer Habitat	Acres	0
Winter Habitat	Acres	0
Specific-Deer		
Summer Habitat	Acres	0
Winter Habitat	Acres	0
Significant Fisheries		
Stream Miles	Miles	1
Stream Habitat	Acres	1
Lakes	No.	0
Lake Habitat	Acres	0
Water Developments		
Existing	No.	0
Recreation		
Primitive	RVDs	0
Semiprimitive		
Nonmotorized	RVDs	0
Motorized	RVDs	850
Roaded Natural	RVDs	150

* Rating also includes uranium, geothermal, and other energy resources.

Table 1

Montana Portion

Category	Unit	01152
Gross Acres	Acres	1,600
Net Acres	Acres	1,600
Range		
Existing Obligated		
Suitable	Acres	0
Allotments	No.	0
AUMs	No.	0
Existing Vacant		
Suitable	Acres	0
Allotments	No.	0
AUMs	No.	0
Proposed		
Suitable	Acres	0
AUMs	No.	0
Timber		
Tentative		
Suitable	Acres	968
Standing Volume	MMBF	8
Minerals Potential		
Very High	Acres	0
High	Acres	1,600
Moderate	Acres	0
Low	Acres	0
Mining Claims	No.	63
Oil and Gas Potential*		
Very High	Acres	0
High	Acres	0
Moderate	Acres	0
Low	Acres	1,600
Oil and Gas Leases		
Leases	No.	1
Leased Area	Acres	1,600

Category	Unit	01152
Corridors		
Existing and Potential	No.	0
Wildlife-Threatened and Endangered-Habitat		
Grizzly Bear		
Situation 1	Acres	0
Situation 2	Acres	0
Situation 3	Acres	0
Bald Eagle	Acres	0
Mountain Caribou	Acres	0
Gray Wolf	Acres	0
Wildlife-Big Game		
Summer Habitat	Acres	0
Winter Habitat	Acres	0
Specific-Elk		
Summer Habitat	Acres	0
Winter Habitat	Acres	0
Specific-Deer		
Summer Habitat	Acres	0
Winter Habitat	Acres	0
Significant Fisheries		
Stream Miles	Miles	0
Stream Habitat	Acres	0
Lakes	No.	0
Lake Habitat	Acres	0
Water Developments		
Existing	No.	0
Recreation		
Primitive	RVDs	0
Semiprimitive		
Nonmotorized	RVDs	0
Motorized	RVDs	0
Roaded Natural	RVDs	16,000

* Rating also includes uranium, geothermal, and other energy resources.

B. Resource Values

1. Recreation. Elk hunting and driving old mining roads are the predominant recreation uses of this area. Current use is light.

2. Wildlife. Most animals found in northern Idaho are also found here. No habitat for threatened and endangered species exists. It is the

elk herd existing in this general area which catches public attention.

3. Timber. The area contains 4,800 acres of suitable timberland supporting 38 MMBF. The low volume reflects the fact that much of suitable acreage is presently poorly stocked brushfield.

4. Minerals. This unit is underlain primarily by argillites and quartzites of the Wallace Formation, a unit of the Precambrian Belt Supergroup. The Ravalli Group crops out to the north and northeast. The northwest-striking Placer Creek fault, which is the southern boundary of the silver belt of the Coeur d'Alene Mining District, is located within the northern half of the unit.

   Two percent of the unit is rated as having very high mineral potential and the remaining 98 percent as high. The Idaho Panhandle side of the unit has 362 unpatented mining claims and 479 acres of patented mining claims. In Montana there are 63 claims. There are many prospects in the area and exploration is ongoing, with a current diamond drilling project underway.

   There is presently a gas and oil lease application on file covering the area.

5. Range. Neither cattle or sheep have used the Wonderful Peak area since the 1930s. This situation will probably not change under either a wilderness or nonwilderness form of management.

C. Other Management Considerations

1. Fire. Although large fires have occurred in the area, the number of fires occurring annually is low.

D. Need

1. Contribution to National Wilderness Preservation System (NWPS). The main attribute and contribution of this area is its display of successional vegetative changes resulting from the 1910 fire, which burned most of the area.

2. Public Interest and Concerns. Public response to the RARE II assessment indicated that 9.5 percent of those expressing a preference favored a wilderness designation while 90.5 percent favored a non-wilderness designation. During public reveiw of the DEIS, few comments were received on the Wonderful Peak Roadless Area. Several comments favored wilderness for all existing roadless areas. Other responders opposed any additions to the wilderness system.

3. Proximity to Designated Wilderness and to Population Centers. Table C-4 displays wilderness opportunities and proximity to roadless areas on the Idaho Panhandle National Forests. The closest wilderness area is the Cabinet Wilderness in western Montana, approximately 100 miles to the northeast. There is access to 1.6 million acres of wilderness located within 200 miles of Coeur d'Alene, as well as an additional

5.8 million acres within 300 miles (northern Idaho, eastern Washington and Oregon, and western Montana).

E. Alternatives and Environmental Consequences

1. Management Emphasis Assignment by Alternatives. Management emphasis indicates which resource activity is highlighted. If the emphasis is timber, most of the activity on those acres would be for timber management. Resource activities which are compatible with the emphasis would continue, but with less intensity. Table 2 lists the acres of each management emphasis by alternative.

Table 2

Wonderful Peak Roadless Area (01152)
Management Emphasis by Alternative

Management Emphasis	Alternatives 1/											
IPNF	1	2	3	4	5	6	7	8	9	10	11	12
Lolo	(a)	(c)	(g)	(c)	(d, e,f)	(-)	(e, f,g)	(-)	(g)	(d, e,f)	(d, e,f)	(d, e,f)
	(Thousand Acres)											
Wilderness	0	0	6.7	0	0	0	0	0	0	0	0	0
Nonwilderness												
No Tbr. Harvest	0	0	0	0	0	0	0	0.8	0	0	0	0
Timber/Wildlife	3.0	3.4	0	3.5	3.4	3.0	3.5	3.5	3.5	3.2	2.2	2.2
Wildlife/Visual	0	0	0	0	0	0	0	0	0	0.2	0	0
Special Areas	0	0	0	0	0	0	0	0	0	0	0	0
Mimimum Level	3.7	3.3	0	3.2	3.3	3.7	3.2	2.4	3.2	3.3	4.3	4.3
Total	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7

Management Emphasis	Alternatives 1/											
IPNF	1	2	3	4	5	6	7	8	9	10	11	12
Lolo	(a)	(c)	(g)	(c)	(d, e,f)	(-)	(e, f,g)	(-)	(g)	(d, e,f)	(d, e,f)	(d, e,f)
	(Thousand Acres)											
Summary of Management Emphasis:												
Developed												
Decade 1	0	0	0	0.3	0	0	0	0	0.3	0	0.8	0.2
Decade 5	5.1	3.9	0	2.3	1.6	5.0	3.0	0.7	1.9	1.5	2.0	0.3
Roadless 2/												
Decade 1	5.1	5.1	0	0	5.1	5.1	5.1	5.1	0	5.1	0	0
Decade 5	0	0	0	0	0	0	0	0	0	0	0	0
Wilderness	0	0	5.1	0	0	0	0	0	0	0	0	0

1/ Alternative clarification -

1 - Regional Goals
2 - High Market
3 - High Nonmarket
4 - High Timber, Fish
5 - Moderate All Resources
6 - High Timber, Wildlife
7 - High Nonmarket, Stable Timber
8 - Current Program
9 - High Recreation
10 - High Wildlife, Moderate Timber
11 - Preferred Alternative
12 - Preferred w/Departure

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The management emphasis for the Wonderful Peak Roadless Area is a combination of management prescriptions and alternatives from two National Forests, the Lolo, and Idaho Panhandle. Because resources, uses, and land conditions area somewhat different on each Forest, neither the alternatives nor the management emphasis are fully integrated. Because the Idaho Panhandle Forest is the lead Forest for this roadless area, for purposees of this evaluation, the alternatives and management emphasis from the Lolo Forest have been integrated into those of the Idaho Panhandle Forest as close as possible on the basis of goals and objectives common to each Forests alternatives and management emphasis.

Further information on the specific alternatives and management emphasis for the Idaho Panhandle Forest's areas can be found in that Forest's Draft Environmental Impact Statement for the Forest Plan.

The proposed wilderness/nonwilderness designation for area 1152 is made and documented in the Idaho Panhandle Environmental Impact Statement. This proposed designation has priority over all other land designations and none of the two

Forests can undertake any management activity other than current direction until such time that a record of decision is issued in conjunction with this document.

Designation: Wilderness
Management Emphasis: Wilderness

The entire area would be designated wilderness under Alternative 3.

A wilderness designation would protect existing wilderness attributes and enhance ones that have been compromised, largely due to mining. Existing uses not compatible with wilderness philosophy would have to be mitigated. The 500 acres of patented mining claims would have to be excluded from the area. Existing roads would be closed and allowed to revegetate and motorized uses would be prohibited.

Harvest of 38 MMBF of timber will be foregone by designation of the Wonderful Peak area as wilderness. Minerals, oil, and gas would not be available since the area would be withdrawn from mineral entry.

The nonpriced benefits or costs would be:

- The national wilderness system area would increase.
- Water quality, fisheries, scenic views, and primitive recreational opportunities would remain at their present high level.
- Natural ecosystem would be protected.
- Opportunity for solitude would increase.
- Diversity would tend toward old growth.
- Big-game security would increase.
- Recreational off-road vehicle use would be eliminated.

Social and economic effects center on the resource values of timber, minerals, wildlife, recreation, and wilderness. The timber industry would not be supported by this designation. The minerals industry would not be supported by this designation. The minerals industry would be negatively impacted by this designation due to loss of high mineral potential area as well as loss of the time and money already invested in exploration of the area. Publics valuing wilderness will be supported. Recreationists with established motorized use of the area would be displaced.

Designation: Nonwilderness
Management Emphasis: Timber/Wildlife

A range of 30 to 50 percent of the area is designated for this management emphasis by all the nonwilderness alternatives.

Wilderness attributes will be negatively impacted for lands designated for this emphasis. After the first decade, approximately 20 percent of the area will be roaded and developed for all alternatives. After the fifth decade, the entire area will be foregone as wilderness for all nonwilderness alternatives.

The market resource of 38 MMBF will be available under this emphasis. Minerals, oil, and gas will be available for development, which is likely since the area has high to very high mineral potential.

The nonpriced benefits or costs would be:

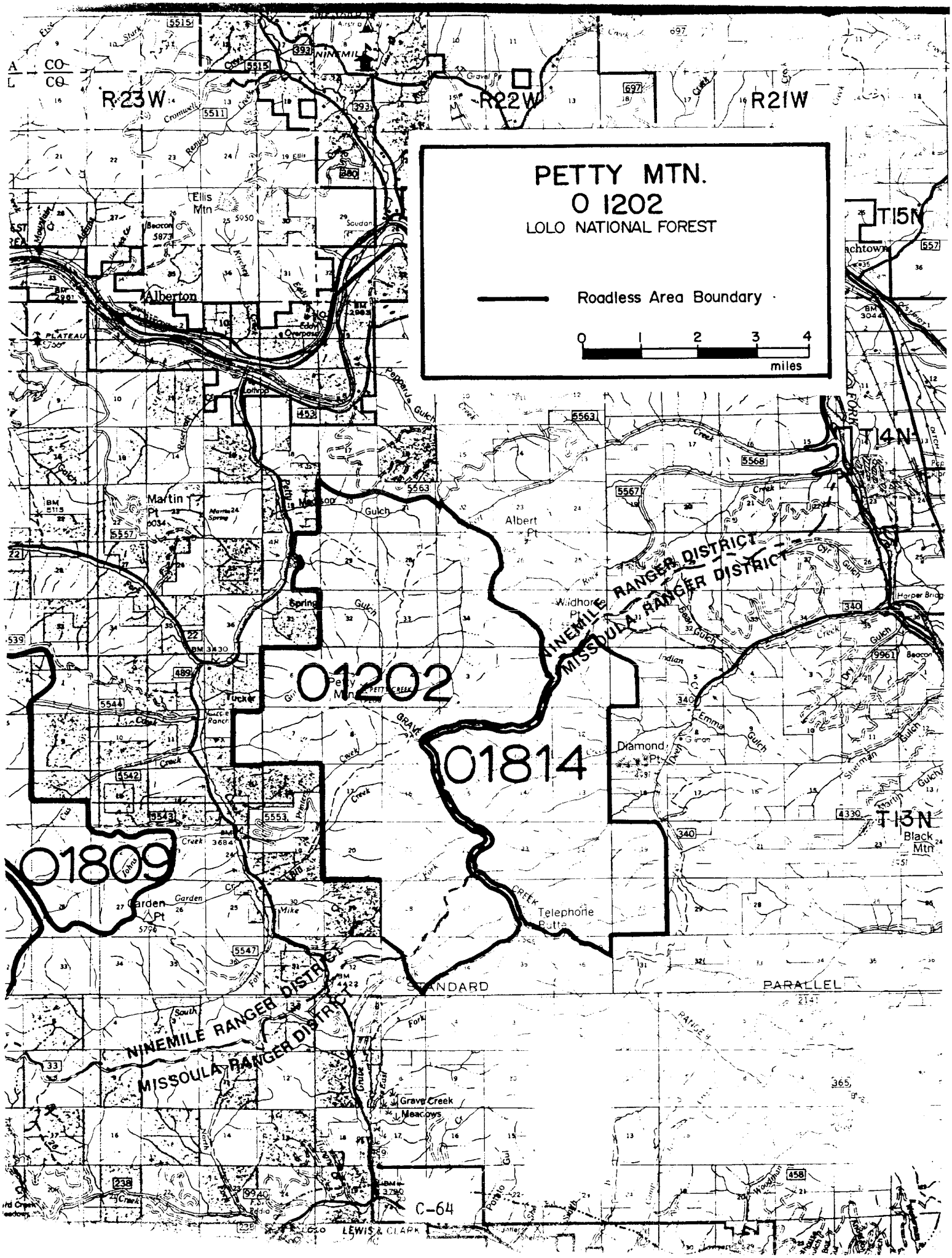
- Wilderness values will be foregone.
- Visual quality will decline.
- Diversity would tend toward younger, managed stands.
- Security for big-game animals would decline.
- Semi-primitive recreation opportunities would decline.
- Water quality and fisheries would decline slightly.
- Opportunities for solitude would be fewer.
- Quality hunting experiences will decline.

Social and economic effects center on the resource values of timber, minerals, wildlife, recreation, and wilderness. Timber and mineral resources would be available, thus supporting the wood products and minerals industries. The change in recreation setting could be disruptive to those publics using the area for primitive or semiprimitive recreation as well as publics viewing the area from the Bitterroot Divide.

Designation: Nonwilderness
Management Emphasis: Minimum Level

For all nonwilderness alternatives, a range of 35 to 65 percent of the area is designated for the minimum level or custodial management emphasis.

Lands designated for this emphasis are located primarily along the State line, on ridgetops throughout the area, and on non-forested sideslopes. Market resources, nonpriced resources, and socioeconomic factors will not be significantly affected by this emphasis. The only impacts that would likely occur would be roads across these custodial areas to gain access to timber harvest or mineral development areas. Consequently, the indirect impacts will be the same as those described in the section on Timber/Wildlife management emphasis.


PETTY MTN.
O 1202
LOLO NATIONAL FOREST
Roadless Area Boundary
0 1 2 3 4
miles
R23W
R22W
R21W
T15N
T14N
T13N
O1202
O1814
O1809
NINEMILE RANGER DISTRICT
MISSOULA RANGER DISTRICT
Ellis Mtn
Alberton
Martin Pt
Albert Pt
Wildhorse Pt
Diamond Pt
Garden Pt
Telephone Butte
Black Mtn
Grave Creek Meadows
STANDARD PARALLEL
C-64
LEWIS & CLARK

PETTY MOUNTAIN #X1202

Acreage:

Gross Acres: 16,980
Net Acres: 16,980

I. Description

A. Location and Access

This area was not included in RARE II because it was part of a Unit Plan. The original area was 19,910 gross acres and 19,910 net acres. The area has been reduced by 2,930 acres as a result of a proposed timber sale in Fiscal Year 1984.

The Petty Creek Roadless Area is situated 17 miles west of Missoula, 5 miles southeast of Alberton, and 6 miles southwest of Frenchtown. Access from the west is from the Graves Creek-Petty Creek Road which forms a small part of the northwest border and generally runs no further than a mile from the boundary. Several logging roads extend off of this main access and terminate at the southwest border. These logging roads are in Printers, Graves, and East Fork of Petty Creeks. Forest Road No. 5563 accesses the north end, and a jeep trail forms the western margin along the Telephone Butte-Wildhorse Point Divide. There are also portions of the system trails extending across this unit for a total distance of 9 miles. Refer to Table C-4 for proximity information.

B. General Description

Petty Mountain is the most prominent feature in this roadless area. Almost 7,300 feet high, this peak rises nearly 4,000 feet above Petty Creek, 2 miles from the peak. A number of streams flow down the steep face into Petty Creek on the west. Albert Creek and Rock Creek drain the north and eastern portion of the Petty Mountain unit and flow into the Clark Fork drainage. The steeper hillsides have numerous rock outcrops, scree slopes, and open savannahs on the south- and west-facing slopes.

The Petty Mountain Roadless Area provides habitat for common game and nongame wildlife species found in western Montana. There is also peregrin falcon habitat. This habitat, along with big game winter range which occurs in the area, are attractive to visitors who value opportunities to view wildlife.

Three members of the Precambrian Age Missoula Group occur in the Petty Mountain Roadless Area; the Miller Peak Formation, Bonner Quartzite, and McNamara Formation. Red, gray, and green argillites, siltites, and quartzites are common in these formations.

Because of its proximity to Missoula, this area is popular with trail-bike and four-wheel drive enthusiasts. Petty Mountain and the Grave Creek Range Divide provide scenic views.

II. Analysis of Wilderness Suitability

A. Capability

1. Wilderness Attributes

a. Naturalness - Ecological processes and the natural landscape in parts of the area have been disrupted to some extent by past domestic grazing; however, the last permitted use was in 1982. The area contains nearly equal amounts (12 to 20 percent) of these habitat types: scree, Douglas-fir/ninebark, blue huckleberry, subalpine fir/menzesia and subalpine fir/beargrass. These comprise the major part of the area above 4,500 feet elevation.

While most of the animal species native to the area are found in the Petty Mountain Roadless Area, none is particularly dependent on wilderness for viability of survival. Animals on winter ranges can be susceptible to human activity and the area does contain some winter range. Viewing animals such as elk in their native habitat may be closely associated with a wilderness experience in some visitors' minds. The area is year-round habitat for approximately 75 bighorn sheep. The existance of wild sheep is unique to the local area.

Air and water quality are considered good within the area.

There are no known structures or facilities within the area.

Evidence of man's activities include Forest Service and four-wheel drive vehicle trails, old lookout tower footings, hitch trails at Petty Mountain, footings of the Grave Range Lookout at the head of Bear Creek along the Grave Creek Range Divide, and footings of the Wildhorse Point Lookout. Four-wheel drive vehicle trails include Grave Creek Range Divide Trail from Blue Mountain to Wildhorse Point, Grave Creek Trail from Grave Creek to the Grave Creek Range Divide Trail, and Camp Creek Trail from Camp Creek to the Grave Creek Divide.

b. Inspirational Values - The size of the area offers visitors the opportunity to experience a sence of being alone which may contrast to their daily life. The physical properties of the area do not contrast appreciably with the surrounding geography and, consequently, may not be awe-inspiring visually except in the general sense.

c. Recreational Values - Topographic screening in some of the valleys offer a sense of solitude. Traffic from Interstate-90 and State Highway 12 is far enough away that it does not particularly impact the unit. Use levels are moderate. Most people recreate here because of its proximity to Missoula, Lolo, and Blue Mountain.

Opportunities for primitive recreation are moderate because of the adequate topographic screening. Trail bike and four-wheel drive use lessens the primitive qualities of the area. The maximum distance from the perimeter to the center is 3 miles. However, in most areas it is about half of that.

There are no known threatened or endangered species.

c. Cultural/Historical Values - Although there are mining sites adjacent to the boundary, there have been no historical or prehistoric sites identified within the area.

e. Scientific/Educational or Unique Values - Some opportunity exists to observe and study big game animals in their natural habitat, but there are no known endangered species of animals or plants in the area. The area does not have unique vegetative communities to be used as benchmarks or unusual or scarce ecosystem representatives not found on existing wilderness areas. Gene pools in the unit do not differ appreciably from the surrounding area.

2. Manageability and Boundaries

The Petty Creek Roadless Area contains no non-Federal lands. Except for the eastern boundary which follows a major divide, the borders run across topographic features and would be very hard to locate and monument on the ground. Some timber harvesting activities taking place outside the perimeter of the unit have an influence on its solitude and primitive enjoyment. Roads are under construction in Albert and Rock Creeks in support of logging. The sight of previously cut stands and current logging on the west side of Petty Creek is visible from many areas within the roadless area, especially at higher elevations. Along the eastern boundary ridge, views of Missoula, the highways, and the pulp mill are readily seen.

B. Other Resources Found in the Area

1. Potential

The area provides habitat for a wide variety of game and nongame wildlife species commonly found in western Montana (see Appendix B-2, Proposed Lolo Forest Plan, RDEIS). There are about 576 acres of riparian lands. The area contains 768 acres of deer and elk winter range.

Forty percent of the Petty Mountain area is under lease for oil and gas, and no mining claims lie inside the boundary. A series of four mining claims and a mill site staked for high purity quartz are immediately adjacent to the west. No acres of high/very high mineral potential lands are known to exist in the area.

The unit has 760 acres classed as nonstocked, 184 acres of seedlings and saplings, 913 acres of poles, 3,362 acres of immature sawtimber, and 10,270 acres of mature sawtimber. Of this, 12,510 acres are

classified as commercial timberland. The suitable lands presently support a standing timber inventory of 97.3 MMBF with a long-term sustained yield of 2.3 MMBF annually.

This unit contains about 2,100 acres of the Petty Creek grazing allotment. The last permitted use was in 1982 for 19 cows for 76 AUM's. This permit was cancelled in 1984 and is now vacant.

On current Recreation Opportunity System maps, this unit is shown as 100 percent semiprimitive motorized. Most of the recreational use occurs during the hunting season, in addition to berrypicking, hiking, and trail biking. Numerous creeks provide fishing opportunities.

2. Resource Summary

X1202 - Petty Mountain Roadless Area

Category		
Gross acres	Acres	16980
Net Acres	Acres	16980
Recreation		
Primitive	RVD's	0
Semiprim. Nonmot.	RVD's	0
Semiprim. Motor.	RVD's	84900
Roaded Natural	RVD's	0
Range		
Existing Obligated		
Suitable	Acres	0
Allotments	No.	0
AUMs	AUMs	0
Existing Vacant		
Suitable	Acres	370
Allotments	No.	1
AUMs	AUMs	30
Proposed		
Suitable	Acres	0
AUMs	AUMs	0
Timber		
Tenative Suitable	Acres	12510
Standing Volume	MMBF	97.3
Corridors		
Exist. & Pot.	No.	0
Wildlife - T&E		
Grizzly Bear		
Habitat Sit. 1	Acres	0
Habitat Sit. 2	Acres	0
Habitat Sit. 3	Acres	0
Bald Eagle Hab.	Acres	0
Gray Wolf Hab.	Acres	0
Peregrin Fal. Hab.	Acres	30
Wildlife - Big Game		
Summer Habitat	Acres	0
Winter Habitat	Acres	768
Significant Fisheries		
Stream Miles	Miles	6.5
Stream Habitat	Hab. Ac	6.3
Lakes	No.	0
Lake Habitat	Hab. Ac	0
Water Develop.		
Existing	No.	0
Hardrock Potential		
Very High	Acres	0
High	Acres	0
Moderate	Acres	6029
Low	Acres	10951
Mining Claims	No.	0
Oil & Gas Potential		
Very High	Acres	0
High	Acres	0
Moderate	Acres	0
Low	Acres	16980
Oil & Gas Leases	No.	1
Leased Area	Acres	6800

3. Management Considerations

There are no management concerns within this area.

4. Need

During the public reveiw period for the DEIS, there were few additional comments on the Petty Mountain Area. Several comments favored wilderness designation for all existing roadless areas. Other responders opposed further additions to the wilderness system.

III. Impacts

Designation: Wilderness
Management Emphasis: Wilderness

Petty Mountain is allocated to wilderness in Alternative g but this is the only alternative that the total or any portion is allocated to wilderness.

Wilderness allocation can enhance the area's wilderness attributes since there are existing uses and facilities not usually associated with wilderness allocation. The existing jeep trails, which are used for recreation, could be eliminated.

The 12,500 acres of land tentatively suitable for timber production would not be available. This would remove about 97 million board feet from the Forest timber base.

Livestock grazing of 30 AUM's could occur in the area but use of motorized equipment would change.

Big-game or elk management would not change much since most of the winter range forage is produced on permanent grassland. Thus, cover/forage relationships should not change much over time except as influenced by wildfire control policy. A policy which lets fire burn on the winter range will maintain communities associated with grassland.

Under wilderness allocation, recreation use would continue to be dominated by hunting.

The nonpriced benefits are:

- Visual quality would be Preserved.
- Wilderness area would increase.
- Existing big-game security would be maintained.
- Diversity would tend toward old-growth without wildfire but could be improved depending on the control policy.
- Water quality and fisheries would be maintained at their present natural levels.
- Local employment would decrease slightly due to the unavailability of timber.

Economic effects would be reflected in the area which represents less than 1 percent of the land base suitable for timber. The loss in timber volume can be mitigated by practicing intensive forestry elsewhere. Other resource values would be retained. Motorized recreational use would be excluded. Oil and gas and mineral opportunities are moderate to low and would be foregone with this emphasis.

Designation: Nonwilderness
Management Emphasis: Timber/Range

All alternatives except a and g allocate all or some of this area to timber or range prescriptions. Alternative c allocates over 80 percent of the area to these prescriptions. Alternatives b, d, e, and f allocate from 2 to 14 percent to timber/range management.

Allocation to this emphasis will forego the possibility of wilderness allocation. The timber will be accessed with roads and harvest will be scheduled up to the limit of the constraints for these prescriptions.

The nonpriced effects are:

- Visual quality would be at its lowest level.
- Semiprimitive recreation potential would be foregone by the end of the fifth decade.
- Wilderness characteristics would be compromised in 50 years.
- Elk security would be minimized.
- Diversity would tend toward younger age classes with minimum old growth.
- Water quality and fisheries effects would be mitigated.
- The greatest number of jobs, mainly in the wood products industry, would be provided.

Under this emphasis, social effects would be reflected in the recreationists' loss of the roadless characteristic. Motorized use would be maintained. Oil and gas and mineral exploration would be allowed. Wildlife habitat would be protected by mitigating timber harvest activities.

Designation: Nonwilderness
Management Emphasis: Wildlife

The main emphasis in this prescription is big game winter range. Alternatives d, e, and f manage about 5 percent of the area for the big-game winter range resource, Alternatives b and c manage 2 or 3 percent of the area for this emphasis.

Wildlife habitat improvements could be accomplished through timber harvest and prescribed burning. Peregrin falcon habitat would be protected through mitigative measures. Other effects are listed under the roadless emphasis.

Designation: Nonwilderness
Management Emphasis: Visual

Alternative b allocates 4 percent, Alternative a allocates 2 percent, Alternatives d, e, and f allocate traces of the area to the visual management emphasis. Alternative c does not manage for this emphasis. Visuals are

retained in the roadless management emphasis. Visual quality resource will be managed according to the management area classification. Effects are displayed in the roadless management emphasis.

Designation: Nonwilderness
Management Emphasis: Riparian

All alternatives contain inclusions of riparian zones and recognize the need to manage these areas according to policy and guidelines. Alternative g is the wilderness alternative and would not impact the riparian areas. Effects are displayed under the roadless emphasis.

Designation: Nonwilderness
Management Emphasis: Roadless

Alternatives a, b, d, e, and f allocate between 76 and 95 percent of the area to the roadless emphasis. Alternative c provides 8 percent of the area for roadless management and Alternative g is the wilderness alternative wherein no roads would be built.

The nonpriced effects are:

- Visual quality will be maintained.
- Semiprimitive and wilderness attributes can be retained for a long period.
- Age class distribution and diversity would be dominated by old growth; young-age classes would be minimal.
- Water quality and fisheries would not be affected.
- Few wood products related jobs would be added to the industry.

The economic effects of this emphasis would be slight since the area represents less than 1 percent of the land base suitable for timber, and other resources would be retained.

Designation: Nonwilderness
Management Emphasis: Miscellaneous

Miscellaneous management emphases include non-forest land, administrative sites, historical or cultural sites, mineral extraction sites, transportation and utility corridors, campgrounds, picnic areas, ski areas, and areas with concentrated use.

Alternative c manages 9 percent of the area for these sites, Alternatives d, e, and f manage 1 percent and the other alternatives do not manage for miscellaneous sites.

ACRES OF AREA UNDER MANAGEMENT FOR EACH EMPHASIS BY ALTERNATIVE
(Refer to Appendix C Introduction for Management Areas under each emphasis)

Management Emphasis	Alternatives a	b	c	d	e	f	g
NONWILDERNESS							

Timber/Range	-	306	14110	2332	2332	2332	-
Wild life							
Grizzly bear	-	-	-	-	-	-	-
Other	514	306	-	776	776	776	-
Visual	306	628	-	112	112	112	-
Miscellaneous	-	-	1596	200	200	200	-
Riparian	*	*	*	576	576	576	-
Roadless	16160	15740	1274	12984	12984	12984	-
WILDERNESS							
Wilderness	-	-	-	-	-	-	16980
Total	16980	16980	16980	16980	16980	16980	16980

* Small inclusions occur in other management emphasis items.

SUMMARY OF MANAGEMENT EMPHASIS (acres managed by decade)

Developed							
Decade 1	-	-	-	-	-	-	-
Decade 5	820	1240	15706	3996	3996	3996	-
Roadless							
Decade 1	16980	16980	16980	16980	16980	16980	-
Decade 5	16160	15740	1274	12984	12984	12984	-
Wilderness							
Decade 1	-	-	-	-	-	-	16980
Decade 5	-	-	-	-	-	-	16980

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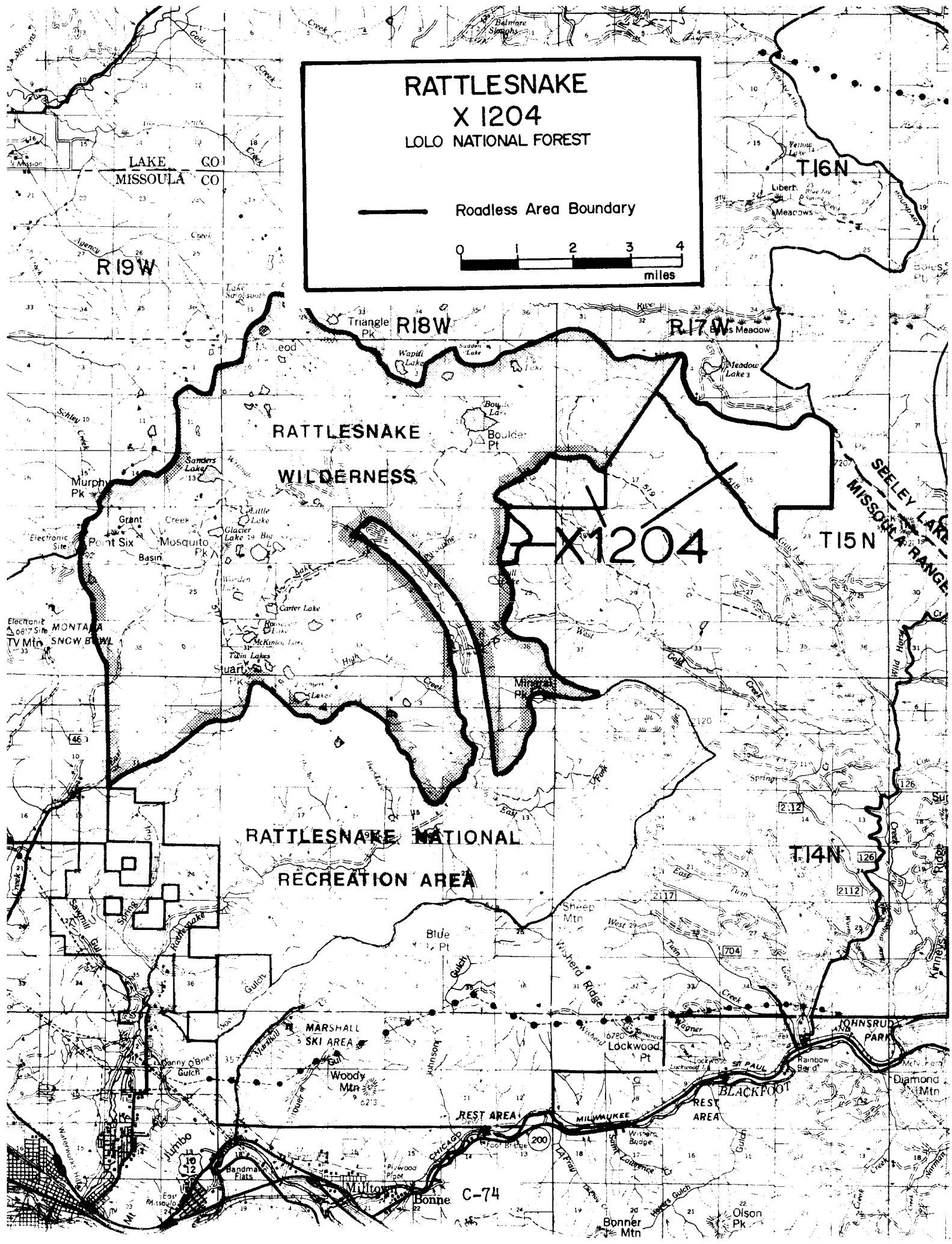
RATTLESNAKE
X 1204
LOLO NATIONAL FOREST
Roadless Area Boundary
0 1 2 3 4
miles
LAKE CO
MISSOULA CO
R19W
R18W
R17W
T16N
T15N
T14N
RATTLESNAKE
WILDERNESS
X1204
RATTLESNAKE NATIONAL
RECREATION AREA
SEELEY LAKE
MISSOULA RANGE
MARSHALL
SKI AREA
REST AREA
REST
AREA
JOHNSRUD
PARK
Triangle Pk
Boulder Pt
Murphy Pk
Point Six
Mosquito Pk
Stuart Pk
Mineral Pk
Blue Pt
Sheep Mtn
Lockwood Pt
Woody Mtn
Rainbow Bend
Diamond Mtn
Bonner Mtn
Olson Pk
Milltown
Bonner
C-74

RATTLESNAKE #X1204

Acreage:

Gross Acres: 3,310
Net Acres: 2,700

I. Description

A. Location and Access

The Rattlesnake Roadless Area is 14 miles northeast of Missoula and 12 miles southwest of Seeley Lake. This unit consists of two separate parcels of land which are between 1-1/2 to 4 miles apart. Vehicle access to the edge of the larger, eastern tract comes from the Gold Creek Road on the south side, and via the Meadow Lake Road out of the Flathead Indian Reservation from the north. The road nearest to the western parcel is the Rattlesnake Creek Corridor, 1-1/2 miles distance. Parts of four system trails cross or skirt the edges of this study area, and they total about 8 miles in length. Some primitive roads exist which are closed to four-wheel drive vehicles but are open to trail bikes. Refer to Table C-4 for proximity information.

The original RARE II area was 13,930 gross acres and 6,180 net acres. As a result of the creation of the Rattlesnake Wilderness area and the Rattlesnake National Recreation Area this area was reduced by 10,620 gross acres and 3,480 net acres.

B. General Description

The Gold Creek-Jocko River Divide forms the northern border of the eastern parcel. A series of generally parallel drainages flow off of it to the southwest and into Gold Creek which forms the southwest boundary. The western tract lies in the upper basin of the West Fork Gold Creek. The drainage is to the southeast.

Precambrian Age Missoula Group rocks are exposed inside this roadless area. Red and green argillites of the Snowslip Formation and carbonaceous beds of the Helena Formation comprise most of the strata seen in outcrop. Glacial tills of Quaternary Age fill some of the higher valleys.

The area is characterized by heavy timber. The Rattlesnake Area as a whole, presents a wide variety of vegetation soils, landforms, wildlife, and esthetics. As a result of past fires, a variety of vegetation in various stages of succession now exists.

Virtually all of this study area has been leased for oil and gas, and an almost equal amount is considered suitable for timber management. Some 20 percent of the land is grizzly bear habitat.

II. Analysis of Wilderness Suitability

A. Capability

1. Wilderness Attributes

a. Naturalness - There has been little disruption of the natural landscape and ecosystem. Over 45 percent of this area consists of the subapline fir/beargrass habitat type. This type makes up a major portion of the higher elevation communities between 5,200 and 7,000 feet on steep, dry exposures. Lodgepole pine is common along with varying amounts of Douglas-fir, spruce, and white bark pine. Understories are limited to huckleberry, beargrass, and varying amounts of grouse whortleberry, pinegrass, elk sedge, and heartleaf arnica. Timber productivity ranges from low to high depending on site conditions. Another 22 percent of the unit is subalpine fir/menziesia which is found on moist, higher elevations on cold exposures between 5,300 to 7,000 feet. Along with subalpine fir are lodgepole pine, Douglas-fir, and spruce. Understories are naturally dominated by menziesia. Timber productivity is moderate to high. The subalpine fir/smooth woodrush and Douglas-fir/blue huckleberry comprises most of the rest of the unit. These vegetative communities are the same as those found on the surrounding lands.

The animal species native to the Rattlesnake Roadless Area are similar to those found outside the unit. None depend upon roadless management for viability or survival. Twenty percent of this area is within Management Situation One for grizzy bear habitat.

Air and water quality are considered good.

There is one cabin in section 18, the Gold Ridge Cabin. Clearcuts and roads from the Gold Creek Timber Sale are located adjacent to the study unit.

b. Inspirational Values - From on top of the Gold Creek-Jocko Creek drainage divide, one can get a very attractive view of the Mission Mountains to the north. This sense of grandeur is somewhat lessened by the many man-made cultural features visible from this vantage point.

c. Primitive and Unconfined Recreation - Opportunities are limited because of the easy access afforded by the high standard Gold Creek Road. Opportunities are also minimal for solitude due to the fact that this unit is a narrow inclusion into an intensive timber management area. The eastern parcel faces an area under active logging.

d. Cultural and Historical Values - No historic or prehistoric sites have yet been found.

e. Educational and Scientific Values - Some opportunities exist to observe big game animals in their natural habitat. No threatened

or endangered plants or animals occur in the unit. The ecosystems in the area are well represented in existing wilderness areas.

f. Uniqueness - Part of the area is considered grizzly bear habitat.

2. Manageability and Boundaries

All of this land slopes into the Gold Creek basin which is under active and extensive timber harvesting. Sights and sounds from the outside operations have a definite adverse impact on what wilderness characteristics exist in the area. The private lands contained within this study unit are slated for intensive harvesting. If the private lands were excluded from the study, the already disjoint unit would become even more fragmented. About half of the overall boundaries follow drainage divides and would not be especially difficult to locate. However, the other borders follow property lines and cutting unit boundaries and are not well marked.

B. Other Resources Found In The Area

1. Potential

The area provides habitat for a wide variety of game and nongame wildlife species commonly found in western Montana (see Appendix B-2, Proposed Lolo Forest Plan, RDEIS). The Rattlesnake drainage has been historic grizzly bear habitat and is considered important to the Mission population.

There are 657 acres of grizzly bear essential habitat in the area. The area also contains approximately 204 acres of elk summer habitat and 85 riparian acres.

Some 95 percent of the total area is currently included under six leases for oil and gas. Only the land in section 22, T. 15 N., R. 17 W., is unleased. There are no mining claims recorded in the study area, and the Forest mineral inventory found no acres of high-very high potential.

There are no range allotments on this unit.

This portion of the Rattlesnake study area contains 18 acres of land classed as nonstocked, 126 acres of seedlings and saplings, 155 acres of poles, 579 acres of immature sawtimber, and 1,748 acres of mature sawtimber. Of this total, 2,570 acres are classified as commercial timberland. The suitable lands presently support a standing timber inventory of 19.5 MMBF with a long-term sustained yield in the area of .59 MMBF annually.

Current Recreation Opportunity maps show this area as 100 percent roaded natural. The area receives light to moderate hiker, horse, and trail bike use to the head of Gold Creek. Because much of this unit is adjacent to the Rattlesnake National Recreation Area and Wilderness, almost all of its use is connected with access to the designated area. Some winter use associated with the Gold Creek Trail exists. There is some four-wheel vehicle use in the Gold Creek area.

2. Resource Summary

X1204 - Rattlesnake Roadless Area

Category		
Gross acres	Acres	3310
Net Acres	Acres	2700
Recreation		
Primitive	RVD's	0
Semiprim. Nonmot.	RVD's	0
Semiprim. Motor.	RVD's	0
Roaded Natural	RVD's	27000
Range		
Existing Obligated		
Suitable	Acres	0
Allotments	No.	0
AUMs	AUMs	0
Existing Vacant		
Suitable	Acres	0
Allotments	No.	0
AUMs	AUMs	0
Proposed		
Suitable	Acres	0
AUMs	AUMs	0
Timber		
Tenative Suitable	Acres	2570
Standing Volume	MBF	19.5
Corridors		
Exist. & Pot.	No.	0
Wildlife - T&E		
Grizzly Bear		
Habitat Sit. 1	Acres	657
Habitat Sit. 2	Acres	0
Habitat Sit. 3	Acres	0
Bald Eagle Hab.	Acres	0
Gray Wolf Hab.	Acres	0
Peregrin Fal. Hab.	Acres	0
Wildlife - Big Game		
Summer Habitat	Acres	204
Winter Habitat	Acres	0
Significant Fisheries		
Stream Miles	Miles	3.5
Stream Habitat	Hab. Ac	3.4
Lakes	No.	0
Lake Habitat	Hab. Ac	0
Water Develop.		
Existing	No.	0
Hardrock Potential		
Very High	Acres	0
High	Acres	0
Moderate	Acres	0
Low	Acres	2700
Mining Claims .	No.	0
Oil & Gas Potential		
Very High	Acres	0
High	Acres	0
Moderate	Acres	2700
Low	Acres	0
Oil & Gas Leases	No.	6
Leased Area	Acres	2600

3. Management Considerations

The amount of lodgepole pine will necessitate the monitoring of the area for possible mountain pine beetle infestation.

4. Public Involvement

During the public reveiw period for the DEIS, there were few additional comments on the Rattlesnake Area. Several comments favored wilderness designation for all existing roadless areas. Other responders opposed further additions to the wilderness system.

III. Impacts

Designation: Wilderness
Management Emphasis: Wilderness

The Rattlesnake Roadless Area is allocated to wilderness in Alternative G but this is the only alternative that the total or any portion is allocated to wilderness.

Wilderness allocation can enhance the area's wilderness attributes since there are existing uses not usually associated with wilderness allocation. Much of this unit is adjacent to the Rattlesnake National Recreation Area and Wilderness and existing motorized activities would be eliminated.

The approximately 2,500 acres of land tentatively suitable for timber production would not be available. This would remove about 19.5 MMBF from the Forest timber base.

Big-game or elk management would not change much although the area does contain a relatively small amount of summer range. Cover/forage ratios should not change much over time except as influenced by wildfire control. There would be no impact on grizzly bear habitat under this emphasis.

The nonpriced effects are:

- Visual quality would be Preserved.
- Wilderness area would increase.
- Diversity would tend toward old growth without wildfire but could be improved depending on the control policy.
- Water quality and fisheries would be maintained at their present levels.
- Local employment may decrease slightly due to the unavailability of timber.

Economic effects would be reflected in the loss of timber volume. This loss is less than 1 percent of the land base suitable for timber on the Forest and could be mitigated by practicing intensive forestry elsewhere. Recreation use would continue to be as varied as it is at the present time; however, without motorized use. Mineral and oil and gas exploration would be precluded.

Designation: Nonwilderness
Management Emphasis: Timber/Range

All alternatives except g allocate some of this area to timber prescriptions. Alterantives a through f allocate from 12 to 95 percent of the area to this prescription.

Allocation to the timber prescription will forego the possibility of wilderness allocation by the end of the first decade.

The nonpriced effects are:

- Visual quality would be at its lowest level.
- Semiprimitive recreation potential would be foregone by the end of the first decade.
- Wilderness characteristics would be compromised in a short time.
- Diversity would tend towards younger age classes with minimum old growth.
- Water quality and fisheries affects would be mitigated.
- The greatest number of jobs, mainly in the wood products industry, would be provided.

Economic effects would not be particularly significant due to the small size of the area. Social effects include maintaining motorized vehicle use at the present level. Oil and gas and mineral exploration would be allowed.

Designation: Nonwilderness
Management Emphasis: Wildlife

The main emphasis in this prescription is summer range. Alternative a allocates 53 percent of the area to both old growth and summer range emphases. Alternatives d, e, and f manage for summer range while Alternatives b, c, and g do not consider this prescription. Wildlife habitat improvement could be accomplished through timber harvest and prescribed burning; however, no improvements are planned. Any potential impact on the grizzly bear habitat would be mitigated. Effects for this emphasis are listed under the roadless emphasis.

Designation: Nonwilderness
Management Emphasis: Visual

Alternative a allocates 28 percent and Alterantive b allocates 41 percent of the area to this emphasis. None of the other alternatives utilize this prescription.

Visuals are retained in the roadless management emphasis. Visual quality resource will be managed according to the management area classification. The effects of this emphasis can be found under the roadless emphasis.

Designation: Nonwilderness
Management Emphasis: Riparian

All alternatives contain inclusions of riparian zones and recognize the need to manage these areas according to policy and guidelines. Alternative g is the wilderness alternative and would not impact the riparian areas. Effects are displayed under the roadless emphasis.

Designation: Nonwilderness
Management Emphasis: Roadless

Alternative b allocates 23 percent of the area, Alterantives a, d, e, and f allocate from a trace to 4 percent and Alterantives c and g do not manage for the roadless allocation.

The nonpriced effects are:

- Visual quality will be maintained at a very high level.
- Semiprimitive and wilderness attributes can be retained for a long period.
- Age class distribution and diversity would be dominated by old growth; young age classes would be minimal.
- Water quality and fisheries would not be affected.
- Few wood products related jobs would be added to the industry.

Since the area represents less than 1 percent of the land base suitable for timber, the economic impact is slight, other resources are retained. Recreation use would remain unchanged.

Designation: Nonwilderness
Management Emphasis: Miscellaneous

Miscellaneous management emphases include non-forest land, administrative sites, historical or cultural sites, mineral extraction sites, transportation and utility corridors, campgrounds, picnic areas, ski areas, and areas with concentrated public use.

Alternatives d, e, and f allocate 16 percent to this emphasis, Alternatives a and c allocate 6 percent and b and g do not manage for these miscellaneous sites.

ACRES OF AREA UNDER MANAGEMENT FOR EACH EMPHASIS BY ALTERNATIVE
(Refer to Appendix C Introduction for Management Areas under each emphasis)

Management Emphasis	Alternatives a	b	c	d	e	f	g
NONWILDERNESS							
Timber/Range	319	959	2541	1235	1235	1235	-
Wildlife							
Grizzly bear	-	-	-	648	648	648	-
Other	1438	-	-	201	201	201	-
Visual	743	1117	-	-	-	-	-
Miscellaneous	159	-	159	420	420	420	-
Riparian	*	*	*	84	84	84	-
Roadless	41	624	-	112	112	112	-
WILDERNESS							
Wilderness	-	-	-	-	-	-	2700
Total	2700	2700	2700	2700	2700	2700	2700

* Small inclusions occur in other management emphasis items.

Management Emphasis	Alternatives a	b	c	d	e	f	g
SUMMARY OF MANAGEMENT EMPHASIS (acres managed by decade)							
Developed							
Decade 1	1740	1740	1740	1740	1740	1740	-
Decade 5	2659	2076	2700	2588	2588	2588	-
Roadless							
Decade 1	960	960	960	960	960	960	-
Decade 5	41	624	-	112	112	112	-
Wilderness							
Decade 1	-	-	-	-	-	-	2700
Decade 5	-	-	-	-	-	-	2700

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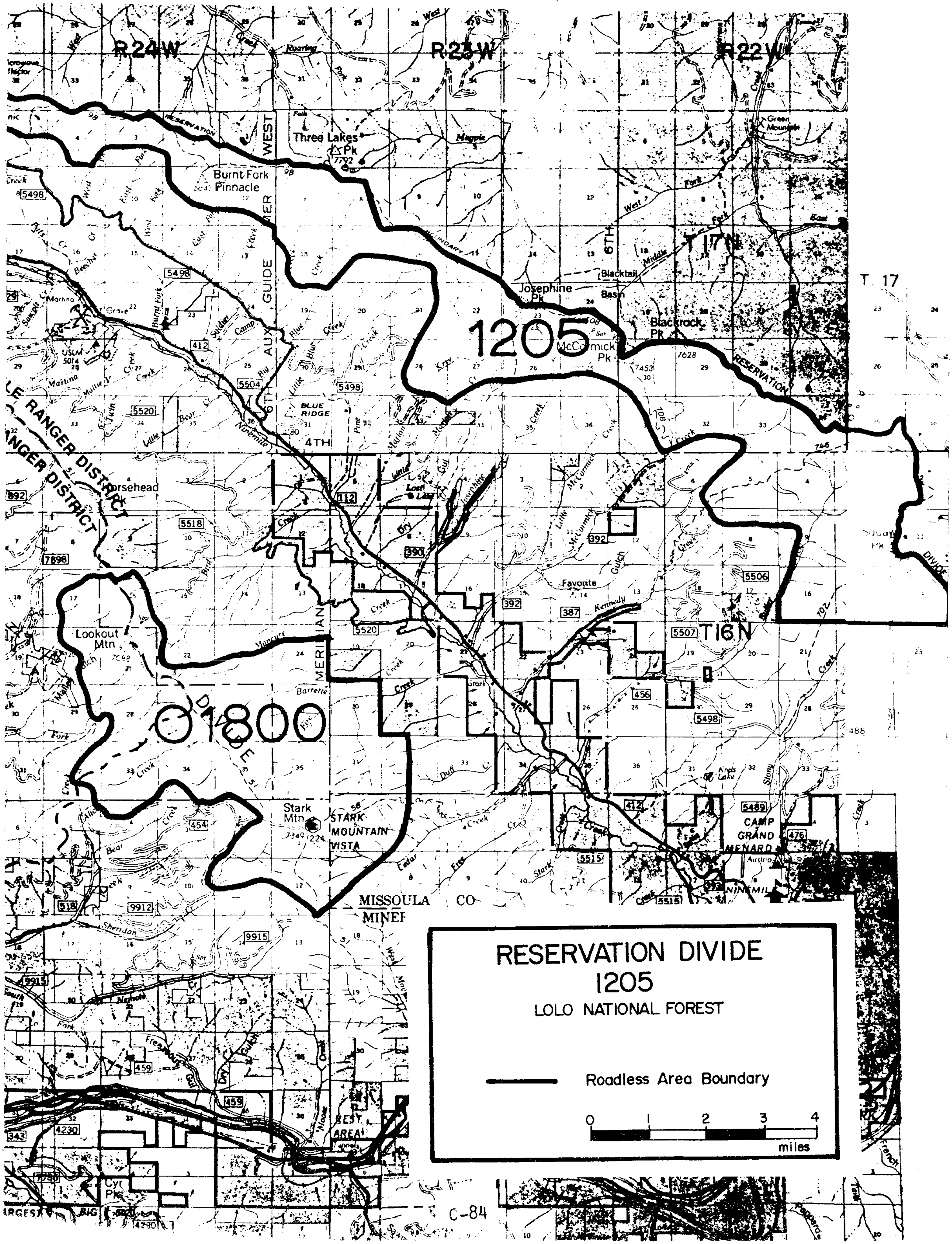
RESERVATION DIVIDE
1205
LOLO NATIONAL FOREST
Roadless Area Boundary
0 1 2 3 4
miles
1205
01800
R24W
R23W
R22W
T17N
T16N
MISSOULA CO
Three Lakes Pk
Burnt Fork Pinnacle
Josephine Pk
Blackrock Pk
McCormick Pk
Lookout Mtn
Stark Mtn
STARK MOUNTAIN VISTA
CAMP GRAND MENARD

RESERVATION DIVIDE #X1205

Acreage:

Gross acres: 16,300
Net acres: 16,300

I. Description

A. Location and Access

This area was not included in RARE II as it was included under a completed unit plan. The original area was 21,680 gross and net acres. The area has been reduced by 1,860 acres by road construction, 2,340 acres for a road currently under construction, and 1,180 acres for a proposed timber sale in 1984.

This long, extremely narrow study unit lies 20 miles northwest of Missoula and 16 miles southeast of the town of Plains. On the Ninemile Creek side, logging and mining roads in Rock, Stony, Butler, Kennedy, McCormick, Josephine, Marion, and Pine Creeks extend up to the Reservation Divide roadless boundary. Further up the Ninemile Valley, other roads are within one-half mile of the border. On the extreme west end of the area, a road accessing an electronics site above Siegel Pass touches the perimeter. From the Flathead Indian Reservation on the north, a road up Seepay Creek comes within three-quarters of a mile, and another road west of Warden Mountain comes within one-half mile of the divide. Refer to Table C-4 for proximity information. There are portions of six system trails totaling 26 miles in the area. Refer to Table C-4 for proximity information.

B. General Description

The Reservation Divide Roadless Area includes the upper portion of all the drainages north of Ninemile Creek from St. Louis Creek to Stony Creek along the Reservation Divide. Elevation within the area varies from approximately 4,400 feet in several stream bottoms to 7,996 feet at Squaw Peak. Squaw Peak is also a prominent feature on the landscape as viewed from the city of Missoula. Topography is steep and rocky near the Divide and gentle in some of the spruce basins at the heads of major streams.

Butler Creek is the largest stream in the roadless area and the only stream large enough to support a fishery. However, a series of waterfalls near the area boundary blocks fish passage, and no fish are found in the upper reaches of Butler Creek. There are no lakes in the area.

There is a variety of 14 habitat types in this area. The main type is subalpine fir/beargrass covering about 40 percent of the area. About 10 percent of the area contains south- and west-facing slopes which are steep, dry, and covered with rocks and scattered vegetation. This diversity would be interesting to a variety of forest users.

Most of this unit contains phyllites and argillites. In the southwestern portion, siltites and argillites are exposed. Diabasic dikes and sills have intruded these Belt Series formations. The Ninemile River Valley was formed as a result of movement and erosion along a major fault system. Deep, unconsolidated alluvial deposits have accumulated in this valley.

The Reservation Divide Roadless Area provides habitat for a variety of game and nongame wildlife species commonly found in western Montana including cougar, ruffed grouse, Franklin's grouse, bobcat, beaver and other furbearers. Visitors can view deer and elk on summer range in the area.

The most popular activities in the area are big game hunting, horseback riding, hiking, and trail bike riding. Snowmobiling occurs along the lower elevations close to road access. The view from Squaw Peak is approximately 50 miles in any direction making it popular with visitors.

II. Analysis of Wilderness Suitability

A. Capability

1. Wilderness Attributes

a. Naturalness - Major fires that occurred in the early 1900's are considered part of the natural process. These fires resulted in expansive lodgepole pine stands which will become susceptable to mountain pine beetle infestation.

Approximately 40 percent of the area is in the subalpine fir/beargrass habitat type which occurs in higher elevations between 5,200 and 7,000 feet. Eleven percent of the area is subalpine fir/ menziesia and another eleven percent is in subalpine fir/woodrush. Ten percent is Douglas-fir/blue huckleberry, 9 percent is subalpine fir-white bark pine/grouse whortleberry. Seven percent of the area is scree. The remaining area is composed of a mixture of other habitat types commonly found on the Lolo Forest.

While most of the animal species native to the area are found in the Reservation Divide Roadless Area, none is particularly dependent on roadless management for viability or survival. Animals on summer ranges can be susceptible to human activity and the area contains some summer range. Viewing animals such as elk in their native habitat may be closely associated with a wilderness experience by some visitors.

The air and water quality are undisturbed; however, there is little available water, except for runoff in the spring. The area is in an airshed which is affected by pollution from the Missoula Valley.

Some 256 mining claims have been staked inside the boundary of this roadless area, some of which are presently being prospected.

An area on the Flathead Indian Reservation contiguous to the Reservation Divide Roadless Area is presently managed as roadless. It is the policy of the tribal council that roads used to harvest timber be closed after use, and that no permanent roads be built to the Reservation Divide within the presently unroaded area.

b. Inspirational Values - As was stated earlier, the view from Squaw Peak can be considered awe-inspiring. A visitor can view the Mission Range, the Flathead Valley, the Missoula Valley, and the lakes on the Reservation side of the Divide.

c. Recreational Values - Solitude might be limited by the narrow shape of the area with short one-half to 2-mile distances from core to perimeter. However, the area does not draw a lot of people except during hunting season. This reduces the likelihood of contact with another visitor.

The area has good proximity and access to perspective users, but it has a lack of water.

d. Cultural/Historical Values - The 1910 fire created a lot of forage through western Montana and Idaho which became valuable to sheepherders. Portions of the Josephine, Mattie-V, and Burnt Fork Trails are part of the old sheep driveway last used around the 1930's or 1940's.

e. Educational and Scientific Values - Educational values for the area are probably limited to casual observation of plants and animals in their native habitat.

f. Unique Values - The unit contains minor amounts of the western red cedar/devil's club habitat type which is uncommon on the Lolo Forest. This type is more represented in National Forests to the west and in northern Idaho.

2. Manageability and Boundaries

The Reservation Divide Roadless Area, a long, narrow strip of land on the Ninemile Creek side of the ridge, is not at all compact. It is 17 miles long and averages 1 mile in width. Visual and aural impacts from timber harvesting activities outside the area are easily perceptible at most locations inside the study unit. The northern border is the Reservation Divide and is easily located on the ground. The other boundaries, however, are much more difficult to find and monument.

B. Other Resources Found in the Area

1. Potential

The area provides habitat for a wide variety of game and nongame wildlife species commonly found in western Montana (see Appendix B-2, Proposed Lolo Forest Plan, RDEIS). There are about 221 riparian acres

in the unit and 204 acres of big game summer range. There are 2.2 miles of significant fishery streams and 2.1 acres of fishery habitat.

Eight issued oil and gas leases cover 95 percent of the area and 256 mining claims have been staked within the boundaries. Virtually all of the unpatented claims are located for placer gold deposits. Some of the faults also carry copper-silver mineralization which is actively prospected for as well. There are 1,275 acres of high or very high mineral potential contained in the unit.

The Reservation Divide Roadless Area contains 271 acres classed as nonstocked, 652 acres of seedlings and saplings, 959 acres of poles, 3,060 acres of immature sawtimber, and 9,327 acres of mature sawtimber. Of this, 11,365 acres are classified as commercial timberland. The suitable lands presently support a standing timber inventory of 82.5 MMBF with a long-term sustained yield in the area of 2.69 MMBF annually.

Portions of the Upper Ninemile and Josephine-Butler grazing allotments are included within the study unit. Nearly all of the area is inside of these two allotments. The last permitted use was in 1982 for 48 cows for 134 AUM's. The entire acreage is unsuitable for grazing due to steep terrain.

The area, especially near Squaw Peak, is a popular hiking and horseback riding route. Trail bikers also use the area. Seasonal hunting, berrypicking, and scenic viewing are also listed as opportunities in semiprimitive nonmotorized.

Recorded prehistoric sites have been inventoried in the area with potential for other sites to exist.

2. Resource Summary

X1205 - Reservation Divide Roadless Area

Category					
Gross acres	Acres	16300	Bald Eagle Hab.	Acres	0
Net Acres	Acres	16300	Gray Wolf Hab.	Acres	0
			Peregrin Fal. Hab.	Acres	0
Recreation					
Primitive	RVD's	0	Wildlife - Big Game		
Semiprim. Nonmot.	RVD's	16300	Summer Habitat	Acres	204
Semiprim. Motor.	RVD's	0	Winter Habitat	Acres	0
Roaded Natural	RVD's	0			
			Significant Fisheries		
Range			Stream Miles	Miles	2.2
Existing Obligated			Stream Habitat	Hab. Ac	2.1
Suitable	Acres	0	Lakes	No.	0
Allotments	No.	0	Lake Habitat	Hab. Ac	0
AUMs	AUMs	0			
Existing Vacant			Water Develop.		
Suitable	Acres	0	Existing	No.	0
Allotments	No.	0			
AUMs	AUMs	0	Hardrock Potential		

Proposed		
Suitable	Acres	0
AUMs	AUMs	0
Timber		
Tenative Suitable	Acres	11365
Standing Volume	MMBF	82.5
Corridors		
Exist. & Pot.	No.	0
Wildlife - T&E		
Grizzly Bear		
Habitat Sit. 1	Acres	0
Habitat Sit. 2	Acres	0
Habitat Sit. 3	Acres	0
Very High	Acres	800
High	Acres	0
Moderate	Acres	15500
Low	Acres	0
Mining Claims	No.	256
Oil & Gas Potential		
Very High	Acres	0
High	Acres	0
Moderate	Acres	16300
Low	Acres	0
Oil & Gas Leases	No.	8
Leased Area	Acres	15500

3. Management Considerations

Present lodgepole pine stands will become susceptible to infestation by the mountain pine beetle as they mature.

4. Public Involvement

During the public reveiw period for the DEIS, there were few additional comments on the Reservation Divide Area. Several comments favored wilderness designation for all existing roadless areas. Other responders opposed further additions to the wilderness system.

III. Impacts

Designation: Wilderness
Management Emphasis: Wilderness

The Reservation Divide area is allocated to wilderness in Alternative g but this is the only alternative that the total area or any portion is allocated to wilderness.

Wilderness allocation can enhance the area's wilderness attributes since there are existing uses not usually associated with wilderness allocation. Any existing motorized activities could be eliminated.

The approximately 11,400 acres of land tentatively suitable for timber production would not be available. This would remove about 82.5 MMBF including a significant area of lodgepole pine which may become infested by mountain pine beetle and eventually need to be salvaged.

Big game or elk management would not change much. The area contains approximately 200 acres of summer habitat. Cover/forage ratios should not change much over time except as influenced by wildfire control.

Under wilderness allocation, recreation use would continue to be dominated by a variety of activities.

The nonpriced effects are:

- Visual quality would be preserved.
- Wilderness area would increase.
- Diversity would tend toward old growth without wildfire but could be improved depending on the control policy.
- Water quality and fisheries would be maintained at their present natural levels.
- Local employment may decrease slightly due to the unavailability of timber.

Economic effects would be reflected in the loss of less than 1 percent of the land base suitable for timber. The loss in timber volume can be mitigated by practicing intensive forestry elsewhere. Social effects would be reflected in Retention of the present recreation status. Other resources would be retained, precluding mineral exploration.

Designation: Nonwilderness
Management Emphasis: Timber/Range

All alternatives except g allocate some of this area to timber prescriptions. Alternative c allocates 71 percent, Alternatives d, e and f allocate 25 percent, and Alternatives a and b allocate between 5 and 9 percent.

Allocation to the timber prescription will forego the possibility of wilderness allocation by the end of the first decade. The possibility of infestation by the beetle will cause the area to be continually accessed with roads and harvest will be scheduled up to the limit of constraints for these prescriptions.

The nonpriced effects are:

- Visual quality would be at its lowest level, Maximum Modification.
- Semiprimitive recreation potential would be foregone by the end of the first decade.
- Wilderness characteristics would be compromised in a short time.
- Diversity would tend towards younger age classes with minimum old growth.
- Water quality and fisheries affects would be mitigated.
- The greatest number of jobs, mainly in the wood products industry, would be provided.

Under this emphasis, social effects would be reflected in the recreationists' loss of the roadless characteristic. Salvaging the infested lodgepole pine is probably the most significant economic factor.

Designation: Nonwilderness
Management Emphasis: Wildlife

The main emphasis in this prescription is summer habitat and old growth. Alternative a allocates 3 percent to these prescriptions. None of the other alternatives provide for management of this emphasis.

Old-growth preservation in this area would be difficult in view of the active maountain pine beetle infestation. Whether or not the area is entered for salvage harvesting, the stands would deteriorate as a result of the possible

mountain pine beetle infestation. There is no planned improvement of the summer habitat identified in the area. Effects do not differ appreciably from the timber management emphasis with wildlife objectives maintained.

Designation: Nonwilderness
Management Emphasis: Visual

Alternatives a, b, d, e, and f allocate from 3 to 5 percent of the area for this prescription and none of the other alternatives utilize this emphasis. Visuals are retained in the roadless management emphasis. Visual quailty resource will be managed according to the management area classification. Effects do not differ from those listed in the timber emphasis with visual objectives maintained.

Designation: Nonwilderness
Management Emphasis: Riparian

All alternatives contain inclusions of riparian zones and recognize the need to manage these areas according to policy and guidelines. Alternative g is the wildernss alternative and would not impact the riparian areas. Effects are as displayed under the roadless emphasis.

Designation: Nonwilderness
Management Emphasis: Roadless

Alternative c allocates 25 percent of the area to roadless, Alternatives a, b, d, e, and f allocate between 70 and 88 percent of the area to this management emphasis.

The nonpriced effects are:

- Visual quality will be maintained. Timber harvest would not be evident.
- Semiprimitive and wilderness attributes can be retained for a long period.
- Age-class distributicn and diversity would be dominated by old growth; young age classes would be minimal.
- Water quality and fisheries would not be affected.
- Few wood products related jobs would be added to the industry.

The area represents less than 1 percent of the land base suitable for timber. The loss in timber volume can be mitigated by practicing intensive forestry elsewhere. Other resource values would be retained. Recreation use would not change.

Designation: Nonwilderness
Management Emphasis: Miscellaneous

Miscellaneous management emphases include non-forest land, administrative sites, historical or cultural sites, mineral extraction sites, transportation and utility corridors, campgrounds, picnic areas, ski areas, and areas with concentrated public use.

Alternatives c, d, e, and f allocate from a trace to 4 percent of the area to this emphasis. Alternatives a, b, and g do not manage for these miscellaneous areas.

ACRES OF AREA UNDER MANAGEMENT FOR EACH EMPHASIS BY ALTERNATIVE
(Refer to Appendix C Introduction for Management Areas under each emphasis.)

Management Emphasis	Alternatives a	b	c	d	e	f	g
NONWILDERNESS							
Timber/Range	815	1434	11573	4069	4069	4069	-
Wild life							
Grizzly bear	-	-	-	-	-	-	-
Other	528	-	-	-	-	-	-
Visual	652	815	-	497	497	497	-
Miscellaneous	-	-	652	43	43	43	-
Riparian	*	*	*	218	218	218	-
Roadless	14305	14051	4075	11473	11473	11473	-
WILDERNESS							
Wilderness	-	-	-	-	-	-	16300
Total	16300	16300	16300	16300	16300	16300	16300

* Small inclusions occur in other management emphasis items.

SUMMARY OF MANAGEMENT EMPHASIS (acres managed by decade)

Developed							
Decade 1	1995	2249	2560	2560	2560	2560	-
Decade 5	1995	2249	12225	4827	4827	4827	-
Roadless							
Decade 1	14305	14051	13740	13740	13740	13740	-
Decade 5	14305	14051	4075	11473	11473	11473	-
Wilderness							
Decade 1	-	-	-	-	-	-	16300
Decade 5	-	-	-	-	-	-	16300

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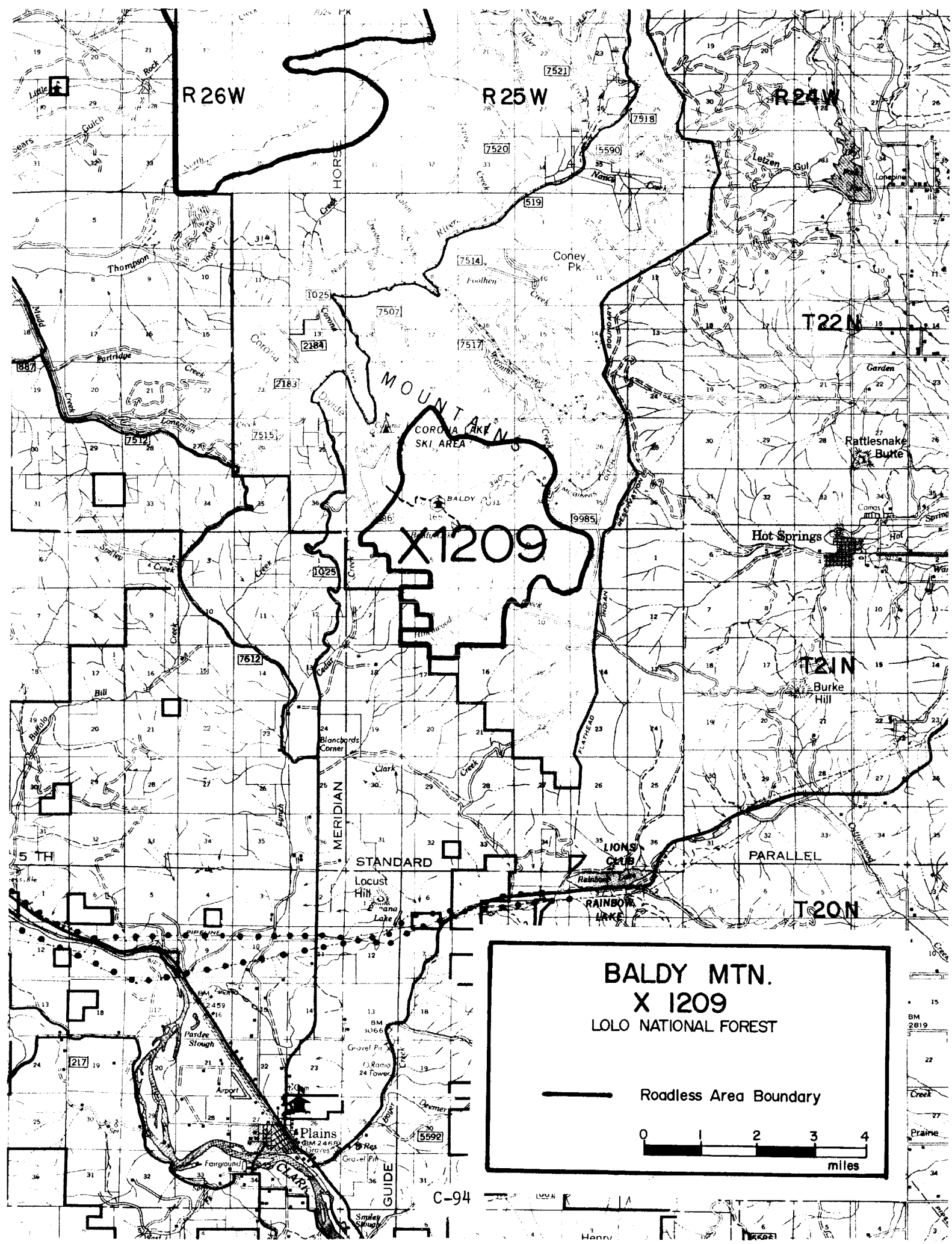

BALDY MTN.
X 1209
LOLO NATIONAL FOREST

Roadless Area Boundary

0 1 2 3 4
miles

BALDY MOUNTAIN #X1209

Acreage:

Gross acres: 6,680
Net acres: 6,680

I. Description

A. Location and Access

Baldy Mountain lies about 5 miles west of the town of Hot Springs and 12 miles north of Plains. Logging roads in Clark Creek provide access to the south side, and logging roads in McGinnis Creek access the east side of the unit. Forest Road No. 886 accesses the west edge. A national recreation system trail (No. 340) meanders generally east to west across Baldy Mountain. Refer to Table C-4 for proximity information.

B. General Description

Baldy Mountain with an elevation of 7,500 feet dominates the landscape in this unit. As the name implies, the upper summit is untimbered and consists of rock ledges and scree slopes. The balance of this roadless area is made up of the mountain slopes. In the southern portion, Hinchwood Creek separates Baldy Mountain from the adjoining hills. There are two small alpine lakes on the north side of the peak. Baldy Mountain, itself, can be seen from both Hot Springs and Plains. As the trail crosses the mountain, it provides a variety of scenic vistas for the visitor.

The area provides habitat for a wide variety of game and nongame wildlife species commonly found in western Montana including furbearers such as cougar and bobcat, and Franklin's grouse and ruffed grouse. Baldy Lake supports a rainbow trout population which was planted for recreation. The other lake in the unit has no fish. There are about 53 riparian acres in the area.

The lower reaches of Baldy Mountain are covered with coniferous trees. Douglas-fir and larch are found on the dryer, south-facing slopes and spruce and subalpine fir on the wetter, north-facing slopes. The upper reaches are mainly rock or talus slides with some scattered subalpine vegetation where there is enough soil to support it. Most of the roadless unit is classified as commercial timberland.

Baldy Mountain, with the national recreation trail and easy access, is a popular area for hiking, hunting, fishing, and trail biking.

II. Analysis of Wilderness Suitability

A. Capability

1. Wilderness Attributes

a. Naturalness - The habitat type for 51 percent of the area is subalpine fir/ beargrass. This occurs at elevations above 5,200 feet on steep, dry exposures. Fourteen percent of the area is Douglas-fir/blue huckleberry and 14 percent is subalpine fir/menziesia. The remainder of the area is covered with a mixture of habitat types which provide the area a wide variety of vegetation.

Precambrian age Ravalli Group strata crop out over all the study area. The primary rock types include argillites, quartzites, and siltites. Large faults running northwest to southeast cut diagonally across the area and displace the rock units by several miles.

The air and water quality are considered good in the area.

Developments within the area include Baldy Lookout and two older lookout foundations. Baldy Lookout is currently in use by the Montana State Department of Lands. A helicopter lands there approximately twice per year to supply the lookout.

Baldy Lookout is not visible from Baldy Lake. Vegetative screening is poor on the southwest side of Baldy due to the extensive talus slopes. Off-site intrusions include the town of Plains, Highway 200, and farms and ranches which are visible from certain parts of the area.

b. Inspirational Values - The topography of the area offers the visitor an opportunity to experience a sense of solitude; however, the area is popular and the trail and Baldy Lake receive moderately high use. This makes visitor contact highly likely.

c. Recreational Values - Opportunities for primitive recreation are very good due to the open understory and high elevation of the area. The trail is well used and provides several expansive vistas from a variety of aspects.

d. Cultural or Historic Values - This area contains one recorded prehistoric site.

e. Educational or Scientific Values - Some opportunity exists to observe and study big-game animals in their natural habitat, but there are no known threatened or endangered species of animals or plants in the area. The ecosystems in the area are well represented in existing wilderness areas.

f. Unique Values - The area is not recognized as having unique vegetative communities which could be used as benchmarks. Gene pools in the unit do not differ appreciably from those in the surrounding area.

2. Manageability and Boundaries

The Baldy Mountain Roadless Area is both small and compact. Virtually all of the boundary is arbitrarly defined by existing developments and landownership lines. For the most part, the boundary would be difficult to locate on the ground. The few access points tend to concentrate users and would make protection of the wilderness characteristics difficult. Few areas can be considered remote and uninfluenced by outside activities. Results of intensive timber harvesting surrounding the unit are easily visible from within it.

B. Other Resources Found in the Area

1. Potential

No mining claims are found inside the Baldy Mountain Roadless Area. Although the Ravalli Group rocks produce copper and silver in the Troy, Montana area, there have been no discoveries of mineralization in this area. Mineral inventories do not indicate a high or very high mineral potential at this time.

The area contains 102 acres classed as nonstocked, 234 acres of seedlings and saplings, 448 acres of poles, 1,338 acres of immature sawtimber, and 3,628 acres of mature sawtimber. Of this, 5,803 acres are classified as commercial timberland. The suitable lands presently support a standing timber inventory of 42.2 MMBF with a long-term sustained yield in the area of 1.38 MMBF annually.

There are no range allotments in the area.

The current Recreational Opportunity System map shows the area as 90 percent semiprimitive, nonmotorized, and 10 percent roaded-natural. The Baldy Lookout and Baldy Lake are popular destinations for hikers and horseback riders from the west and for motorcyclists from the east. A horse unloading ramp is located at the west trailhead. Recreation opportunities include hiking, viewing, fishing, berrypicking, trail biking, and hunting.

2. Resource Summary

X1209 - Baldy Mountain - Roadless Area

Category		
Gross acres	Acres	6680
Net Acres	Acres	6680
Recreation		
Primitive	RVD's	0
Semiprim. Nonmot.	RVD's	6012
Semiprim. Motor.	RVD's	0
Roaded Natural	RVD's	6680
Range		
Existing Obligated		
Suitable	Acres	0
Allotments	No.	0
AUMs	AUMs	0
Existing Vacant		
Suitable	Acres	0
Allotments	No.	0
AUMs	AUMs	0
Proposed		
Suitable	Acres	0
AUMs	AUMs	0
Timber		
Tenative Suitable	Acres	5803
Standing Volume	MMBF	42.2
Corridors		
Exist. & Pot.	No.	0
Wildlife - T&E		
Grizzly Bear		
Habitat Sit. 1	Acres	0
Habitat Sit. 2	Acres	0
Habitat Sit. 3	Acres	0
Bald Eagle Hab.	Acres	0
Gray Wolf Hab.	Acres	0
Peregrin Fal. Hab.	Acres	0
Wildlife - Big Game		
Summer Habitat	Acres	0
Winter Habitat	Acres	0
Significant Fisheries		
Stream Miles	Miles	0
Stream Habitat	Hab. Ac	0
Lakes	No.	0
Lake Habitat	Hab. Ac	0
Water Develop.		
Existing	No.	0
Hardrock Potential		
Very High	Acres	0
High	Acres	0
Moderate	Acres	6680
Low	Acres	0
Mining Claims .	No.	0
Oil & Gas Potential		
Very High	Acres	0
High	Acres	0
Moderate	Acres	6680
Low	Acres	0
Oil & Gas Leases	No.	2
Leased Area	Acres	6680

3. Management Considerations

There are none.

4. Public Involvement

During the public reveiw period for the DEIS, there were few additional comments on the Baldy Mountain Area. Several comments favored Wilderness designation for all existing roadless areas. Other responders opposed further additions to the wilderness system.

III. Impacts

Designation: Wilderness
Management Emphasis: Wilderness

Baldy Mountain is allocated to wilderness in Alternative g but this is the only alternative that the total or any portion is allocated to wilderness.

Wilderness allocation can enhance the area's wilderness attributes since there are existing uses and facilities not usually associated with wilderness allocation. Any existing motorized activities could be eliminated.

Approximately 5,800 acres of land tentatively suitable for timber production would not be available. This would remove about 42 MMBF from the Forest timber base.

Big-game or elk management would not change much since the area does not contain significant summer or winter habitat. Cover/forage relationships should not change much over time except as influenced by wildfire control.

Under wilderness allocation, recreation use would continue to be dominated by a variety of activities.

The nonpriced effects are:

- Visual quality would be preserved.
- Wilderness area would increase.
- Diversity would tend toward old growth without wildfire but could be improved depending on the control policy.
- Water quality and fisheries would be maintained at their present natural levels.
- Local employment may decrease slightly due to the unavailability of timber.

Social effects would include recreational use dominated by a variety of activities. Mineral and oil and gas exploration would not be permitted. Economically, the loss in timber volume can be mitigated by practicing intensive forestry elsewhere. Inability to salvage the infested lodgepole pine would be an economic factor.

Designation: Nonwilderness
Management Emphasis: Timber/Range

All alternatives except g allocate some of this area to timber prescriptions. Alternatives a through f allocate from a trace to 86 percent of the area to this management emphasis.

Allocation to the timber prescription will forego the possibility of wilderness allocation sometime after the end of the first decade. The area will be accessed with roads and harvest will be scheduled up to the limit of constraints for these prescriptions.

The nonpriced effects are:

- Visual quality would be at its lowest level.
- Semiprimitive recreation potential would be foregone after the end of the fifth decade.
- Wilderness characteristics would be compromised in 50 years
- Diversity would tend toward younger age classes with minimum old growth.
- Water quality and fisheries affects would be mitigated.
- The greatest number of jobs, mainly in the wood products industry, would be provided.

Under this emphasis, social effects would be reflected in the recreationists' loss of the roadless characteristic. Salvaging the infested lodgepole pine would be an economic factor.

Designation: Nonwilderness
Management Emphasis: Wildlife

The main emphasis in this prescription is old growth. Alternative a allocates 21 percent of the area to this management emphasis. The other alternatives do not manage for this component. Management could be accomplished through timber management or prescribed burning. The effects of this emphasis are basically as listed in the timber emphasis with wildlife objectives being maintained.

Designation: Nonwilderness
Management Emphasis: Visual

Alternatives a, b, d, e, and f provide between 5 and 25 percent of the area for visual management. This emphasis is not included in the other alternatives.

Visuals are retained in the roadless and wilderness management emphases. Visual quality resource will be managed according to the management area classification. Effects do not differ appreciably from those listed under timber emphasis with visual objectives maintained.

Designation: Nonwilderness
Management Emphasis: Riparian

All alternatives contain inclusions of riparian zones and recognize the need to manage these areas according to policy and guidelines. Alternative g is the wilderness alternative and would not impact the riparian areas. Effects are listed under roadless management emphasis.

Designation: Nonwilderness
Management Emphasis: Roadless

Alternatives b, d, e, and f allocate from 50 to 70 percent of the area for roadless management, Alternative a allocates 7 percent. Alternative c does not manage for roadless and Alternative g is the wilderness alternative.

The nonpriced effects are:

- Visual quality will be maintained.
- Semiprimitive and wilderness attributes can be retained for a long period.
- Age class distribution and diversity would be dominated by old growth; young age classes would be minimal.
- Water quality and fisheries would not be affected.
- Few wood products related jobs would be added to the industry.

The area represents less than 1 percent of the land base suitable for timber. Economic impacts would be reflected in the timber volume lost. This loss of volume could be mitigated by practicing intensive forestry elsewhere. Recreation use remains unchanged.

Designation: Nonwilderness
Management Emphasis: Miscellaneous

Miscellaneous management emphases include non-forest land, administrative centers, historical or cultural sites, mineral extraction sites, transportation and utility corridors, campgrounds, picnic areas, ski areas, and areas with concentrated public use.

Alternative c allocates 14 percent, Alternatives b, d, e, and f allocate trace acres to these sites, and Alternatives a and g do not manage for miscellaneous sites.

ACRES OF AREA UNDER MANAGEMENT FOR EACH EMPHASIS BY ALTERNATIVE
(Refer to Appendix C Introduction for Management Areas under each emphasis.)

Management Emphasis	Alternatives a	b	c	d	e	f	g
NONWILDERNESS							
Timber/Range	154	100	5725	1489	1489	1489	-
Wild life							
Grizzly bear	-	-	-	-	-	-	-
Other	1436	-	-	-	-	-	-
Visual	314	1757	-	1631	1631	1631	-
Miscellaneous	-	33	955	20	20	20	-
Riparian	*	*	*	54	54	54	-
Roadless	4776	4790	-	3486	3486	3486	-
WILDERNESS							
Wilderness	-	-	-	-	-	-	6680
TOTAL	6680	6680	6680	6680	6680	6680	6680

* Small inclusions occur in other management emphasis items.

SUMMARY OF MANAGEMENT EMPHASIS (acres managed by decade)

Developed							
Decade 1	-	-	-	-	-	-	-
Decade 5	1904	1890	6680	3194	3194	3194	-
Roadless							
Decade 1	6680	6680	6680	6680	6680	6680	-
Decade 5	4776	4790	-	3486	3486	3486	-
Wilderness							
Decade 1	-	-	-	-	-	-	6680
Decade 5	-	-	-	-	-	-	6680

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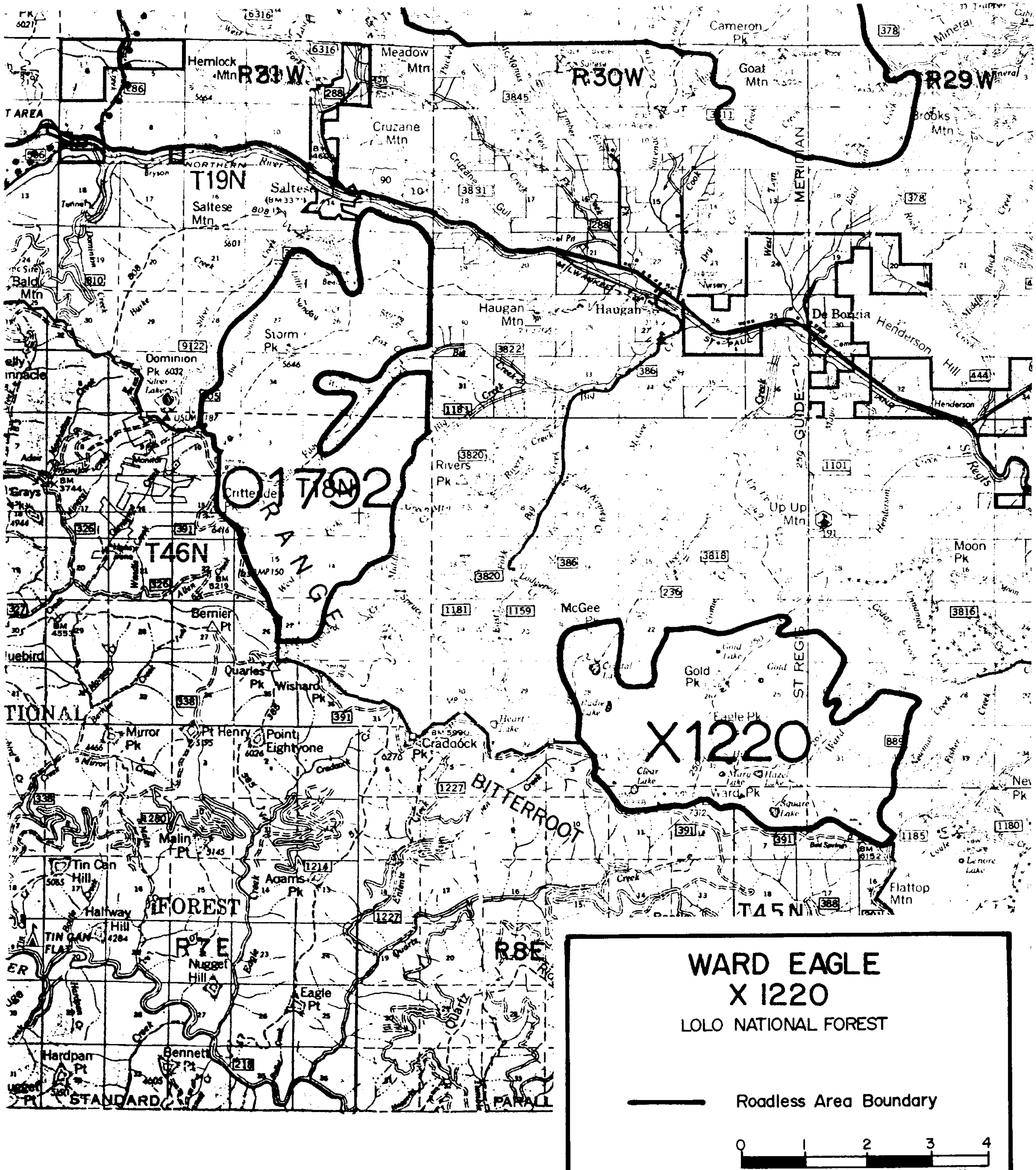
WARD EAGLE
X 1220
LOLO NATIONAL FOREST
Roadless Area Boundary
0 1 2 3 4
miles
X1220
01792
R31W
R30W
R29W
T19N
T18N
T46N
T45N
R7E
R8E
Hemlock Mtn
Meadow Mtn
Cameron Pk
Goat Mtn
Brooks Mtn
Cruzane Mtn
Saltese
Saltese Mtn
Haugan Mtn
Haugan
De Borgia
Henderson Hill
Henderson
Storm Pk
Dominion Pk
Rivers Pk
Up Up Mtn
Moon Pk
McGee Pk
Gold Pk
Eagle Pk
Ward Pk
Bernier Pt
Quarles Pk
Wishard Pk
Cradock Pk
Mirror Pk
Pt Henry
Point Eightyone
Malin Pt
Adams Pk
Tin Can Hill
Halfway Hill
Nugget Hill
Eagle Pt
Hardpan Pt
Bennett Pt
Flattop Mtn
BITTERROOT
RANGE
ST REGIS
MERIDIAN
GUIDE
FOREST
STANDARD
PARALL

Acreage:

Gross Acres: 8,570
Net Acres: 8,570

I. Description

A. Location and Access

The Ward Eagle Roadless Area lies 5 miles south of DeBorgia and 12 miles west of St. Regis. Vehicle access on Forest Service System roads is available in all directions. The East Fork of Big Creek Road (No. 1159) comes within three-quarters of a mile of the west boundary. The Deer Creek (No. 3818) and Up Up Mountain (No. 101) Roads form part of the northern margin, while the Ward Creek (No. 889) and Twomile Creek (No. 1185) Roads access the east end. From the Idaho side, the State Line Road (No. 391) either forms or parallels the southern boundary. This unit also contains parts of four system trails totaling 8 miles. Refer to Table C-4 for proximity information.

This area was not included in the RARE II inventory as it was part of a unit plan. The original area was 8,960 gross and net acres. The area has been reduced by 390 acres as a result of a timber sale.

B. General Description

The east-west trending State Line Divide forms the southern boundary. Extending perpendicularly to the north is a ridge containing Ward, Eagle, and Gold Peaks. All of the mountains have had alpine glacier activity which formed bowl-like basins, lakes and serrated ridges. Ward and Deer Creeks originate in the upper basins and flow northeastward and north, respectively. Nestled within the basins are 14 lakes.

Except for the northeastern corner where the Wallace Formation is exposed, all of this roadless unit is underlain by the argillites and quartzites of the Precambrian Ravalli Group. Northwest-southeast trending normal faults constitute the major structural features in the area. Large thrust faults with displacement to the northeast occur south of Ward Peak.

Habitat types vary widely from the harsh rockland/screes to the productive western red cedar habitat type. Rockland, Truefissure, and Wishard are the dominant soil types.

Because of the easy access to the area, it receives moderate to heavy recreational use for hunting, fishing, and hiking. This unit also has a high potential for hardrock mineralization.

II. Analysis of Wilderness Suitability

A. Capability

1. Wilderness Attributes

a. Naturalness - The vegetative communitites within the unit are the same as those found on the adjacent lands. About 37 percent of the land is composed of scree and talus slopes. The largest vegetative component (20 percent) consists of subalpine fir/smooth woodrush. This habitat type dominates the upper elevations. Whitebark pine, lodgepole pine, and spruce are also found in this type. Undergrowth is dominated by grouse whortleberry, beargrass, and heartleaf arnica with lesser amounts of pinegrass and huckleberry. Timber productivity is generally low. Some 11 percent of the unit is made up of the subalpine fir/beadlilly community. This is found at the 3,200 to 5,500 feet elevations on all but the driest aspects. Major species include subalpine fir, Douglas-fir, larch, lodgepole pine, and white pine. Understories are very diverse with beadlilly, goldthread, bunchberry, twisted stalk, and bedstraw being more common. Timber production varies from moderate to very high. Another 18 percent of the area contains the subalpine fir/menziesia and western red cedar/beadlilly habitat types.

While most of the animal species native to the area are found in the Ward-Eagle Roadless Area, none is particularly dependent on a wilderness setting for survival. Animals on summer and winter ranges can be susceptible to human activity; however, there are almost no such lands in this unit.

Air and water quality are considered good in the area.

There is an old cabin and evidence of an old dam on Hub Lake. Prospect diggings occur throughout much of the area. There is some evidence of early logging activities in Deer Creek.

b. Inspirational Values - Because of the generally small size of the area, there is limited opportunity for visitors to experience a sense of aloneness. The terrain does offer certain interesting, even breathtaking vistas.

c. Primitive and Unconfined Recreation - This area has moderate opportunities for solitued due to its small size. The maximum distance from perimeter to core is only 2-1/4 miles. Small size and easy access to the many lakes limit opportunities for primitive forms of recreation.

d. Cultural and Historical Values - There are no known prehistoric or historic sites in this area.

e. Educational and Scientific Values - There are no known threatened or endangered species within this unit. Neither are there any unique vegetative communities in the area which could be used as benchmarks. Gene pools here do not differ appreciably from the

surrounding area. The ecosystems in this area are well represented in existing wilderness.

f. Uniqueness - None of the physical or biological features occurring in the Ward-Eagle Roadless Area are considered to be unique.

2. Manageability and Boundaries

All but the northern boundary follows topographic features and would not be especially difficult to locate on the ground. Although the unit is relatively compact, its small size, 5 miles wide by 3 miles long, makes it easy to view the external activities. The northern boundary has been modified to exclude roads along upper Deer and Ward Creeks. This roadless area contains no private or State-owned lands.

B. Other Resources Found in the Area

1. Potential

The area provides habitat for a variety of game and nongame wildlife species commonly found in western Montana (see Appendix B-2, Proposed Lolo Forest Plan, RDEIS). There are approximately 280 acres of elk summer habitat identified in the area and 619 riparian acres.

There are three oil and gas lease applications within this unit, and they cover 30 percent of the total area. One lease has been granted and the other two applications have been recommended for issuance. Four mining claims lie between Ward Peak and Eagle Peak. Gold is the mineral being sought. The Lolo mineral inventory found 8,570 acres of high to very high mineral potential here.

About 30 percent (4,480 acres) of the Deer Creek grazing allotment lies inside the Ward Eagle Roadless Area. However, none of this acreage is considered primary range. The last permitted use was in 1971 for 8 cows and 32 AUM's.

The Ward Eagle Roadless Area contains 192 acres classed as non-stocked, 317 acres of seedling and saplings, 516 acres of poles, 1,692 acres of immature sawtimber, and 4,431 acres of mature sawtimber. Of this, 3,654 acres are classified as commercial timberland. The suitable lands presently support a standing timber inventory of 30.8 MMBF with a long-term sustained yield in the area of .81 MMBF annually.

Current Recreation Opportunity maps show the area as being 90 percent semiprimitive nonmotorized, and 10 percent roaded natural. Opportunities include lake and stream fishing, big-game hunting, hiking, and horseback riding.

2. Resource Summary

X1220 - Ward Eagle Roadless Area

Category		
Gross acres	Acres	8570
Net Acres	Acres	8570
Recreation		
Primitive	RVD's	0
Semiprim. Nonmot.	RVD's	7713
Semiprim. Motor.	RVD's	0
Roaded Natural	RVD's	8570
Range		
Existing Obligated		
Suitable	Acres	0
Allotments	No.	0
AUMs	AUMs	0
Existing Vacant		
Suitable	Acres	165
Allotments	No.	1
AUMs	AUMs	6
Proposed		
Suitable	Acres	0
AUMs	AUMs	0
Timber		
Tenative Suitable	Acres	3654
Standing Volume	MMBF	30.8
Corridors		
Exist. & Pot.	No.	0
Wildlife - T&E		
Grizzly Bear		
Habitat Sit. 1	Acres	0
Habitat Sit. 2	Acres	0
Habitat Sit. 3	Acres	0
Bald Eagle Hab.	Acres	0
Gray Wolf Hab.	Acres	0
Peregrin Fal. Hab.	Acres	0
Wildlife - Big Game		
Summer Habitat	Acres	280
Winter Habitat	Acres	0
Significant Fisheries		
Stream Miles	Miles	3.0
Stream Habitat	Hab. Ac	2.9
Lakes	No.	9
Lake Habitat	Hab. Ac	74
Water Develop.		
Existing	No.	0
Hardrock Potential		
Very High	Acres	0
High	Acres	7150
Moderate	Acres	1420
Low	Acres	0
Mining Claims .	No.	4
Oil & Gas Potential		
Very High	Acres	0
High	Acres	0
Moderate	Acres	0
Low	Acres	8570
Oil & Gas Leases	No.	3
Leased Area	Acres	2600

3. Management Considerations

The various pines in this unit can be highly susceptible to the mountain pine beetle infestation. A consideration is to monitor the stands and possibly initiate harvesting if the bugs become a problem.

4. Public Involvement

During the public reveiw period for the DEIS, there were few additional comments on the Ward Eagle Area. Several comments favored wilderness designation for all existing roadless areas. Other responders opposed further additions to the wilderness system.

III. Impacts

Designation: Wilderness
Management Emphasis: Wilderness

Ward Eagle roadless area is allocated to wilderness in Alternative g but this is the only alternative that the total area or any portion is allocated to wilderness.

Wilderness allocation can enhance the area's wilderness attributes since there are existing uses and facilities not ususally associated with wilderness allocation. Any existing motorized activities could be eliminated.

Approximatley 3,700 acres of land tentatively suitable for timber production would not be available. This would remove about 39 MMBF from the Forest timber base.

Big game or elk management would not change much. The area contains approximately 280 acres of summer habitat. Cover/forage relationships should not change much over time except as influenced by wildfire control.

Under wilderness allocation recreation use would continue to be dominated by hunting and hiking.

The nonpriced effects are:

- Visual quality would be preserved.
- Wilderness area would increase.
- Diversity would tend toward old growth without wildfire but could be improved depending on the control policy.
- Water quality and fisheries would be maintained at their present natural levels.
- Local employment may decrease slightly due to the unavailability of timber.

The area represents less than 1 percent of the land base suitable for timber. Economic impacts would be reflected in the timber volume lost. This loss in volume can be mitigated by practicing intensive forestry elsewhere. Nonmotorized varieties of recreation would remain.

Designation: Nonwilderness
Management Emphasis: Timber/Range

All alternatives except b and g allocate some or this area to timber prescriptions. Alternatives a, c, d, e, and f allocate from 4 to 50 percent of the area to this prescription.

Allocation to the timber prescription will forego the possibility of wilderness alocation by the end of the first decade. Road construction and harvest will be scheduled up to the limit of constraints for these prescriptions.

The nonpriced effects are:

- Visual quality would be at its lowest level, Maximum Modification.
- Semiprimitive recreation potential would be foregone by the end of the first decade.
- Wilderness characteristics would be compromised in a short time.
- Diversity would tend toward younger age classes with minimum old growth.
- Water quality and fisheries affects would be mitigated.
- The greatest number of jobs, mainly in the wood products industry, would be provided.

Due to the small size of the tentative suitable land base the economic impact is relatively small. Socially, the recreation use would include more motorized use.

Designation: Nonwilderness
Management Emphasis: Wildlife

The main emphasis in this prescription is big game summer habitat. Alternative b allocates 2 percent of the area to this emphasis and Alternatives d, e, and f allocate 3 percent to summer range management.

The effects of this prescription could be mitigated by shifting harvest scheduled in the early decades to other areas outside this roadless area. Habitat improvement practices could include timber harvest or prescribed burning. Effects of this emphasis do not differ appreciably from those listed under the timber emphasis except wildlife objectives are maintained.

Designation: Nonwilderness
Management Emphasis: Visual

Alternatives a, b, d, e, and f allocate from 2 to 5 percent of the area to this emphasis. None of the other alternatives utilize this emphasis. Visuals are retained in the roadless management emphasis. Visual quality resource will be managed according to the management area classification. Effects do not differ from those listed under the timber emphasis with visual objectives being maintained.

Designation: Nonwilderness
Management Emphasis: Riparian

All alternatives contain inclusions of riparian zones and recognize the need to manage these areas according to policy and guidelines. Alternative g is the wildernss alternative and would not impact the riparian areas. Effects are basically the same as those listed under the roadless management emphasis.

Designation: Nonwilderness
Management Emphasis: Roadless

Alternatives a through f allocate from 42 to 90 percent to roadless management. Alternative g is the wilderness alternative and precludes a need for roading.

The nonpriced effects are:

- Visual quality will be maintained.
- Semiprimitive and wilderness attributes can be retained for a long period.
- Age class distribution and diversity would be dominated by old growth; young age classes would be minimal.
- Water quality and fisheries would not be affected.
- Few wood products related jobs would be added to the industry.

Economically, the loss of timber volume from this emphasis could be mitigated through practicing intensive timber management elsewhere on the Forest. Other resources would be retained and recreation use would not change from the present variety of uses.

Designation: Nonwilderness
Management Emphasis: Miscellaneous

Miscellaneous management emphases include non-forest land, administrative centers, historical or cultural sites, mineral extraction sites, transportation and utility corridors, research natural areas, campgrounds, picnic areas, ski areas, and areas with concentrated public use.

Alternatives d, e and f allocate 1 percent to this emphasis. Alternatives a and c allocate from 4 to 8 percent to these miscellaneous sites.

ACRES OF AREA UNDER MANAGEMENT FOR EACH EMPHASIS BY ALTERNATIVE
(Refer to Appendix C Introduction for Management Areas under each emphasis.)

Management Emphasis	Alternatives a	b	c	d	e	f	g
NONWILDERNESS							
Timber/Range	317	-	4285	1621	1621	1621	-
Wild life							
Grizzly bear	-	-	-	-	-	-	-
Other	-	163	-	280	280	280	-
Visual	429	643	-	198	198	198	-
Miscellaneous	369	-	643	122	122	122	-
Riparian	*	*	*	618	618	618	-
Roadless	7455	7764	3642	5731	5731	5731	-
WILDERNESS							
Wilderness	-	-	-	-	-	-	8570
Total	8570	8570	8570	8570	8570	8570	8570

* Small inclusions occur in other management emphasis items.

SUMMARY OF MANAGEMENT EMPHASIS (acres managed by decade)

Developed							
Decade 1	960	806	960	960	960	960	-
Decade 5	1115	806	4928	2839	2839	2839	-
Roadless							
Decade 1	7610	7764	7610	7610	7610	7610	-
Decade 5	7455	7764	3642	5731	5731	5731	-
Wilderness							
Decade 1	-	-	-	-	-	-	8570
Decade 5	-	-	-	-	-	-	8570

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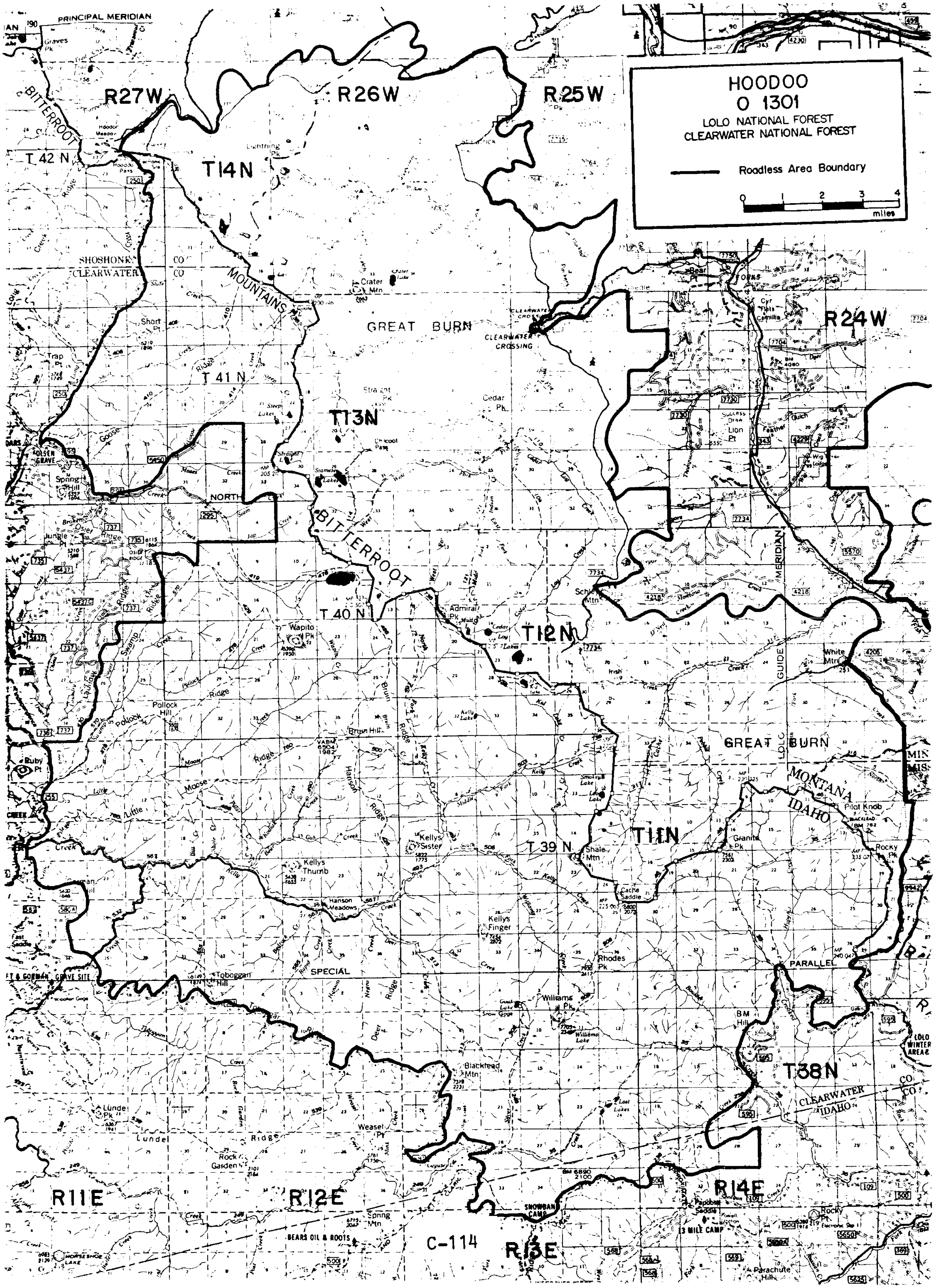
HOODOO
O 1301
LOLO NATIONAL FOREST
CLEARWATER NATIONAL FOREST
Roadless Area Boundary
0 1 2 3 4
miles
PRINCIPAL MERIDIAN
R27W
R26W
R25W
R24W
T 42 N
T14N
T 41 N
T13N
T 40 N
T12N
T 39 N
T11N
T38N
R11E
R12E
R13E
R14E
BITTERROOT
MOUNTAINS
GREAT BURN
SHOSHONE
CLEARWATER
CLEARWATER CROSSING
Crater Mtn
Cedar Pk
Hoodoo Pass
Graves Pk
Short Pt
Trap Pt
Spring Hill
Jungle Pt
Wapito Pk
Pollock Hill
Ruby Pt
Bruin Hill
Kellys Sister
Kellys Thumb
Hanson Meadows
Kellys Finger
Rhodes Pk
Toboggan Hill
Williams Pk
Blacklead Mtn
Lunde Pk
Weasel Pt
Rock Garden
Spring Mtn
Shale Mtn
Cache Saddle
Granite Pk
Pilot Knob
Rocky Pt
White Mtn
BM Hill
Lion Pt
Bear Pt
Admiral Pk
Schley Mtn
LOLO GUIDE MERIDIAN
MONTANA
IDAHO
PARALLEL
CLEARWATER
IDAHO
SPECIAL
LOLO WINTER AREA
SNOWBANK CAMP
13 MILE CAMP
BEARS OIL & ROOTS
Parachute Hill
Papoose Saddle
HORSESHOE LAKE
GRAVE SITE

HOODOO ROADLESS AREA #01301

Acreage:	Gross Acres	Net Acres
Idaho-Clearwater NF	153,312	149,147
Montana-Lolo NF	98,680	98,500
Total	251,892	247,647

I. Description

A. Location and Access

The Hoodoo Roadless Area is situated on the Idaho-Montana border, approximately 30 air miles west of Missoula, Montana. The Idaho portion is located in parts of Clearwater, Idaho, and Shoshone Counties in the Clearwater National Forest. In Montana, the area is in the Lolo National Forest within portions of Missoula and Mineral Counties.

The area may be accessed by vehicle from numerous Forest roads paralleling the boundaries in some cases and as dead-end roads in other cases. The northeast corner-boundary is within 4 miles of a major Federal highway, Interstate 90. The graveled Pierce-Superior Road No. 250 forms a boundary along the northwest side which also joins with the main divide trail at Hoodoo Pass. The Toboggan Ridge Road No. 581, a dirt road, is also a throughway and is the southwest boundary providing numerous access points to the area. The Granite Creek, White Mountain, Schlez Mountain, Quartz Creek, Clearwater Crossing, Lake Creek, and Goose Creek Roads, and Kelly Creek Work Center all provide trail heads for interior trail access.

B. General Description

Over 200 miles of trails are within the area. The main creek and ridge trails are maintained on a regular basis. Because of inadequate funding, many of the other side trails are not maintained on a regular basis and may be difficult to use at times.

From an aerial perspective, the Hoodoo area may be viewed as a long, high mountainous hydrologic divide running generally north-south approximately 40 miles in length. From the divide on both sides emanate large and small fast-moving streams draining into the Clearwater River system in Idaho and into the Clark Fork River system in Montana.

Topography is variable with elevations as low as 3,200 feet at the mouth of Moose Creek to 7,930 feet at the top of Rhodes Peak. Except for the saddles (where two drainages start), much of the divide is above 6,500 feet with the prominent peaks especially in the southern half, ranging from 7,300 to 7,400 feet.

Although little detailed geologic mapping has been done, extrapolation from other studies and field reconnaissance indicate that most of the

area is underlain by the Wallace Formation, a unit in the Precambrian Age Belt Supergroup. The major lithologies associated with the Wallace Formation include limestones, dolomites, and carbonaceous argillites. The extreme southeastern portion of the area contains granite rocks of the Cretaceous Age Idaho batholith and volcanic rhyolites.

While this "high divide country" is not considered true alpine, it exhibits near or subalpine conditions with relatively few trees, grassy mountain meadows, considerable barren land with numerous rock outcrops, cliffs, and jagged peaks. Mountain heather and other alpine-type species are found intermingled where the thin soils have enough moisture to support plant growth. Annual precipitation ranges from 30 inches near the eastern border to near 100 inches along the Idaho-Montana Divide. Snow depths of 10 to 14 feet are not uncommon in the higher country lasting well into the summer and providing considerable water for the Clearwater and Clark Fork River systems.

The name "Great Burn" attached to the area by several groups during the RARE II process, stems from the large and devastating wildfires which denuded much of the area during the early 1900's, primarily on the Idaho portion. Except for upper Moose, Pollack, and Swamp Creeks, much of the area north of Kelly Creek is still primarily covered with shrubs with scattered individual and small groups of trees. The area south of Kelly Creek has regenerated largely to lodgepole pine. Most all of the drainages in Montana capable of supporting vegetation are primarily tree covered.

Three ecosystems are found within the area: cedar-hemlock-pine, western spruce-fir, and alpine meadows and barren. The cedar-hemlock-pine group represents the lower elevations. Where trees are found, it is represented primarily by western red cedar, grand fir, Douglas-fir, and larch with very small ammounts of western white pine on the Idaho portion. Ponderosa pine is found at the lower and drier elevations. The spruce-fir system is represented in this ecosystem on the Montana portion by Engelman spruce, subalpine fir, mountain hemlock, and the seral lodgepole pine on the burned over areas. Very small amounts of white bark pine are found at the higher elevations above 6,500 feet.

Along with the outstanding scenery, the variety and abundance of wildlife species (especially elk, black bears, mountain goats and moose), and the high quality westslope cutthroat trout fishery (Idaho) are the major attractions to visitors. Although slim, there is a chance of seeing an endangered wildlife species, the gray wolf.

The 33 mountain lakes, most of which are located near the Idaho-Montana Divide, and the variety of vegetative types interspersed with the numerous streams and barren, subalpine rocky peaks contribute to the visitor's enjoyment. As the area becomes known, more people visit it every year.

II. Analysis of Wilderness Suitability

A. Capability

1. Wilderness Attributes

a. Naturalness - With exceptions, the area retains a high degree of natural integrity and appearance. Human activities have resulted in relatively minor and isolated impacts from several minor hardrock mining sites, pack trails, stock driveways, and fire control access trails during the ealy 1900's. Most of these impacts have rehabilitated naturally as the activities ceased. Concentrated use around some of the larger, more popular lakes, such as Fish Lake and Heart Lake, and overuse on several of the main trails are the only real detractions from the natural integrity and appearance of the area.

About 114 acres of actual mining sites exist. At Greenwood Cabins are 40 acres of fixed sites of mostly patented mining claims. Near Kid Lake is evidence of approximately 3 miles of a very primitive, closed mining road and hard rock mining activity. Evidence of other early mining activity is very minor.

b. Uniqueness - The vastness of the area, covering over 247,000 acres along with its rectangular shape extending approximately 30 miles north-south provides excellent opportunity for solitude. The 40-plus streams dissect the area, effectively isolating visitors from each other. The trees and shrubs plus the varied mountainous terrain further screen people from each other.

External influences of sight and sound are minimal. The only regular motorized use adjacent to the area is over the Pierce-Superior Road (FS No. 250). Sounds from logging activity and other occasional motorized, public use near the periphery can be heard up to a mile inside the roadless area in only a few places.

Hunters, fishermen, horseback riders, and hikers congregating at the larger lakes such as Fish, Heart, Pearl, Goat, Williams, and Siamese Lakes would tend to reduce opportunities for solitude at certain times. However, groups using the area have not generally been very large. An exception to this is at Fish Lake on opening day of fishing season where up to 100 people have been known to congregate.

Solitude may be somewhat affected from certain viewpoints specifically along the divide or on steep slopes above developments. Timber harvest units and associated roads on both the Idaho and Montana sides may be viewed in several areas although in most cases these detractions are in the far distance or background viewing area.

The size and diversity of the area, the variety of vegetative types and land forms, the variety and abundance of wildlife, and the

abundance of streams and lakes all contribute to virtually unlimited primitive recreational opportunities. Primary uses besides hiking, backpacking, horseback riding, and lake fishing are big-game hunting, primitive camping, outdoor photography, and sightseeing.

Some excellent opportunities exist for stream fishing in the major streams of Kelly Creek, Fish Creek, and Cache Creek. Some limited mountain climbing opportunities are available along the divide.

c. Special Features - The Hoodoo area is symbolized by several features which set it apart from other roadless lands. Foremost is the name coined during RARE II, the "Great Burn", which denotes the catastrophic fire in 1910. The sheer force of the fire is evidenced by the long period of time it has taken for nature to restore tree cover in many portions of the area.

Many pointed rock formations are located along the higher ridges, especially in the vicinity from William's Peak to Shale Mountain. The rock formations are thin and irregular. Local people often refer to these formations as "dinosaur rocks" because they resemble the back of some prehistoric animals. Rock pinnacles are also in abundance along these ridges.

The area is used extensively by commercial outfitters primarily for elk hunting. Six outfitters operate currently in the Idaho portion.

A study done several years ago indicated that prior to the arrival of the white man, Indians used various natural animal crossings on the divide to wait for animals to migrate or be driven, at which time they would be in position to kill them. To date, over 40 of these sites have been recorded within the area.

Kelly Creek, including all its tributaries, has been a catch and release stream since 1970. The purpose of this Idaho Fish and Game regulation was to enhance the westslope cutthroat trout fishery since the completion of Dworshak Dam in 1970 blocked migration of steelhead trout. This fishery has improved to the point that the stream is regionally and nationally known as a blue-ribbon trout stream. Fishermen from all over the country are drawn to the stream where catching and releasing 12 to 15 inch and even larger trout is not uncommon.

The proposed Steep Lakes Research Natural Area encompasses one of the only two lakes on the Clearwater Forest that support a viable, although limited, population of California golden trout. This brightly colored trout normally found above 7,000 feet in the mountain lakes in California was stocked here in 1962. A limited fishing season for them has been in effect for many years providing a unique attraction for fishermen each summer.

Based on numerous reports over the years, along with two verified sightings (with photographs) in recent years in the Kelly Creek

drainage, the Hoodoo Roadless Area is regarded as important habitat for the endangered gray wolf.

These sightings, along with suitable habitat requirements, has prompted the Forest Service to designate over 110,000 acres within the Clearwater Forest as essential habitat. The management of an adequate prey base, which on the Clearwater Forest is elk, and restrictions on motorized road use are two major components of protecting and enhancing this endangered species.

d. Effects of Size and Shape on Wilderness Attributes - At its narrowest point, the Hoodoo roadless area is nine air miles across; otherwise, the area averages between 15 and 20 air miles wide and over 40 air miles long. Except for some background viewing opportunities of several timber harvest and road activities, the potential wilderness values and attributes of the area are virtually unaffected by external influences.

2. Manageability and Boundaries

The Hoodoo area is a compact unit. In most cases, boundaries are fairly well defined on major terrain or other recognized features. In a few locations, however, terrain features are less prominent and boundary lines would be difficult to locate on the ground.

It is fairly remote and free of external influences. In Montana, small portions of mostly undeveloped private land exist within the area boundaries in the northeast corner.

During the RARE II process in 1979, 178,000 acres were recommended for wilderness. That boundary excluded all the private land, but in places the boundary would be difficult to locate on the ground.

Recreation and other resource uses not requiring surface disturbance can be managed while protecting the wilderness character. Mineral exploration can be controlled with present Federal regulations, although some impacts can be expected.

B. Other Resources Found in the Area

1. Recreation - Although there are numerous potential developed recreation sites, the actual construction of such sites is dependent on road access, funding, and need. Current and anticipated near future funding outlooks are very low. Primitive, semiprimitive, and dispersed recreation have been discussed previously.

2. Wildlife and Fish - Although population numbers are not known, elk, mule deer, and black bears are considered to be the most abundant. It is estimated that 20 to 50 mountain goats inhabit the high country along the divide. Mountain lions and moose, along with many species of furbearers and small game common to the Forests, are also found here.

Summer range is a key feature. With most elevations above 4,000 feet, only 4,150 acres of key big game winter range exist within the area.

More than 10 unconfirmed sightings of the threatened grizzly bear have been made over the past 30 years. Additional studies are planned to determine whether all or part of this area could qualify as essential habitat.

Most of the larger streams and lakes support fishable populations of cutthroat and rainbow trout.

3. Livestock Operations - No cattle or sheep allotment have been used since the 1960's. One active horse and mule allotment is current on the Idaho portion for 24 animal unit months.

4. Timber - The Hoodoo area has 153,000 acres of land suitable for timber production. Potential yields vary greatly because of the wide range of elevations and climatic and soil conditions. Standing volumes of sawtimber within the area total 1,649,700 million board feet. Large stands of young unmerchantable and merchantable lodgepole pine currently is of relatively low market value because of remoteness and substandard travel routes.

5. Minerals - Overall, mineral potential ranges from low to medium. A total of 13,387 acres of high mineral potential has been identified in the Montana section. A total of 296 mining claims are located within the area. A great majority of them are concentrated in Irish Basin, an area recommended for nonwilderness during the RARE II study. Other mining claims are clustered in the northern portion in Montana. Most of the production associated with these claims has come from placer gold and fluorite, although iron, molybdenium, and barite have also been found.

   Oil and gas potential are rated as low. There are currently three oil and gas leases comprising about 5 percent of the area in Montana. One lease has been applied for in Idaho. Virtually all of the area in Montana was once under lease application. However, all but the fringe area was recommended for wilderness designation during the RARE II process. As a result of this proposal, processing of these oil and gas lease offers was suspended pending the final land designation by Congress. In the meantime, most of the applicants withdrew their lease offers. There still remains a great deal of speculative interest for oil and gas.

6. Cultural Resources - The current known cultural resources located within the Clearwater National Forest portion includes five USFS lookout sites; 14 cabins or cabin remains; five Forest Service Ranger Station site locations; 24 Native American sites including camp areas, a vision quest site, lithic workshops, and game traps; two mining sites; one Lewis and Clark expedition campsite; and two Euro-American grave locations. In addition, at least four Indian trails existed including the Lolo trail along the southern boundary; the current State line trail; and a possible trail through Hanson Meadows. Another trail, the historic "Tin Can Trail", was an important early

access route to the Moose City gold mining area from Superior, Montana.

7. Land Uses - Commercial outfitting and guiding using pack and riding stock is the single largest land use. Six outfitters are currently licensed to operate in Idaho.

C. Important Management Considerations

1. Non-Federal Lands - Roughly 2 percent or 4,315 acres is within private ownership. Most of this is within a checkerboard pattern in Idaho and is part of a larger Plum Creek Timber Company ownership contiguous to the area. A smaller acreage in Montana is the result of patented mining claims in the North Fork Greenwood Creek.

2. Fire - As stated previously, large fires occurred during the early 1900's up through 1934. Since these large burns, the size of fires has decreased. Records dating back to the 1950's indicate a moderate occurrence of fires annually, most of which are 1/4 acre or less. Most of these occur where the dense stands of timber are usually in the older age classes.

3. Insects and Disease - Current insect and disease occurrence is low. As the lodgepole pine starts maturing, a potential increase in mountain pine beetle has been predicted.

D. Resource Summary

01301 - Hoodoo

Description		Clwtr	Lolo	Total
Gross Acres	Acres	153,312	98,680	251,992
Net Acres	Acres	149,147	98,500	247,647
Recreation				
Primitive	RVD's	8,324	0	8,324
SPNM	RVD's	6,023	68,950	74,973
SPM	RVD's	11,399	98,500	109,899
Roaded Natural	RVD's	5,888	98,500	104,388
Range				
Existing Obligated				
Suitable	Acres	671	0	671
Allotments	No.	1	0	1
AUM's	AUM's	24	0	24
Existing Vacant				
Suitable	Acres	0	0	0
Allotments	No.	0	0	0
AUM's	AUM's	0	0	0
Proposed				
Suitable	Acres	0	0	0
AUM's	AUM's	0	0	0

Description		Clwtr	Lolo	Total
Timber				
Tentative Suitable	Acres	98,783	54,283	153,066
Standing Volume	MBF	1,241,000	408,700	1,649,700
Corridors				
Exist. and Potential	No.	1	0	1
Wildlife - T&E				
Grizzly Bear				
Habitat - Sit. 1	Acres	0	0	0
Habitat - Sit. 2	Acres	0	0	0
Habitat - Sit. 3	Acres	0	0	0
Bald Eagle Hab.	Acres	0	0	0
Gray Wolf Hab.	Acres	111,000	0	111,000
Peregrine Fal. Hab.	Acres	0	0	0
Wildlife-Big Game				
Big Game				
Summer Habitat	Acres	0	0	0
Winter Habitat	Acres	0	0	0
Elk				
Summer Habitat-Key	Acres	16,993	0	16,993
Winter Habitat-Key	Acres	1,450	1,813	4,150
Significant Fisheries				
Stream Miles	Miles	277	0	277
Stream Habitat	Acres	345	0	345
Lakes	No.	13	0	13
Lakes - Habitat	Acres	389	0	389
Water Developments				
Existing	No.	0	0	0
Minerals				
Hardrock Potential				
Very High	Acres	0	0	0
High	Acres	0	13,387	13,387
Moderate	Acres	8,320	21,388	29,708
Low	Acres	140,827	63,725	204,552
Claims	No.	4	296	300
Oil and Gas Potential				
Very High	Acres	0	0	0
High	Acres	0	0	0
Moderate	Acres	0	0	0
Low	Acres	149,147	98,500	247,647
Oil and Gas Leases				
Leases	No.	0	3	3
Leased Area	Acres	0	9,925	9,925

E. Need

A key attribute and contribution for wilderness classification is the display of successional vegetative changes resulting from the early 1900 fires. The quality and variety of primitive recreation along with the varied outstanding scenic values are also a significant contribution. The area would add to the ecosystem acres of cedar-hemlock-pine, western spruce-fir, and alpine meadows and barren.

A high amount of interest has been shown by local and regional persons dating back to the early 1970's (RARE I process). The area has been endorsed by the Wilderness Society and Sierra Club along with numerous other local and regional groups and organizations. A group based in Missoula called the Great Burn Study Group consolidated much of the wilderness interest from the Montana side.

During public reveiw of the Lolo Forest Plan DEIS, many comments were received in support of including this area in the National Wilderness Preservation System. Many responders indicated support for the Irish Basin/ Cache Creek addition to the proposed area. The Irish Basin/Cache Creek portion of Management Area 11 is now recommended for inclusion in the National Wilderness System. Comments were received that opposed any additional wilderness. Few responders oppose wilderness designation for this area.

The RARE II Environmental Impact Statement (1979) recommended 165,197 acres for wilderness (Idaho - 100,000 : Montana - 65,097). Attempts were made with this recommendation to consider the high quality wilderness values as well as the timber and mining values.

Table C-4 shows the location and proximity of the Hoodoo roadless area to other wilderness areas and population centers in Idaho, western Montana, and eastern Washington.

F. Alternatives and Environmental Consequences

1. Management Emphasis by Alternative

The management emphasis for the Hoodoo roadless area is a combination of management prescriptions and alternatives from two National Forests; the Clearwater and Lolo. Because resources, uses, and land conditions are somewhat different on each Forest, neither the alternatives nor the management emphasis are fully integrated. Because the Clearwater Forest is the lead Forest for this roadless area, for purposes of this evaluation, the alternatives, and management emphasis from the Lolo Forest has been integrated into those of the Clearwater Forest as close as possible on the basis of goals and objectives common to each Forest's alternatives and management emphasis.

Further information on the specific alternatives and management emphasis for the Clearwater National Forest for this area can be found in the Clearwater Forest's Draft Environmental Impact Statement.

The proposed wilderness/nonwilderness designation for area 1301 is made and documented in this Environmental Impact Statement. This proposed designation has priority over all other land designations and neither Forest can undertake any management activity other than current direction until such time that a Record of Decision is issued in conjunction with this document.

Hoodoo Roadless Area

Management Emphasis by Alternative
*Alternatives (Thousand Acres)

Management Emphasis	A (a)	B (e)	C (e)	D (c)	E (d)	E1 (d)	F (b)	G (b)	H (f)	I (g,h)	J (c)
WILDER-NESS:	100.1 (81.9)	0 (0)	19.9 (0)	63.9 (81.9)	100.1 (89.5)	100.1 (89.5)	137.6 (81.9)	137.6 (81.9)	131.8 (81.9)	149.1 (98.5)	119.5 (81.9)
NONWILDER-NESS: Unroaded	0 (4.3)	0 (39.6)	0 (39.6)	54.8 (3.5)	8.9 (0)	8.9 (0)	0 (10.0)	0 (10.0)	0 (3.5)	0 (0)	0 (3.5)
Elk Winter	0 (1.9)	0 (2.1)	0 (2.1)	0 (0.5)	1.3 (1.5)	1.3 (1.5)	0 (0.2)	0 (0.2)	0 (0.5)	0 (0)	0 (0.5)
Timber/ Wldlf-Wtshd	37.5 (2.5)	65.8 (46.5)	71.9 (46.5)	15.8 (12.4)	8.8 (5.9)	8.4 (5.9)	2.1 (3.1)	8.6 (3.1)	2.7 (12.4)	0 (0)	7.5 (12.4)
Timber/ Visual-Rip	8.9 (6.3)	6.1 (0.7)	7.0 (0.7)	11.3 (0)	5.8 (0.7)	6.3 (0.7)	8.3 (2.7)	2.9 (2.7)	3.3 (0)	0 (0)	6.5 (0)
Timber/ Special	0 -	0 -	0 -	0 -	22.2 -	22.2 -	0 -	0 -	0 -	0 -	15.1 -
Special	0 (0)	0 (0)	0.2 (0)	0.8 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Min Lvl	2.6 (1.6)	77.3 (9.5)	50.2 (9.5)	2.5 (0.2)	2.0 (2.8)	1.9 (2.8)	1.1 (0.6)	0 (0.6)	11.3 (0.3)	0 (0)	0.5 (0.2)
TOTAL	149.1 (98.5)	149.1 (98.5)	149.1 (98.5)	149.1 (98.5)	149.1 (98.5)	149.1 (98.5)	149.1 (98.5)	149.1 (98.5)	149.1 (98.5)	149.1 (98.5)	149.1 (98.5)

Management Emphasis	A (a)	B (e)	C (e)	D (c)	E (d)	E1 (d)	F (b)	G (b)	H (f)	I (g,h)	J (c)
SUMMARY OF MANAGEMENT EMPHASIS											
WILDERNESS:	100.1 (81.9)	0 (0)	19.9 (0)	63.9 (81.9)	100.1 (89.5)	100.1 (89.5)	137.6 (81.9)	137.6 (81.9)	131.8 (81.9)	149.1 (98.5)	119.5 (81.9)
Total	182.0	0	19.9	145.8	189.6	189.6	219.5	219.5	213.7	247.6	201.4
NONWILDERNESS:											
Developed-Clearwater											
Decade 1	7.0	7.0	7.0	7.0	7.0	7.0	1.3	1.3	7.0	0	7.0
Decade 5	44.1	58.7	55.2	22.0	40.9	40.9	3.2	3.2	10.5	0	22.0
Developed-Lolo											
Decade 1	(5.8)	(5.8)	(5.8)	(5.8)	(5.8)	(5.8)	(5.8)	(5.8)	(5.8)	(0)	(5.8)
Decade 5	(12.4)	(58.9)	(58.9)	(13.1)	(10.5)	(10.5)	(6.7)	(6.7)	(58.9)	(0)	(13.1)
Roadless-Clearwater											
Decade 1	142.1	142.1	142.1	142.1	142.1	142.1	147.9	147.9	142.1	149.1	142.1
Decade 5	105.0	90.4	93.9	127.1	108.2	108.2	145.9	145.9	138.6	149.1	127.1
Roadless-Lolo											
Decade 1	(10.9)	(92.7)	(92.7)	(10.9)	(10.9)	(10.9)	(10.9)	(10.9)	(92.7)	(0)	(10.9)
Decade 5	(4.3)	(39.6)	(39.6)	(3.6)	(6.2)	(6.2)	(10.0)	(10.0)	(39.6)	(0)	(3.6)

Total Acres-Clearwater = 149.1
-Lolo = 98.5

Total Acres Roadless Area = 247.6

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* This roadless area is contiguous with the Lolo National Forest. Numbers in parenthesis represent the alternatives and acres on the Lolo Forest.

III. Impacts

Designation: Wilderness
Management Emphasis: Wilderness

Alternative I recommends the entire area for wilderness. Alternatives A, D, E, E1, F, G, H, and J recommend wilderness in a range of 73 to 93 percent of the area. Alternative C has the least amount of wilderness (8 percent of the area), and then only on the Clearwater Forest. Alternative B has no wilderness.

A wilderness designation can enhance the area's wilderness attributes since there are existing areas and facilities not usually associated with wilderness. Any existing motorized activities could be eliminated.

A wilderness classification would reduce the 153,000 acres of suitable timber land to approximately 20 percent or less in all alternatives except B and C, which would provide timber management opportunities on approximately 50 percent of the suitable timber land. Alternatives with substantial wilderness would preclude harvesting upwards of 1.3 billion board feet of timber on both the Lolo and Clearwater Forests. Extensive stands of lodgepole pine on the Lolo, which may become infested by mountain pine beetle, would become unavailable under all alternatives except B and C. Old growth-commercial timber resource in the Pollock and Little Moose Creek drainage would be unavailable under Alternatives F, H, and I.

Alternatives B and C would have the least impact on access for development of the mineral resources. Under the other alternatives, access and methods of mining could be constrained in varying amounts. The forage or grazing resource available for commercial use could be reduced under all alternatives except B and C, depending on future conflicts between commercial grazing and wildlife needs, recreation associated grazing, and other recreational/social conflicts.

Nonpriced resource costs and benefits would be:

- Visual quality would be Preserved.
- Threatened and endangered species, specifically the gray wolf, would be protected.
- Natural forces would shape the area's ecosystem.
- Big-game winter range, because of its small acreage and location at lower elevations on both Forests, would be unaffected by wilderness classification under all alternatives except I.
- Water quality and fisheries would be maintained at their present natural levels in all key fishery streams.
- Vegetative density would tend toward old growth without wildfire where trees now exist. This is especially true on the Lolo with the present extensive tree cover (primarily lodgepole). The Clearwater has wide diversity already with open grass and forb areas and vast shrub fields intersperced with timber stands.
- The existing primitive/semiprimitive recreation setting would be retained.

Economic and social effects vary depending on the amount of tentatively suitable timber land and areas of mineral potential recommended for wilderness. Wilderness emphasis under Alternatives F, G, H, and I would have the greatest adverse impacts on the economy of the area. The wilderness emphasis would create an adverse social impact on those recreationists who access the area by motorcycles in all alternatives except B and C. Presently, many areas now accessible by motorcycles would be closed to motor vehicles under the wilderness emphasis. Wilderness would enhance dispersed recreation in primitive and semiprimitive settings.

Designation: Nonwilderness
Management Emphasis: Unroaded

Alternative D designates approximately 23 percent of the area to unroaded management with most of it on the Clearwater Forest. Alternatives B and C on the other hand contribute about 16 percent of the area to unroaded, all of it on the Lolo Forest. The other alternatives have minor amounts mostly in the Lolo portion. Unroaded management would enhance dispersed recreation of all types. Areas suitable for motorized vehicles would be left open for that use. Most of the areas, however, are physically inaccessible for motor bikes etc.

Timber management activities would be excluded from all areas designated as unroaded. The effects would be similar to the effects of wilderness, as discussed in the previous section, since with most cases the same areas are involved, varying by alternative.

Potential mining operations, specifically prospecting and development, would be affected because of the absence of road access.

Grazing would not be affected unless conflicts would develop with recreation or wildlife values.

Most of the areas affected by this management emphasis under any alternative are located in areas of low timber and range values and actual effects would probably be insignificant.

Nonpriced resource costs and benefits would be:

- Visual quality would be maintained at high levels either Retention or Partial Retention.
- Threatened and endangered species, especially the gray wolf, would be entirely compatible with this management emphasis.
- Big-game summer habitat is enhanced. Big game winter range is relatively unaffected because of small acreages.
- Water quality and fishery habitat would be fully protected in those areas designated to unroaded management.
- Vegetative diversity would be maintained and even enhanced because of wildlife habitat management on the Clearwater portion of the area.
- The primitive/semiprimitive recreation setting would be retained.

Economic and social effects are related to recreation, timber, and wilderness values. Outfitters and guides would benefit from unroaded management, whereas timber interests would be adversly affected to some degree, depending on the alternative. Alternatives A, B, and C would have the least effect even though some areas are unroaded. Most of the unroaded designations occur in areas of lower timber values.

Hikers, hunters, and fishermen would benefit the most from alternatives with the highest amount of unroaded management. Wilderness advocates would be partially supported.

Designation: Nonwilderness
Management Emphasis: Elk winter range

All alternatives except I include a small amount of elk winter range managed exclusively for elk winter range. Only Alternatives E and E1 include this

emphasis on the Clearwater Forest. This emphasis would include primarly prescribed burning on brush fields or southern exposure land.

Because winter range under this management emphasis is located on brush fields, short term effects on timber are negligible. By restricting tree growth, long term effects would be more significant, except that less than 5 percent of the area is involved.

Effects on the grazing and mining resources would also be insignificant.

Nonpriced resource costs and benefits would be:

- Visual quality may be affected in the short term (1 year or less) because of prescribed burning.
- Threatened and endangered species, especially the gray wolf, would be enhanced because of the emphasis or producing prey base (elk).
- Big game, especially elk, would be enhanced.
- Water quality and fish habitat would generally not be effected because of the absence of roads, although burning could cause more temporary effects.
- Vegetative diversity would not be maintained but because of the small acreage involved, diversity could very well enhance diversity when larger adjacent areas are managed for other use that would permit more climax vegetative growth opportunities.
- Natural forces shaping the ecosystem of the effected areas would be disrupted by prescribed burning.

Economic and social impacts would relate to timber, wildlife, recreation, and wilderness values. The enhancement of winter range produces elk which in turn benefits hunters, outfitters and guides, and recreationists in general. Long term effect on timber production and the local timber industry would be adverse. Wilderness advocates would not be supported.

Designation: Nonwilderness
Management Emphasis: Timber/Wildlife-Watershed

Under this management emphasis, timber production at varying investment levels would be the primary management goal. Minimum management constraints relating to elk security needs and water quality would also be met.

Ten of the eleven alternatives contain this emphasis. Approximately 45 to 48 percent of the area would be managed under this emphasis under Alternatives B and C. Under Alternatives A and D, 11 to 16 percent of the area would be allocated to this emphasis. Alternatives E, E1, G, H, and J would designate approximately 7 percent of the area this use. Only 2 percent of the area would be allocated to timber production under Alternative F.

Because of the relatively small amount of big-game winter range in this area the emphasis is primarily associated with big-game summer range. The big-game range that is included would be managed primarily through timber harvest methods.

Under all alternatives with this emphasis, approximately 95 percent of the area would remain unroaded through the end of the first decade preserving a majority of its wilderness attributes. Under the high market output Alternatives B and C, approximately 60 percent of the area would still remain unroaded after the

end of the fifth decade. Eighty to ninty-five percent of the area would still remain unroaded after the fifth decade under the other alternatives.

This management emphasis would increase the utilization of market resources in the short term in all alternatives except in Alternatives F, H, and I. The greatest positive effect would occur in later decades in Alternatives B and C and to a lesser extent in Alternative A, because presently immature timber stands would be maturing in the third and fourth decades. Some type of timber harvest will be permitted on the present old growth, natural timber stands in all alternatives except G, F, I, and J.

Nonpriced resource costs and benefits would be:

- The naturally appearing visual setting would be changed to one meeting Modification visual quality objectives.
- Gray wolf security habitat would be disturbed by roading activity. The gray wolf elk prey base could decline as roading progresses.
- Elk summer and security habitat would be reduced to a minimum of 25 percent of potential elk use.
- Water quality would meet minimum management constraints.
- Vegetative diversity would tend toward seral successional stages favoring wildlife species not dependent on old growth.
- The recreation setting would shift from primitive to roaded natural.

Economic and social effects would center on timber, recreation, and wilderness resource values. The economics of both Clearwater County in the State of Idaho and Mineral County in the State of Montana are presently heavily dependent on the timber industry. This management emphasis would have a measureably positive effect on the economics of these counties and particularly in Mineral County. However, this area receives moderately heavy use from out of county and out-of-State users. They visit the area because of its attributes associated with a roadless environment. These groups would be adversely effected by this management emphasis. This would be most noticable in alternative B and C. Wilderness advocates would not be supported.

Designation: Nonwilderness
Management Emphasis: Timber/Visual-Riparian

All alternatives except Alternative I include this emphasis. Under Alternative I, visual and riparian areas would be protected by the wilderness emphasis.

This management emphasis is essentially a constraint on timber management activities along sale perennial streams and certain designated corridors to protect riparian and/or visual values. They occur in scattered stringers throughout the area. Total acreages are small with generally 10 percent or less of the total area designated for the emphasis under all alternatives (except I).

Although the emphasis is only associated with adjacent or surrounding timber management emphasis it would effectively impact wilderness values because of timber cutting practices.

This management emphasis would reduce the volume of timber removed in the short term but not in the long term. Timber harvest would be scheduled over a longer period of time as needed to protect the visual corridors and riparian areas.

Grazing could be affected if conflicts with riparian values occur.

Mining operations could also be affected in visual corridors and especially in riparian zones where maintaining water quality could be a factor.

Nonpriced resource costs and benefits would be:

- Visual quality would be maintained within designated visual corridors. Visual quality within riparian areas but outside visual corridors may be reduced to levels compatible to the appropriate management emphasis of adjacent or surrounding lands.
- Threatened and endangered species would be protected to the extent that they could exist within such narrow zones. The type of management emphasis assigned to adjacent or surrounding land would have a greater affect than the zones themselves.
- Big game habitat, especially moose, would benefit favorably.
- Water quality and fish habit would be maintained and enhanced.
- Vegetative diversity including riparian vegetation and all growth would be protected and enhanced.
- The existing primitive/semiprimitive recreation setting would be changed to a roaded natural setting. Roaded natural recreational activities would increase.

Social and Economic effects relate to timber, recreational, watershed, and wilderness values. Although timber and therefore economic benefits would be reduced, the relatively low percentage of land in this category under any alternative would minimize actual monetary losses in any one economic area. Social effects would be generally beneficial in terms of Forest visitors who enjoy high quality water, fishing, observing wildlife and the aesthetics of well managed and diverse stands of timber including old growth.

Designation: Nonwilderness
Management Emphasis: Timber Special

This management emphasis which applies only to big game summer range emphasizes elk mangement and watershed/fishery stream protection in certain areas on the Clearwater Forest only. High quality areas designated to this emphasis include the north side of lower Kelly Creek, Little Moose Creek, and lower Pollock Creek, under Alternatives E, E1, and J. This encompasses approximately 10 percent of the area in these alternatives.

This emphasis would preclude designation of the area for wilderness.

Although there is no reduction for timber under this emphasis, scheduling in order to meet elk and fishery values could create some adverse effect in later decades. Effects could be significant in the early decades because of access constraints.

Effects on grazing is minimal, mainly because of very low values in areas designated for this emphasis.

Minerals exploration and development is dependent upon road access which in the long term would be benefited.

Nonpriced resource costs and benefits would be:

- Visual quality could be reduced to modification because of timber harvest and roads.
- Threatened and endangered species, primarily the gray wolf, would be essentially protected with road closures and relatively high levels of elk for prey.
- Big game, especially elk, would be maintained at 75 percent of potential mainly through road closures and timber scheduling.
- Water quality and fishery habitat potential would be maintained at 80 percent levels through road design, timber scheduling, and road closures.
- Vegetative diversity would be maintained with all stages of vegetative growth encouraged. Some stands of old growth timber would also be maintained.
- The existing primitive recreation setting would shift to roaded natural.

Economic and social effects relate to timber, wildlife, fishery, wilderness, and recreational resource values. Any adverse social impact of timber management as a result of the management emphasis would be minimal. The positive effects on the economy of Mineral County, Montana and subsequent social impacts would probably offset the adverse social impacts to those who would prefer no development.

Designation: Nonwilderness
Management Emphasis: Special Areas

This management is applicable only to the Clearwater Forest and only includes one special area, the proposed 784 acre Steep Lakes Research Natural Area (RNA). Although the RNA is included in all alternatives except A and B, it falls within recommended wilderness in all remaining alternatives except C and D.

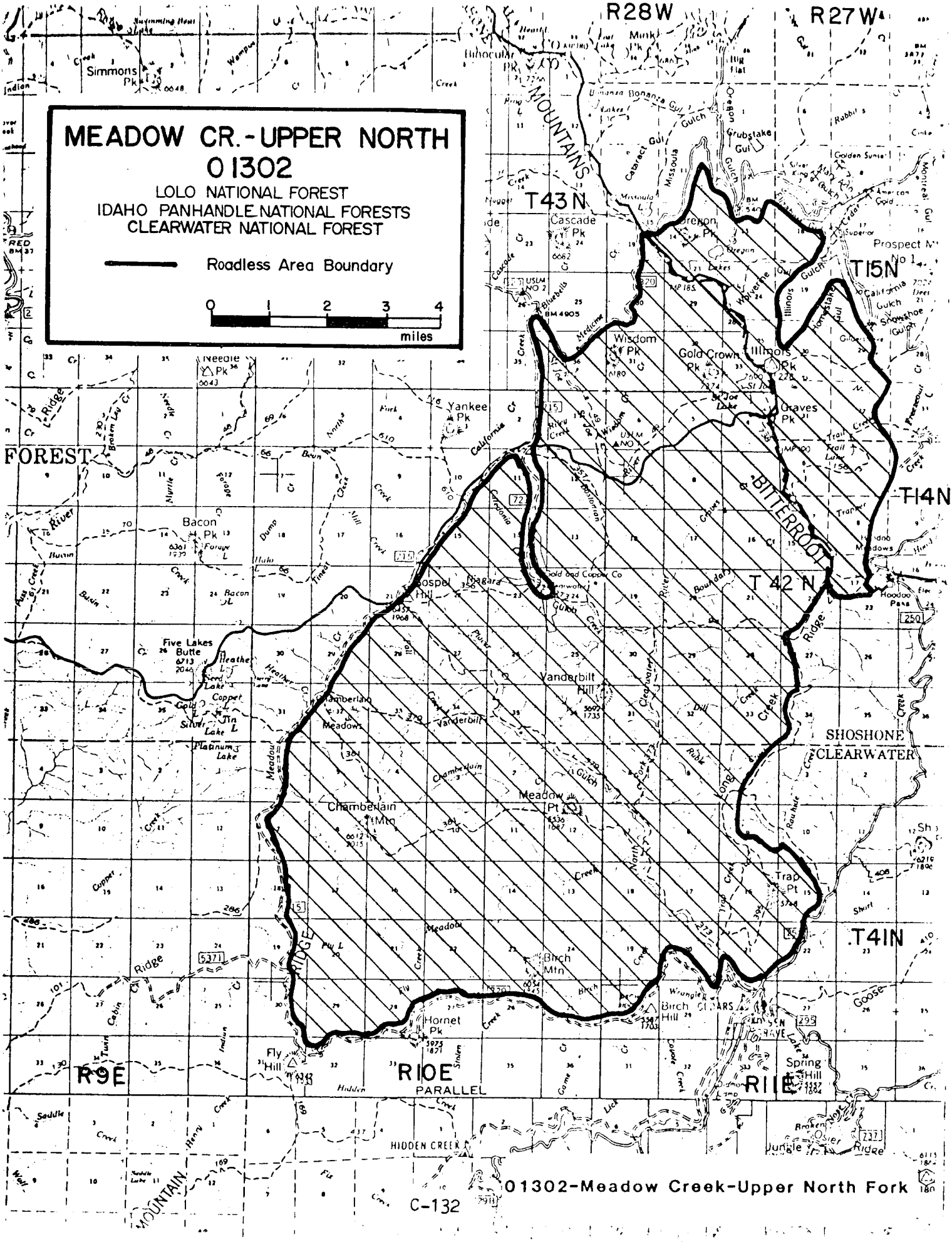
An RNA in the area is entirely compatible with wilderness emphasis.

The proposed RNA is located on land unsuitable for timber management and therefor would have no effect on timber outputs. Grazing, as well as mineral development, is also incompatible with an established RNA.

Nonpriced resource costs and benefits would be:

- Visual quality of retention would be maintained.
- Threatened and Endangered species would be protected.
- Big-game habitat as well as water quality and fish habitat would be maintained.
- Vegetative diversity would be maintained not because of management but because of the natural diversity of the area which includes grass-forb areas as well as high mountain shrubs and some stand of subalpine trees.

There are no known economic values in the area. The social benefit is the opportunity to study from a scientific and educational standpoint a natural high mountain lake and associated aquatic ecosystem.


MEADOW CR.-UPPER NORTH
01302
LOLO NATIONAL FOREST
IDAHO PANHANDLE NATIONAL FORESTS
CLEARWATER NATIONAL FOREST
Roadless Area Boundary
0 1 2 3 4
miles
R28W
R27W
T43N
T15N
T14N
T42N
T41N
R9E
R10E
R11E
BITTERROOT MOUNTAINS
FOREST
SHOSHONE
CLEARWATER
Cascade Pk
Wisdom Pk
Gold Crown Pk
Illinois Pk
Graves Pk
Yankee Pk
Bacon Pk
Gospel Hill
Vanderbilt Hill
Meadow Pt
Chamberlain Mtn
Birch Mtn
Hornet Pk
Fly Hill
Spring Hill
Trap Pt
Five Lakes Butte
Meadows
Chamberlain Meadows
HIDDEN CREEK
MOUNTAIN
01302-Meadow Creek-Upper North Fork
C-132

MEADOW CREEK-UPPER NORTH FORK #01302

Acreage:	Gross Acres	Net Acres
Idaho-Clearwater	45,440	40,702
Idaho-Idaho Panhandle	6,100	6,100
Montana-Lolo	7,200	7,200
Total	58,740	54,002

I. Description

The Meadow Creek-Upper North Fork Roadless Area is situated on the Idaho-Montana border, approximately 40 air miles west of Missoula, Montana. The Idaho portion is located in parts of Clearwater and Shoshone Counties within the Clearwater and Idaho Panhandle National Forests. The Montana portion is in Mineral County within the Lolo National Forest.

Accessibility is provided from several directions. From the east, it is 16 miles from Superior, Montana via the Cedar Creek Road No. 320 or 24 miles via the Pierce-Superior Road No. 250. From the northwest, it is 35 miles from Avery, Idaho via the St. Joe River Road No. 320. From the south, it is 100 miles from Orofino, Idaho via the Fly Hill Road No. 715, and the Pot Mountain Ridge Road No.720.

Interior access is provided over 54 miles of relatively low-standard, fire control and administrative trails. Because of funding and need, many trails are maintained intermittently and then just to keep them open. Cross country travel is very difficult over most of the area because of rugged terrain and dense low vegetation. Access along the state line divide is easier over barren and sparce vegetation areas.

Topography changes from narrow flat valley bottoms to very narrow flat and U-shaped valleys at higher elevations. Sharp rugged relief above 7,000 feet occurs along the Bitterroot Divide which separates Idaho from Montana. Several cirque basins containing four small lakes are also found near the divide. Two other small lakes are found at lower elevations. Topography becomes less steep in the North Fork of the Clearwater River drainage dropping down to 3,800 feet in elevation where the river exits the area.

Geologically, the area is composed of Belt Series bedrock which is made up of schists and gneiss'. These rocks are generally more stable and less erosive than those within the batholith.

Two major river systems, the St. Joe and the North Fork of the Clearwater, start within the area. The streams in the Montana side drain into the Clark Fork River. Six lakes are found and all but one are within relatively short distance of the Bitterroot Divide.

The area contains three major vegetative ecosystems: cedar-hemlock-pine forest encompassing the lower elevations in the North Fork of the Clearwater River and

Meadow and Chamberlain Creeks, western spruce-fir forest at the higher elevations up to 6,000 feet, and alpine meadows and barren land in a band along the Bitterroot Divide above 6,000 feet.

Vegetation varies from carex and beargrass on high elevation south slopes to grand fir and western red cedar types at lower elevations. Large forest fires in the late 1800's and early 1900's had a major influence on the present vegetation with much of the area being coverd with even-aged stands of lodgepole pine averaging six to ten inches in diameter. Most of the area is reforested with exception of south slopes having thin soils. Other species present include subalpine fir, western larch, mountain hemlock, grand fir, and some white bark pine.

Big game hunting, stream and lake fishing, hiking, backpacking, photography, scenic viewings, camping, prospecting, and horseback riding, all in primitive or undeveloped settings are the primary attractions. Except in places along the Bitterroot Divide, cross-country travel is difficult because of dense vegetation.

II. Analysis of Wilderness Suitability

A. Wilderness Attributes

1. Natural Integrity and Appearance

Human activities have had a moderate impact primarily in the St. Joe drainage, Upper Cedar Creek, and the head of the North Fork of the Clearwater River. Evidence remains of turn-of-the-century gold and silver placer and dredge mining activities. Rock tailing piles along streams, diversion ditches, cabins and remains of cabins, and access roads are the principal detractions even though much of it has softened over the years through natural vegetation and erosion. Present-day mining activites are more localized.

A metal lookout tower is located on Illinois Peak.

The majority of the rest of the area is relatively free of human impacts, even the trails appear natural and some minor grazing up to 1970 may still by evident in the meadows around Chamberlain Basin.

2. Uniqueness

The Meadow Creek-Upper North Fork provides a high opportunity for solitude because of its rectangular shape and large size incompassing over 54,000 acres. The area runs 14 miles north-south and 7 miles east-west. Screening, because of broken and varied topography and dense vegetation, is a big factor in reducing visual contact with others as well as minimizing noise levels and possibilities to observe discordant features outside the area. Encounters with visitors are most likely at the several larger accessible fishing lakes, the National Recreation Trail along the Bitterroot Divide, and within the St. Joe Wild River Corridor.
The boundary is 9 miles from a major highway on the east side and is adjacent to the Pierce-Superior road on the south side. Sounds from

logging activity near the periphery of the area have the potential of penetrating upwards to a mile into the roadless area. Sounds from mining activity inside the area also have the potential to be heard for a mile or so. Some very distant roads and timber harvest areas are visible in Montana and Idaho from the highest points along the Idaho-Montana Divide.

The opportunity for solitude also varies by season. Except for lower elevations in the North Fork, most land is inaccessible due to snow from November until July. Moderate to high use is experienced during elk hunting season in October.

Because of the high degree of solitude, dispersed recreation occurring in primitive and semiprimitive settings are excellent. The only improvements are the access trails which provide opportunities for hiking and horseback riding.

The major lakes, the St. Joe River, the North Fork of the Clearwater River, and other larger streams provide excellent fishing opportunities. Big game hunting, scenic viewing, and photography are other major uses.

3. Special Features - The evidence of early day mining activities and Native American use is a highlight in portions of the area.

   Approximately 4 miles of the headwaters of the St. Joe River have been classified a wild river under the National Wild and Scenic Rivers Act of 1968. Management of this corridor is directed by the St. Joe Wild and Scenic River Management Plan.

   State Line Trail No. 730 which extends north from Hoodoo Pass along the Bitterroot Divide has been designated as a National Recreational Trail. Because of the publicity these types of trails receive, visitors are increasing.

4. Effects of Size and Shape on Wilderness Attributes

   Because of the relative uniform rectangular shape of the area, external adverse effects are minimal. The isolated nature as well as the relatively low standard roads and short season also contribute to very low use resulting in even less effect on the wilderness attributes.

B. Manageability and Boundaries

Existing roadless area boundaries follow low standard roads along the southern, western, and northwestern sides and well defined ridges and creeks along most of the east side. Most of the boundary along the northeast boundary in Montana is poorly defined, following timber sale and other managment activities.

Along the southern edge, a checkerboard pattern of Diamond International land occurs. Other ownerships are the result of patented mining claims in Caledonia and Niagra Creeks. In terms of maintaining a well defined

wilderness boundary, land exchange or purchase of most of the private lands would be desirable. To exclude the private land from a proposed wilderness and still retain identifiable boundaries would result in a reduction of approximately 20,000 acres. Although the boundaries on the Montana side are irregular, it would be important to retain them as is, if possible, so as to keep the high divide country in tact.

The Rawhide Roadless Area (RARE II 01313), an area of 4,400 acres, is for all practical purposes contiguous to this area. The boundary between these two areas was established on the basis of the abandoned Rawhide Road which provided the first road access to the Clearwater Forest over Hoodoo Pass. This road was replaced with the Pierce-Superior Road No. 250 in the early 1950's. Although evidence of the road remains in places, it is unuseable in all except a short stretch near the pass.

C. Other Resources Found in the Area

1. Recreation - The potential for developed recreational sites is generally dependent upon road access, demand, and funding. Current and near future outlooks for funding as well as a perceived low demand in this area severely limits the likelihood of developing additional sites.

2. Wildlife and Fish - Wildlife species include elk, moose, black bear, whitetail and mule deer, grouse, and numerous species of nongame birds and animals indigenous to coniferous covered mountains in north-central Idaho and Montana. Most of the streams and lakes have a catchable size fish population, predominantly cutthroat and rainbow trout with some mountain whitefish and brook trout.

   Because of the elevations and heavy snowpacks over much of the area during the winter, only a small percentage of the area is suitable in big-game winter range.

   Although no verified sightings or other confirmed evidence of the endangered gray wolf exists in the Meadow Creek-Upper North Fork Roadless Area, habitat conditions conducive to the wolf have resulted in designation of the area as essential habitat. The management of an adequate prey base, which in this case is primarily elk, and restrictions on motorized road use are two major components for protection and enhancement of the species.

   Although sightings of the threatened grizzly bear have been reported a number of times over the years, no confirmed evidence has been presented.

3. Livestock Operations - Livestock grazing potential is moderate, but limited primarily to small, open, mountain grasslands and meadows along some of the major creeks. Cattle were last grazed commercially in the early 1970's. Some commercial horse and mule grazing is permitted in conjunction with the one outfitter and guide operating in the area.

4. Timber - About 36,000 acres or 67 percent of the total net acreage is considered suitable for the production of timber. The standing volume of sawtimber has been estimated at 579,900 million board feet. Much of the timber is immature, although there are pockets of larger old growth, especially in the North Fork Clearwater drainage.

5. Minerals - Mining (placer and hardrock) has been an important use in the past and still continues to attract a lot of prospecting. The mineral potential especially for silver and gold is moderate in a large area encompassing Niagara, Vanderbilt, Chamberlain, and Meadow Creeks in the North Fork drainage and extending north into the upper St. Joe River basin and the Cedar Creek drainage in Montana. The remainder of the area is low potential. Oil and gas potential is considered low.

6. Cultural Resources - Known cultural resources include three USFS lookout sites, five cabins or cabin remains, one Forest Service Ranger Station site, eight historic hunter or outfitter camps, one prehistoric camp and fishing site, three mining sites, and one Euro-American grave site. Indian trails existed along the present Pot Mountain Trail and several other areas.

   As noted previously, considerable early day mining has resulted in numerous sites and evidence of these activities.

   Historic evidence also indicates early Native Americans used selected sites along the Bitterroot Divide for killing game that crossed or were driven from one side to the other.

D. Important Management Considerations

1. Non-federal Lands - With the exception of about 400 acres of patented mining claims in Niagara and Caledonia Creeks, approximately 4,300 acres of land in the lower North Fork is owned by Plum Creek Timber Company, Inc. Some logging has taken place within two of the sections within recent years and plans are to access and harvest timber in other sections.

   There is currently very little mining activity within the mining claims.

2. Fire - Fire history includes the large burns of 1889 and 1910. Advanced fire suppression has contributed to low numbers and acres of annual fires in recent years. Correspondingly, the volume of fire fuels is increasing especially in areas where insect and disease-killed timber is found.

E. Resource Summary

01302 - Meadow Creek-Upper North Fork

Description		Clwtr	IPNF	Lolo	Total
Gross Acres	Acres	45,440	6,100	7,200	58,740
Net Acres	Acres	40,702	6,100	7,200	54,002
Recreation					
Primitive	RVD's	1,721	0	0	1,721
SPNM	RVD's	1,188	0	6,840	7,668
SPM	RVD's	8,996	365	0	9,361
Roaded Natural	RVD's	4,159	140	7,200	11,499
Range					
Existing Obligated					
Suitable	Acres	1,000	0	0	1,000
Allotments	No.	1	0	0	1
AUM's	AUM's	118	0	0	118
Existing Vacant					
Suitable	Acres	1,628	0	0	1,628
Allotments	No.	1	0	0	1
AUM's	AUM's	150	0	0	150
Proposed					
Suitable	Acres	0	0	0	0
AUM's	AUM's	0	0	0	0
Timber					
Tentative Suitable	Acres	33,089	1,615	1,513	36,217
Standing Volume	MBF	545,000	23,000	11,900	579,900
Corridors					
Exist. and Potential	No.	0	0	0	0
Wildlife - T&E					
Grizzly Bear					
Habitat - Sit. 1	Acres	0	0	0	0
Habitat - Sit. 2	Acres	0	0	0	0
Habitat - Sit. 3	Acres	0	0	0	0
Bald Eagle Hab.	Acres	0	0	0	0
Gray Wolf Hab.	Acres	40,702	0	0	40,702
Peregrine Fal. Hab.	Acres	0	0	0	0
Wildlife - Big Game					
Big Game					
Summer Habitat	Acres	0	0	0	0
Winter Habitat	Acres	0	0	0	0
Elk					
Summer Habitat-Key	Acres	0	179	0	179
Winter Habitat-Key	Acres	0	0	0	0

Description		Clwtr	IPNF	Lolo	Total
Significant Fisheries					
Stream Miles	Miles	179	0	0	179
Stream Habitat	Acres	215	0	0	215
Lakes	No.	4	0	0	4
Lakes - Habitat	Acres	68	0	0	68
Water Developments					
Existing	No.	0	0	0	0
Minerals					
Hardrock Potential					
Very High	Acres	0	0	0	0
High	Acres	0	0	0	0
Moderate	Acres	27,520	0	7,200	34,720
Low	Acres	13,182	0	0	13,182
Claims	No.	25	16	11	52
Oil and Gas Potential					
Very High	Acres	0	0	0	0
High	Acres	0	0	0	0
Moderate	Acres	0	0	0	0
Low	Acres	40,702	0	7,200	47,902
Oil and Gas Leases					
Leases	No.	0	0	0	0
Leased Area	Acres	0	0	0	0

F. Need

An important attribute is that it is representative of high alpine country, vegetation, and lakes in a largely unaltered natural condition. Management of St. Joe Lake and the surrounding area as wilderness would be more consistent with the wild river designation of the upper St. Joe River and aid in maintaining the integrity of the entire system.

Another main attribute is the display of successful vegetative changes resulting from the 1910 fires.

Considerable interest locally and regionally for wilderness classification has been shown. Before and during the RARE I and II process, the idea was promoted of having a continuous wilderness starting with the Mallard-Larkins continuing across Meadow Creek-Upper North Fork and connecting up with the Hoodoo area extending south all the way to near Lolo Pass. These efforts were promoted primarily by interests in the Lewiston-Moscow area.

The results of public input received on the RARE II Draft Environmental Statement recorded 1,787 favorable responses for wilderness, and 2,981 responses or 63 percent of the responses for development. Interest since that time (1979) has been minimal with some exceptions.

During public reveiw of the Lolo Forest Plan DEIS, many comments were received in support of including this area in the National Wilderness Preservation System. The Montana portion of this area is attached to a larger portion in Idaho which can become a contiguous area with the Great Burn recommendation. A large number of comments were in favor of the Great Burn Wilderness. This area is considered by many, as a portion of the Great Burn area. Comments were received that opposed any additional wilderness. Few responders oppose wilderness designation for this area.

In 1974, public input and concerns were solicited on the closure of St. Joe River Trail No. 49 to use by motorized vehicles. Interest in this area was considerable and overwhelmingly in favor to closure.

Table C-4 show the location and proximity to other wilderness areas and population centers in Idaho, western Montana, and eastern Washington.

G. Alternatives and Environmental Consequences

1. Management Emphasis by Alternative

The management emphasis for the Meadow Creek-Upper North Fork Roadless Area is a combination of management prescriptions and alternatives from three National Forests, the Clearwater, Lolo, and Idaho Panhandle. Because resources, uses, and land conditions are somewhat different on each Forest, neither the alternatives nor the management emphasis are fully integrated. Because the Clearwater Forest is the lead Forest for this roadless area, for purposees of this evaluation, the alternatives and management emphasis from the other two Forests have been integrated into those of the Clearwater Forest as close as possible on the basis of goals and objectives common to each Forest's alternatives and management emphasis.

Further information on the specific alternatives and management emphasis for the Idaho Panhandle and the Lolo National Forest's areas can be found in these Forest's Draft Environmental Impact Statements for the Forest Plans.

The proposed wilderness/nonwilderness designation for area 1302 is made and documented in the Idaho Panhandle Enviromental Impact Statement. This proposed designation has priority over all other land designations and none of the three Forests can undertake any management activity other than current direction until such time that a record of decision is issued in conjunction with this document.

Meadow Creek-Upper North Fork Roadless Area

Management Emphasis by Alternative
*Alternatives (Thousand Acres)

Clwtr IPNF Lolo	A (8) (a)	B (2) (c)	C (4) (c)	D (5,7) (d,e,f)	E (11) (d,e,f)	E1 (12) (d,e,f)	F (7) (b)	G (1) (a)	H (10) (d,e,f)	I (3,7,9) (g)	J (5) (d)
Management Emphasis											
WILDERNESS:	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (7.2)	0 (6.1)	40.7 (13.3)	0 (0)
NONWILDERNESS:	0	0	0	0	0	0	0	0	0	0	0
Unroaded	(0.7)	(4.8)	(4.8)	(8.9)	(8.9)	(9.2)	(10.2)	(4.0)	(5.0)	(0)	(8.9)
Elk Winter	0 -	0 -	0 -	0 -	0 -	0 -	0 -	0 -	0 -	0 -	0 -
Timber/ Wldlf-Wtshd	29.4 (1.7)	27.0 (3.4)	28.5 (3.4)	22.7 (1.2)	22.4 (1.5)	21.3 (1.2)	2.9 (0.7)	29.4 (0.1)	0 (0.7)	0 (0)	20.3 (1.2)
Timber/ Visual-Rip	6.5 (1.3)	2.5 (0)	2.7 (0)	16.4 (0.7)	15.7 (0.7)	16.7 (0.7)	14.9 (0.8)	10.2 (0)	9.4 (0.7)	0 (0)	19.4 (0.7)
Timber/ Special	0 (0.3)	0 (0.3)	0 (0.3)	0 (0.2)	0 (0.2)	0 (0.2)	20.6 (0)	0 (0)	30.4 (0.2)	0 (0)	0 (0.2)
Special	0 (1.3)	0 (1.3)	0 (1.3)	0 (1.3)	0 (1.3)	0 (1.3)	0 (1.3)	0 (1.3)	0 (0)	0 (0)	0 (1.3)
Min Lvl	4.8 (8.0)	11.2 (3.5)	9.5 (3.5)	1.6 (1.0)	2.6 (0.7)	2.7 (0.7)	2.3 (0.3)	1.1 (0.7)	0.9 (0.6)	0 (0)	1.0 (1.0)
TOTAL	40.7 (13.3)	40.7 (13.3)	40.7 (13.3)	40.7 (13.3)	40.7 (13.3)	40.7 (13.3)	40.7 (13.3)	40.7 (13.3)	40.7 (13.3)	40.7 (13.3)	40.7 (13.3)
Summary of Management Emphasis											
Wilderness:											
Clearwater	0	0	0	0	0	0	0	0	0	40.7	0
IPNF	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(6.1)	(6.1)	(0)
Lolo	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(7.2)	(0)	(7.2)	(0)
Nonwilderness:											
Developed-Clearwater											
Decade 1	36.7	36.7	36.7	36.7	36.7	36.7	36.7	36.7	36.7	0	36.7
Decade 5	40.7	40.7	40.7	40.7	40.7	40.7	40.7	40.7	40.7	0	40.7
Developed-Lolo											
Decade 1	(1.8)	(1.9)	(1.9)	(1.4)	(1.4)	(1.4)	(1.0)	(1.9)	(1.4)	(0)	(1.4)
Decade 5	(7.2)	(2.4)	(2.4)	(2.2)	(2.2)	(2.2)	(1.0)	(2.4)	(2.2)	(0)	(2.2)

Clwtr	A	B	C	D	E	E1	F	G	H	I	J
IPNF	(8)	(2)	(4)	(5,7)	(11)	(12)	(7)	(1)	(10)	(3,7,9)	(5)
Lolo	(a)	(c)	(c)	(d,e,f)	(d,e,f)	(d,e,f)	(b)	(a)	(d,e,f)	(g)	(d)
Developed-IPNF											
Decade 1	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
Decade 5	(1.8)	(1.8)	(1.8)	(0)	(1.0)	(0)	(0)	(0)	(0)	(0)	(0)
Roadless-Clearwater											
Decade 1	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	40.7	4.0
Decade 5	0	0	0	0	0	0	0	0	0	40.7	0
Roadless-Lolo											
Decade 1	(5.4)	(5.3)	(5.3)	(5.8)	(5.8)	(5.8)	(6.2)	(5.3)	(5.8)	(0)	(5.8)
Decade 5	(0)	(4.8)	(4.8)	(5.0)	(5.0)	(5.0)	(6.2)	(4.8)	(5.0)	(0)	(5.0)
Roadless-IPNF											
Decade 1	(6.1)	(6.1)	(6.1)	(6.1)	(6.1)	(6.1)	(6.1)	(6.1)	(0)	(0)	(6.1)
Decade 5	(0)	(0)	(0)	(6.1)	(5.1)	(6.1)	(6.1)	(6.1)	(0)	(0)	(6.1)

Total Acres:

Clearwater -	40.7
Idaho Panhandle -	6.1
Lolo -	7.2

Total Acres Roadless Area: 54.0

* This roadless area is contiguous with the Lolo and Idaho Panhandle National Forests. Numbers in parenthesis represent the alternatives and acres on the Lolo and Idaho Panhandle Forests.

III. Impacts

Designation: Wilderness
Management Emphasis: Wilderness

The entire area is allocated for this management emphasis in Alternative I. Alternative G would allocate approximately 13 percent of the area to wilderness with Alternative H designating 11 percent of the area to wilderness use.

This emphasis will enhance the wilderness attributes of the area. The acquisition of the private lands around Birch Mountain and in Niagara Gulch, 4,738 acres, would maintain the entire area as essentially roadless.

Approximately 550 MMBF of standing timber on the 36,000 acres of tentatively suitable timber land located within the area would not be available for timber harvest.

Mineral, gas, oil exploration, and development could continue. However, exploration and development costs would be extremely high because of access and other operational constraints, needed to protect the areas' wilderness characteristics.

Existing livestock grazing would be compatible with current wilderness policy.

Nonpriced benefits and costs would be:

- The visual quality would be maintained in a natural setting.
- The national wilderness system would increase.
- The gray wolf habitat would be maintained. The solitude of the area would be maintained and the prey base, elk, should be sufficient. The habitat would eventually decline as the timber stands encroach on the existing openings and the elk habitat declines.
- The elk habitat could eventually decline due to the natural succession of the forest, and the inability to modify it by prescribed burning. Openings in the forest stands will occur through fire or insect and disease. The lodgepole pine stands will become increasingly subject to attack by the mountain pine beetle within 20 to 40 years.
- The water quality of the area will be maintained to the highest fishable level.
- The present primitive and semiprimitive recreation setting would remain. Big game hunting, hiking, camping, photography, fishing, and horseback riding activities would continue.
- Vegetative diversity would trend towards old growth. Old growth dependent wildlife species would be favored.

The social and economic effects center around timber, minerals, wildlife, and recreation. The local timber industry would not be supported. The mineral industry would not be supported. Individuals favoring wilderness designation would be supported. Recreationists favoring roaded natural recreation activities would not be served.

Designation: Nonwilderness
Management Emphasis: Unroaded

Portions of the Idaho Panhandle and Lolo National Forests would be allocated to this emphasis in 10 of the 11 alternatives. Under Alternatives D, E, E1, F, and J, approximately 16 to 18 percent of the area would be allocated to this emphasis. Alternatives B, C, G, and H would allocate approximately 8 percent of the area to this emphasis with only 1 percent of the area being managed with this emphasis under Alternative A. The wilderness attributes of the affected portions of the area would be maintained.

The suitable timber land within the affected portions of the area would not be available for harvest or other investment purposes.

Mineral, oil, gas exploration, and development could occur. However, extraction costs would be extremely high because of access and other operational constraints required to maintain roadless values.

This emphasis would have no impact on the existing livestock grazing activities within the area.

Nonpriced resource costs and benefits would be:

- The naturally appearing, unroaded visual setting would be maintained.
- Gray wolf security habitat would remain undisturbed with the elk prey base declining over time because of successional trends.
- Vegetative diversity would tend to move towards climax successional stages and species. Old growth dependent wildlife species would be favored.
- The lodgepole pine stands in the area would become more susceptible to insect and disease attack over time.
- Elk habitat would be modified by natural forces including fire. Elk populations could fluctuate depending on naturally evolving cover/forage ratios.
- Water quality would remain high.
- The existing primitive/semiprimitive recreation opportunity setting would remain. Hunting, fishing, hiking, photography, ski touring, and horseback riding would remain the dominant recreational activities.

Social and economic effects would relate to timber, recreation, and wilderness resource values. The local timber products industry would not be supported. Those individuals advocating wilderness values would be largely supported. Those individuals favoring primitive/semiprimtive recreation experiences would be served. Recreationists desiring roaded natural recreation experiences would not be supported.

Designation: Nonwilderness
Management Emphasis: Timber/Wildlife/Waterhsed

Under this management emphasis, timber production at varying investment levels would be the primary management goal. Minimum management constraints relating to elk security needs and water quality would also be met.

Ten of the eleven alternatives would allocate portions of the area to this management emphasis. Approximately 55 to 60 percent of the area would be allocated to timber production in Alternatives A, B, C, and G. Under Alternatives D, E, E1, and J, approximately 40 to 45 percent of the area would be managed for such emphasis. Alternative F would allocate 7 percent of the area to such use, with only 1 percent of the area in Alternative H.

Under all alternatives except I, (high wilderness) approximately 70 percent of the area could be roaded by the end of the first decade, significantly altering the affected areas' wilderness characteristics. Under the same alternatives, 20 to 30 percent of the area would still remain unroaded by the end of the fifth decade.

Timber on suitable lands within the affected areas would be available for harvest and other long term investments under this emphasis. Lodgepole pine is the major species on a third of the suitable timber land.

Development of any discovered mineral, oil, or gas resources would be facilitated because of improved access.

This emphasis would not significantly impact the livestock grazing resource of the area. Timber harvest would provide transitory range.

Nonpriced benefits or costs would be:

- Visual quality would be affected by road access and timber harvest. The natural landscape in visual sensitive portions would be retained or partially retained.
- The gray wolf habitat could be maintained by controlling road access and providing an adequate prey base.
- A minimum of 25 percent of the elk habitat potential would be maintained by controlling road access and scheduling of timber harvesting. Harvesting in the wide spread continuous lodgepole pine stands would improve elk cover/forage ratios in the area.
- The water quality of area would be maintained a high fishable level by controlling road access and scheduling of road construction and timber harvesting.
- Existing vegetative diversity would tend towards seral successional stages and species.
- The semiprimtive recreation setting would be changed to roaded natural as development progresses. Hunting, fishing, camping, and motorized recreational opportunities would dominate the setting.

Social and economic effects center around the resource values of timber, wildlife, wilderness, and recreation. Timber and mineral resources would be available, supporting the local wood products and mineral industries. The change in recreation settings could be disruptive to those individuals using the area for primitive or semiprimitive recreation as well as public viewing the area from the lakes, streams, and roads. Individuals supporting wilderness would not be served. Those recreationists desiring roaded natural recreational activites would be supported.

Designation: Nonwilderness
Management Emphasis: Timber/Visual-Riparian

All alternatives except J would contain areas with this management emphasis that has a goal of timber production on areas that fall into the Retention/Partial Retention visual categories and areas of ecologically important riparian vegetation and features located along stream sources.

Ten of the eleven alternatives would contain lands with this emphasis. Under Alternative D approximately 40 percent of the area would be allocated to this management emphasis. Alternatives E, E1, and F would allocate approximately 30 percent of the area to it; Alternatives A, G, H, and I would designate 15 to 20 percent of the area for visual/riparian emphasis. Under Alternatives B and C, only 5 percent of the area would be managed for this purpose.

Because these largely narrow and linear shaped areas would be directly spatially related to larger areas with timber production emphasis, the effects would essentially mirror those of the timber/wildlife/watershed management emphasis.

Wilderness characteristics would be adversely modified. Timber harvest would occur on an extended rotation basis.

Mineral development would be costly because of constraints needed to protect key riparian/visual values.

Some transitory range for livestock would be created.

The primary effects on nonpriced resources would mirror those of the timber/wildlife/watershed management emphasis areas. However, vegetative diversity would trend towards climax successional stages because of extended timber rotations. This would favor old growth dependent wildlife species.

Social and economic effects would relate to watershed, timber recreation, and wilderness values. Water quality values would be supported. Hunting, fishing, driving, and/or hiking would be the predominate recreation activities Individuals advocating roaded natural recreational activities would be supported. Wilderness advocates would not be supported.

Designation: Nonwilderness
Management Emphasis: Timber Special

Ten of the eleven alternatives contain lands allocated to this management category.

Alternative H would allocate 57 percent of the area located in the Meadow Creek and Upper North Fork of the Clearwater drainages on the Clearwater National Forest, to a primary management goal of maintaining existing resident cutthroat, Dolly Varden, and rainbow trout fishery values with a secondary management goal of timber production. Under Alternative F, approximately 38 percent of the area located in the Meadow Creek drainages would be managed for the same emphasis. In the 8 other alternatives, less than 1 percent of the area on the Lolo National Forest would be allocated to this category of management. The remaining alternatives do not have this emphasis. This emphasis would preclude future wilderness designation on areas where roads are constructed.

There would not be any change in the suitable timber land available for harvest over those discussed under the timber/wildlife/watershed emphasis. The greatest change for timber harvesting activities would be in the scheduling of road construction and timber harvest to be compatible with the fish habitat productivity and water quality objectives. There will be a greater cost for mitigation measures in timber management activities in the form of road closures and smaller harvest unit size.

Mineral, grazing, and oil and gas resources would remain available. Grazing would not be encouraged in the elk calving areas in the spring.

Nonpriced benefits or costs would be:

- Visual quality would be affected by road access and timber harvest. There would be a higher visual quality from the timber/wildlife/watershed management emphasis due to the smaller size and irregular shaped timber harvest units. The roads could be constructed to minimize long sight targets and to take advantage of natural screening.

- The gray wolf habitat would be maintained or increased over levels in the timber/wildlife/watershed emphasis. The gray wolf's food base will be greater since the elk habitat will be maintained at least 75 percent of potential elk use.
- The summer range productivity would be maintained at a minimum of 75 percent of maximum potential elk use. An increase in the elk population over E-1 could be expected.
- The water quality of the area will be maintained at a high fishable level. The main river and its tributaries are a major spawning water for the Dolly Varden.
- The scenic primitive recreation setting would change to the roaded natural. The increase use of road closures would maintain more of a semiprimitive environment from management emphasis E1.

Social and economic effects center around resource values of wildlife, recreation, wilderness, and timber. Timber and mineral resources would be available thus, supporting the wood products and mineral industries. The recreation experience provided by commercial outfitters would be reduced from the present unroaded condition. The public would have limited motorized access on the new roads constructed in the area. Individuals advocating wilderness would not be supported.

Designation: Nonwilderness
Management Emphasis: Special

Under all alternatives except I and H, (wilderness), approximately 1,300 acres of the area would be managed to protect the outstanding scenic, wildlife, fisheries, and ecological values of the St. Joe Wild and Scenic corridor. Under alternatives H and I, those portions of the river corridor within the area would be allocated to wilderness.

A road currently parallels much of the river corridor impacting the wilderness characteristics of the corridor. Under all alternatives, the wilderness character of the corridor would remain essentially at existing levels. Timber on suitable timber land within the corridor would not be available for harvest other than on an opportunity basis to enhance or protect corridor values.

Nonpriced resource costs and benefits would be:

- The visual setting in the corridor would be managed to meet Retention/Partial Retention goals.
- Gray wolf habitat and elk prey base values would remain essentially unchanged.
- Water quality levels would remain high.
- Existing roaded natural and semiprimitive recreational opportunity settings and activities would remain essentially unchanged.

Economic and social effects would relate to timber, recreation, and wilderness values. Overall, the emphasis would not support the local timber products or minerals industries. Recreationists favoring roaded natural and semiprimitive settings and activities would be supported. Wilderness advocates would not be wholly supported.

Designation: Nonwilderness
Management Emphasis: Minimum Level Custodial

Lands in this category have been defined as being unavailable for timber or within their other resource investment purposes because of either biophysical conditions or indentified economic constraints. Acre variances between alternatives are created by other resource constraints imposed by alternative resource emphasis items. Management would be custodial with no investments occurring.

All of the alternatives with the exception of I (wilderness) contain lands in this emphasis. Approximately 20 to 25 percent of the area would be allocated to this emphasis under Alternatives A, B, and C. Four to five percent of the area would be managed under such emphasis under the remaining alternatives.

Effects on resources would reflect those resulting from management of surrounding lands.

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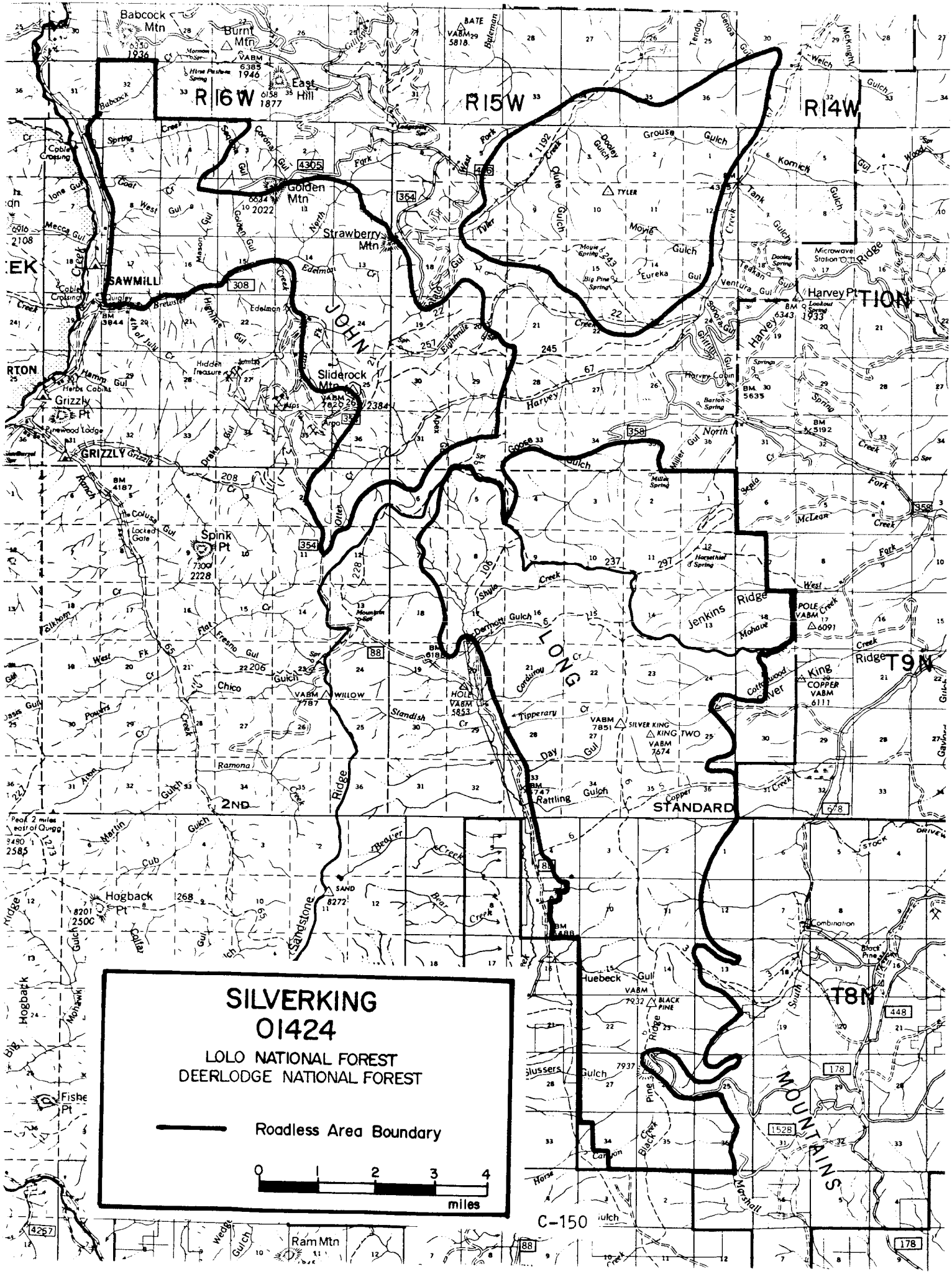
SILVERKING
01424
LOLO NATIONAL FOREST
DEERLODGE NATIONAL FOREST
Roadless Area Boundary
0 1 2 3 4
miles
R16W
R15W
R14W
T9N
T8N
C-150

SILVER KING #01424

Acreage:

Forest	Total Acres	Private Acres
Deerlodge NF	42,617	1,170
Lolo NF	13,150	310
Total	65,767	1,480

I. Description

This area is located in Granite County in southwestern Montana about 15 miles northwest of Philipsburg. It lies on the south end of the Long John Mountain Range. It is separated from the Quigg Peak Roadless Area by a road up Upper Willow Creek. Refer to Table C-4 for proximity information.

The area is best described as high ridge country. The main ridge of the unit is the eastern half of an elongated horseshoe shaped ridge system with a long U-shaped valley in the middle. Fairly steep, rounded slopes form both sides but avalanche activity is nominal.

The ridges are timber covered with interspersed grassland. The east facing slope is predominantly forested with lodgepole pine and Douglas-fir. A large amount of downfall chokes any ideas of convenient travel. The west-facing slope has fir groves mixed with open parks. The ridgetop is mostly a mixed variety of conifers including white bark pine.

The lower slopes are generally tree covered. Elevations range from 4,000 to 7,851 feet at the top of Silver King Mountain.

Access to the area is relatively easy with roads around all sides. Near the southwestern corner the road to Black Pine Mountain affords easy access. Upper Willow Creek Road along the western boundary and several unimproved roads along the eastern boundary also make for easy access.

The vast majority of recreation use here is classified as being in a roaded natural-appearing setting and not in primitive or semiprimitive settings.

II. Wilderness Suitability

Wilderness suitability is determined by both the degree to which an area retains its primeval natural integrity in a pure ecological sense, and whether it appears natural to most people. Suitability requires outstanding opportunities for solitude and a primitive and unconfined type of recreation. The abilities to manage and protect an area's natural characteristics are also factors to take into account.

A. Natural Integrity

This roadless area has retained a high degree of its wilderness characteristics. Some impacts are evident, but do not detract from its natural qualities.

Current mineral prospecting sites are located east of Black Pine Mountain. A few older sites can be found near the eastern boundary and could easily be separated from the area.

Lodgepole pine thinning projects have accelerated revegetation processes of ground cover close to the eastern boundary (T. 9 N., R. 14 W., section 18 and T. 9 N., R. 15 W., section 24).

A few old deteriorated cabins are apparent in the area.

Grazing in the lower elevations has had minimal effect on vegetation.

On the eastern and western boundaries are two short sections of unimproved road (T. 8 N., R. 14 W., section 18) and (T. 10 N., R. 16 W., section 25). Off-road vehicle tracks start up McDermott Creek, Corduroy Creek, Tipperary Creek, and on Pole Ridge.

The trails traveling through the area enhance the area's natural integrity.

B. Opportunities for Solitude

The distance from the perimeter to the core of this area averages about 2 miles. Although topographical screening is not present in abundance, the vegetative screening would allow a large number of visitors to obtain solitude.

A few off-site intrusions can be seen from the ridge and mountain tops. Close to the area's boundary (T. 10 N., R. 16 W., section 25), a fire lookout and microwave tower can be seen. Also, the Black Pine Mine and a few working ranches are perceived in the distance.

C. Primitive Recreation Opportunities

A long ridge trail leads from the Black Pine Lookout, north to McDermott Creek. It is in fairly good condition and used infrequently by hikers, hunters, snowshoers, and crosscountry skiers.

D. Manageability

The Silver King Roadless Area was inventoried and evaluated in the 1979 RARE II Environmental Impact Statement. Changes between that EIS and this planning effort are:

Inventory	Gross Acres	Net Acres	Reason for Change
1979 RARE II	46,200	44,970	
1983 Plan	42,670	41,447	
Change	-3,530	-3,523	Acreage recalculation Timber harvest, Mining activity and BPA powerline construction

With the BPA transmission line in place this roadless area has really become two separate areas. Boundaries on the west side are reasonable. Major adjustments would be desirable on the east side, should the area be designated wilderness.

Existing contractual agreements and private rights which would need to be addressed if the area were designated wilderness include:

* 1,170 acres of private land
* 1,640 acres of unpatented mining claims
* 37,820 acres of oil and gas leases

III. Availability

A. Resource Potentials

TABLE 1 - ROADLESS RESOURCE DATA

Category	Unit	Number Deerlodge	Number Lolo
Gross Acres	Acres	42,617	13,150
Net Acres	Acres	41,447	12,840
Recreation			
Primitive	RVDs	0	0
Semiprim. Nonmotor.	RVDs	1,800	2,568
Semiprim. Motor.	RVDs	4,000	6,420
Roaded Natural	RVDs	0	89,880
Range			

Category	Unit	Number Deerlodge	Number Lolo
Existing Obligated			
Suitable	Acres	4,871	4,650
Allotments	No.	2	3
AUMs	AUMs	1,075	184
Existing Vacant			
Suitable	Acres	0	3,070
Allotments	No.	0	2
AUMs	AUMs	0	350
Proposed			
Suitable	Acres	0	0
AUMs	AUMs	0	0
Timber			
Tentative Suitable	Acres	33,075	8,728
Standing Volume	MBF	204,734	60,900
Corridors			
Exist. & Potential	No.	1(E)	0
Wildlife - Big Game			
Summer Habitat	Acres	35,354	9,465
Winter Habitat	Acres	6,093	3,375
Significant Fisheries			
Stream Miles	Miles	24	3.2
Stream Habitat	Hab.Ac.	53	3.1
Lakes	No.	0	0
Lake Habitat	Hab.Ac.	0	0
Water Developments			
Existing	No.	0	1
Minerals			
Hardrock Potential			
Very High	Acres	0	978
High	Acres	106	35
Moderate	Acres	4,160	11,827
Low	Acres	37,181	0
Mining Claims	No.	82	87
Oil & Gas Potential			
Very High	Acres	0	0
High	Acres	0	0
Moderate	Acres	0	0
Low	Acres	37,181	12,840
Oil and Gas Leases			
Leases	No.	18	8
Leased Area	Acres	37,820	3,850

B. Recreation

The area receives little recreational use because of its dense vegetation, although fall hunting and hiking on established trails is found.

C. Wildlife

Big-game animals include elk, moose, mule deer, and whitetail deer, all of which are hunted, plus numerous species of nongame animals and birds.

D. Water

The majority of the area is in the Rock Creek drainage and many people in the Region would like to see the high water quality maintained.

E. Livestock Operation

The area now supports a considerable amount of livestock grazing (1,259 AUM's annually) on five allotments. Some opportunities exist for increasing this grazing by more spring developments and fencing.

F. Timber

A good portion of the area has tentatively been identified as suitable for harvest. Because of the relative case of access also, local timber interests want a nonwilderness designation.

G. Minerals

Much of the area has moderate mineral potential, especially on Lolo National Forest portions while most of the remaining area is rated at low potential. Silver and base metal deposits are suspected from Cooper Creek to the Black Pine mineral belt on the southern part of the area.

H. Cultural Resources

The area has received a very limited amount of survey work although some private work has been done and a few prehistoric sites and historic period logging and homesteading sites have been found.

I. Land Use Authorizations - None.

J. Non-Federal Lands

There are 1,170 acres of potential mining claims and industrial timber land exist in the area.

IV. Public Perception

A. Proximity to Other Designated Wilderness and to Population Centers

(See Figures A & B at end of Appendix.)

B. Contributions to the National Wilderness Preservation System

The National Wilderness System has attempted to achieve a wide spectrum of wilderness characteristics. These include a diversity of landforms, ecosystems, and areas with good geographic distribution and accessibility..

Landforms and ecosystems contained in this roadless area are fully represented in the Region. The goal of accessibility/distribution is to provide opportunities for a wilderness experience within a day's travel time. Because of the existing amount of wilderness in the Region, this goal is fully met.

While the area does not fulfill needs for the identified characteristics, it does provide opportunities for recreation within a semiprimitive setting and for experiencing a sense of solitude.

C. Public Interest

Our assessment of public interest is based on the results of six public workshops, 34 letters, position papers of the Governor of Montana and wilderness groups such as MWA, and the Montana Wilderness Coalition, and the proposed Montana Wilderness Bill of 1984 (S. 2850).

The Forest has, over the past 3 years, received 106 comments on the wilderness issue. There were 0 recommendations for wilderness, 2 against, and 3 favoring nonwilderness (roadless management). From what we have concluded, the public interest in Silver King is low. That conclusion is reinforced by the exclusion of this area in wilderness position papers of the Governor and other wilderness groups and its absence from the proposed Montana Wilderness Bill (S. 2850).

During the public reveiw period for the DEIS, there were few additional comments on the Silver King Area. Several comments favored wilderness designation for all existing roadless areas. Other responders opposed further additions to the wilderness system.

V. Alternatives and Environmental Consequences

A. Management Emphasis Assignment by Alternatives

Management emphasis highlights a particular resource activity. For example, if the emphasis is timber, most of the activity on those acres would be for timber management. Resource activities which are compatible with the emphasis would continue, but with less intensity. Table 2 lists the acres of each management emphasis by alternative.

The management emphasis for the Silver King Roadless Area is a combination of management prescriptions and alternatives from two National Forests, the Deerlodge and Lolo. Because resources, uses, and land conditions are somewhat different on each Forest, neither the alternatives nor the management emphasis are fully integrated. Because the Deerlodge Forest is the lead Forest for this roadless area, for purposes of this evaluation, the alternatives and management emphasis from the other Forest has been integrated into those of the Deerlodge Forest as close as possible on the basis of goals and objectives common to each Forest's alternatives and management emphasis.

Further information on the specific alternatives and management emphasis for the Deerlodge National Forest's areas can be found in that Forest's Draft Environmental Impact Statement for the Forest Plan.

The proposed wilderness/nonwilderness designation for area 1424 is made and documented in the Deerlodge Envirommental Impact Statement. This proposed designation has priority over all other land designations and none of the two Forests can undertake any management activity other than current direction until such time that a Record of Decision is issued in conjunction with this document.

TABLE 2 - MANAGEMENT EMPHASIS BY ALTERNATIVE

ACRES OF AREA UNDER MANAGEMENT FOR EACH EMPHASIS BY ALTERNATIVE
Lolo Forest (Only)
(Refer to Appendix C Introduction for Management Areas under each emphasis)

Management Emphasis	Alternatives a	b	c	d	e	f	g
NONWILDERNESS							
Timber/Range	988	1592	6703	5256	5256	5256	-
Wild life							
Grizzly bear	-	-	-	-	-	-	-
Other	11223	757	6137	3575	3575	3575	-
Visual	629	796	-	12	12	12	-
Miscellaneous	-	475	-	3267	3267	3267	-
Riparian	*	*	*	317	317	317	-
Roadless	-	9220	-	413	413	413	-
WILDERNESS							
Wilderness	-	-	-	-	-	-	12840
Total	12840	12840	12840	12840	12840	12840	12840

* Small inclusions occur in other management emphasis items

SUMMARY OF MANAGEMENT EMPHASIS (acres managed by decade)

Roaded							
Decade 1	1920	1920	1920	1920	1920	1920	-
Decade 5	12840	3620	12840	12427	12427	12427	-
Roadless							
Decade 1	10920	10920	10920	10920	10920	10920	-
Decade 5	-	9220	-	413	413	413	-
Wilderness							
Decade 1	-	-	-	-	-	-	12840
Decade 5	-	-	-	-	-	-	12840

Deerlodge Forest (Only)

Management Emphasis	Acres by Alternative												
	A	B	C	D	E	F	G	I	J	K	L	M	N
Wilderness	0	0	0	0	0	0	0	0	41447	0	0	0	0
Nonwilderness									0				
Timber	6679	15778	16489	13296	15778	15778	15778	13329	0	15778	15778	14263	13218
Range	5506	3428	2717	5359	3428	3428	3428	4500	0	3428	3428	4943	4948
Wildlife	2312	2152	2152	2152	2152	2152	2152	2520	0	2152	2152	2152	2152
Recreation	26950	20089	20089	20640	20089	20089	20098	21098	0	20089	20089	20089	21129
Municipal Watershed	0	0	0	0	0	0	0	0	0	0	0		
Minimal Level	0	0	0	0	0	0	0	0	0	0	0		
TOTAL	41447	41447	41447	41447	41447	41447	41447	41447	41447	41447	41447	41447	41447
Summary of Management Emphasis:													
Developed													
Decade 1	1318	1584	4069	1318	1584	1584	1641	1340	0	1584	2251	3199	3199
Decade 5	5922	9342	11871	6802	9342	9342	9342	7142	0	9148	9342	7328	7314
Roadless													
Decade 1	40129	39863	37378	40129	39863	39863	39806	40107	0	39863	39196	38248	3820
Decade 5	35525	32105	29576	34645	32105	32105	32105	34305	0	32299	32105	34119	3413
Wilderness	0	0	0	0	0	0	0	0	41447	0	0		

1/ Roadless is defined as 5,000 acres or greater in size or any acreage if contiguous to existing wilderness.

Alternative Coorelation between Lolo and Deerlodge alternatives

Lolo alternatives	a	b	c	d	e	f	g
Deerlodge alternatives	A	I	C	L	E	I	J

B. Impacts

Designation: Wilderness
Management Emphasis: Wilderness

Only Alternative J calls for wilderness designation of this area. The impacts of these two alternatives include:

- The removal of 33,079 acres of tentatively suitable timber land from potential timber production.
- Increased management complexity on the 4,871 acres of grazing land and of the 1,075 AUM's of use in the area.
- Withdrawal from mineral entry (subject to existing rights) of an area classed as moderate in mineral potential.
- Removal of the opportunity to improve big-game habitat on slightly over 2,100 acres.
- Economic effects such as increased timber management intensity (i.e., costs) to offset the smaller area available for timber harvest; increased cost for range management and increased mineral level costs should the 1,170 acres of potential claims and the 1,740 acres of unpatented claims be developed.

The associated nonpriced benefits/costs include:

- Area of wilderness would increase.
- Existing visual condition would be maintained.
- Existing elk security would be maintained.
- Water quality and fisheries habitat would be maintained.
- Average tree age would increase and the area would tend toward old growth.

Designation: Nonwilderness
Management Emphasis: Recreation

All alternatives except J allocate 44 to 66 percent of the area to this management emphasis. Motorized use may continue on portions of the area where such use now takes place. However, since this management emphasis excludes scheduled timber harvest and associated road construction, there should be little long term change in the area's wilderness attributes. The area would, however, be open to mineral development, and should development take place, some loss of wilderness characteristics would occur.

Economic effects are basically the loss of secondary benefits associated with the unavailability of 33,075 acres of tentatively suitable timber land and the extra costs for mineral activities common to a minimal access situation.

Except for the wilderness benefit, the associated nonpriced benefits/ costs are similar to the above management emphasis of wilderness.

Designation: Nonwilderness
Management Emphasis: Timber, Timber/Wildlife,
Timber/Wildlife/Range

All alternatives except J allocate from 16 to 45 percent of the area to this management emphasis.

Implementation of a timber emphasis would basically eliminate portions of the area from further consideration for wilderness. Alternatives call for a maximum of 2,251 acres to be developed the first decade. This should leave 39,196 acres (95 percent of the area) available for wilderness suitability evaluation during the next scheduled plan revision.

Economic effects are those associated with timber production on a maximum of 33,075 acres of land classed as suitable in the alternatives. Increased access could also have some economic benefit to the minerals and livestock industries.

The associated nonpriced benefits/costs include:

- Wilderness suitability would be seriously impaired.
- Existing visual condition would change and man's activities may dominate portions of the landscape.
- Semiprimitive recreation opportunities would be seriously reduced.
- Existing elk security index would be reduced, due to roading and timber harvest.
- Forage for elk and cattle would be optimized.
- Water quality and fisheries habitat would be reduced by roading and timber harvest.
- Average tree age would be reduced resulting in less old growth.

Designation: Nonwilderness
Management Emphasis: Wildlife, Range/Wildlife, Range

All alternatives except J allocate from 12 to 20 percent of the area to these management emphases. Lands receiving this emphasis are forage producing. In some cases, these lands may also be described as tentatively suitable for timber.

Since road construction is not part of the Range and/or Wildlife emphasis, they would have little effect on the area's wilderness attributes. The structural improvements associated with the management of these resources would be the most noticable impacts.

Economic effects are basically the loss of those secondary benefits associated with the unavailability of 33,075 acres of tentatively suitable timber land and the extra costs for mineral activities common to a minimal access setting.

The associated nonpriced benefit/costs include:

- Wilderness suitability could be slightly affected.
- Existing visual condition would be slightly reduced.
- Existing elk security would be maintained.
- Water quality would be maintained.
- Fisheries habitat would be improved where economical.
- Average tree age would increase and the area would tend toward old growth.

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Map for Bear-Marshall-Scapegoat-Swan
is provided by the Flathead National Forest
and is inserted at the end of Appendix C

Acreage:

Total Gross Acres:	866,330	Total Net Acres:	865,178
Flathead National Forest	348,950	Flathead National Forest	348,950
Helena National Forest	58,752	Helena National Forest	58,700
Lolo National Forest	121,940	Lolo National Forest	120,900
Lewis & Clark National Forest	336,688	Lewis & Clark National Forest	336,628

I. Description

A. Location and Access

The Bear-Marshall-Scapegoat-Swan Roadless Area is located in the Northern Continental Divide Ecosystem. This roadless area surrounds the Bob Marshall, Great Bear, and Scapegoat Wildernesses. It also includes portions of the Swan Range north of the Bob Marshall Wilderness near Inspiration Point and Alcove Mountain to the Columbia Mountain locale near Columbia Falls, Montana.

This area includes portions of Flathead, Lake, Missoula, Glacier, Pondera, Teton, Lewis and Clark, and Powell Counties in the Flathead, Lewis and Clark, Helena, and Lolo National Forests.

From the east side, access is very limited. Less than a dozen access points exist in the 75 miles of Forest boundary. Much of the roadless area boundary is adjacent to private land; thus right-of-way is required for any new access points. The eastern portion can be accessed by the North Fork Teton River Road, South Fork Teton River Road, Sun River Canyon Road, Beaver/Willow Creek Road, Benchmark Road, and Elk Creek Road. Major access to the northeast portion can be gained by roads and trails that originate from U.S. Highway 2.

On the west side, access is less restricted. National Forest or State lands border much of this portion of the roadless area. In the north, access can be gained by trails which begin at U.S. Highway 2. Roads paralleling Hungry Horse Reservoir provide access to the Swan Crest and other portions east of the South Fork Flathead River. Many other roads provide access to the west side; Holland Lake is the most popular of these. On the south side, the road near Monture Creek, North Fork Blackfoot River Road, Copper Creek Road, and Alice Creek Road provide access to this portion of the roadless area.

B. General Description

The topography and vegetation in the eastern portion differ dramatically from the western portion. These changes occur at the Continental Divide. On the east side, the topography was formed by overthrust faulting and local glaciation. Generally, the area is steep and

dissected with numerous valleys. On the west side, the terrain is steep as a result of uplifting of the Swan Range along the Swan Fault. Glaciers have scoured the sides and tops of these mountains, leaving them well rounded on the top.

Major ecosystems on the east side (Kuchler, 1966 1/) are the western spruce-fir forest and the Douglas-fir forest, with alpine meadows and foothill prairie occurring in lesser amounts. Mountains are characterized by long linear ridges called reefs with forests or grasslands on the gentle backslopes and barren rock cliffs on the front of the thrust sheet. Major tree species on the east side are Douglas-fir, lodgepole pine, ponderosa pine, Engelmann spruce, and subalpine fir. The area is not densely forested and has low productivity, with south facing slopes often open or in a mosaic of forest and meadows that are a result of wildfire. Large grasslands (parks) occur in most major drainages. Major ecosystems on the west side are the western spruce-fir forest with some Douglas-fir forest and alpine meadow in the southern portion. Major tree species are Douglas-fir, larch, lodgepole pine, western white pine (in the north), Engelmann spruce, subalpine fir, and whitebark pine. The area is densely forested with trees thinning out to alpine meadows toward the higher elevations.

Precipitation varies from 20 to 40 inches or more per year on the east side; from 40 to 60 inches or more per year on the west side.

The roadless area provides habitat for many wildlife species, including grizzly bear, black bear, cougar, lynx, fisher, marten, elk, deer, whitetail deer, mule deer, wolf, moose, mountain goat, and bighorn sheep. Whitetail deer are found mostly on the west side, mule deer on the east. This roadless area, with most of the area at high elevations, contains important summer range habitat for big game species.

The grizzly bear is a threatened species. The majority of the roadless area is considered occupied grizzly bear habitat and classified as Situation 1, or necessary for the survival and recovery of the grizzly bear. The gray wolf is classified as an endangered species. Sightings of gray wolf are rare. Potential habitat exists in the majority of the roadless area, but it is not currently considered to be occupied. The area also provides habitat for the threatened bald eagle and the peregrine falcon.

Significant fisheries include the Middle Fork Flathead River in the northern portion, and the Dearborn River in the southeast portion. The Middle Fork Flathead River contains important bull trout spawning areas. The Dearborn River is known for its excellent cutthroat trout fishing.

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*Kuchler, A. W., 1966, Potential Natural Vegetation of the Conterminous United States. American Geographical Society, NY.

This roadless area has special importance to many people because it is adjacent to the Great Bear, Bob Marshall, and Scapegoat Wildernesses. Much of the use in these areas is either by horse or foot, and involves hiking, backpacking, hunting, cross-country skiing, and horseback riding. In order to get to one of the three wilderness areas, one usually travels several miles through this roadless area. Some people view parts of this roadless area as part of their wilderness experience in the Bob Marshall or Scapegoat Wildernesses. Two of the most popular access points to the Bob Marshall Wilderness, Holland Lake and Benchmark, are in this roadless area.

Livestock grazing, motorized recreation, timber harvesting, and oil and gas development represent other uses of this roadless area to other people. Most grazing occurs on the east side. Timber harvesting potential is not very high for the entire area because most of the area is high elevation, steep, and has low productivity sites. The better timber sites are on the west side. Probably the most important resource with the highest potential for development is the oil and gas resource. Much of this roadless area is over the overthrust belt. This area is rated as having a very high potential for oil and gas; much of it is leased.

To describe and analyze this roadless area in greater detail, 12 different locations are identified (see location map or Bear-Marshall-Scapegoat-Swan Roadless Area map in map package). The east side is considered part of the Rocky Mountain Front. From north to south, included are:

Badger/Two Medicine
Teton
Deep Creek/Reservoir North
Renshaw
Benchmark/Elk Creek
Silver King/Falls Creek

The eastern portion of this roadless area is managed by the Lewis and Clark and Helena National Forests.

On the west side, most of the roadless area is in the Swan Mountain Range. From north to south, included are:

Middle Fork Flathead
East South Fork Flathead
Swan Crest
Swan Front
Monture
Stonewall Mountain

The western portion is managed by the Lolo, Flathead, and Helena National Forests.

Badger/Two Medicine - This area consists of the Badger Creek and South Fork-Two Medicine River drainages. Badger Creek and its tributaries flow east. The Badger Creek drainage consists of steep, rocky mountains

dissected by numerous narrow canyons and waterways. The South Fork of the Two Medicine River flows north towards Glacier National Park. Two Medicine is a broad, glaciated valley with moderate slopes.

Snowmobilers and motorcyclists are the predominate users of the area's transportation system. The Elk Calf-Two Medicine Trail is a National Recreation Trail.

These lands were once part of the Blackfoot Indian Reservation. This area was ceded from the reservation in 1896. The Blackfoot Indian Nation retains certain use rights on these lands under the Agreements of 1888 and 1896, and the Treaty of 1855. The Treaty and Agreements also accorded to the United States certain rights and privileges.

Teton - This area includes Blackleaf Canyon and the North, South, and Middle Forks of the Teton River. The Middle Fork Teton River and the eastern sides of several high peaks along the Teton-Sun River Divide are found here. The area borders the Bob Marshall Wilderness for 8 miles. Two heavily used trails, Route Creek and Headquarters Pass, provide access to the Bob Marshall. This area consists of high rugged mountains formed by thrust faults with steep front slopes and gentle backslopes bisected by numerous valleys and streams.

The Blindhorse Creek Wilderness Study Area, managed by the Bureau of Land Management, and the Montana Department of Fish, Wildlife and Parks' Blackleaf Game Range are located adjacent to this area.

The high peaks found along the divide are Rocky Mountain Peak, at 9,392 feet, the highest mountain within the Bob Marshall Wilderness; Old Baldy, 9,156 feet; Teton Peak, 8,416 feet; and Mt. Lockhart, 8,691 feet. Mountain goats are found within the area. Our Lake, one of the few alpine lakes in the eastern portion, is heavily used by backpackers and fishermen.

Blacktail-South Fork Teton, Crown Mountain-Petty Creek, and Jones Creek are National Recreation Trails which pass through the area.

Deep Creek/Reservoir North - This area, which is 25 miles northwest of Choteau, is south of the Teton area. Deep Creek/Reservoir North borders the eastern side of the Bob Marshall Wilderness for 15 miles, and consists of high parallel overthrust limestone reefs separated by deep valleys. Sheep Reef, Arsenic Mountain, and other unnamed features separate Deep Creek from the Sun River drainage. Chute Mountain and Castle Reef along the eastern boundary rise abruptly from the adjacent prairie foothills. The extensive south-facing valleys, such as Hannan, Blacktail, Mortimer, Big George, Wagner Basin, and Arsenic Mountain serve as winter habitat for elk, whitetail deer, mule deer, and bighorn sheep. Large numbers of elk use the southern portion of the area for seasonal migration and winter habitat. The area is the wintering range for the Sun River Rocky Mountain bighorn sheep herd, numbering around 1,000. This is one of the largest herds in the lower 48 states.

The southwestern portion of the area is used extensively by commercial outfitters and guides and private recreationists during the general

hunting season. Visitor use in the area is light during the spring and summer and consists of day hiking, hoseback riding, and traffic enroute to the Bob Marshall Wilderness. Use increases dramatically during hunting season. A National Recreation Trail runs north-south through the area along Blacktail Creek and the South Fork of the Teton River. Two adjacent Bureau of Land Management Wilderness Study Areas, Chute Mountain and Deep Creek/Battle Creek, are found on the eastern boundary of this area.

Renshaw - This area is bordered on the north and west by the Bob Marshall and Scapegoat Wildernesses. It contains three distinct areas - Patricks Basin, which consists of Lange Creek draining north to Gibson Reservoir through a broad, heavily timbered valley; the plateau area, which consists of Fairview and Ford Creek Plateaus; and the South Fork of the Sun River. The Sun River elk herd, one of the largest in Montana, uses the Lange Creek drainage, along with the Bob Marshall and Scapegoat Wildernesses to the west and the Sun River Game Range to the east. The Fairview-Ford Creek Plateau provides winter habitat for bighorn sheep and elk. The third area, the valley of the South Fork of the Sun River, is a popular access route to the Bob Marshall Wilderness.

A small subalpine lake, Renshaw Lake, is frequented by fishermen and youth groups. Two major landmarks of this area are Renshaw Mountain, 8,264 feet, and Fairview Mountain, 8,245 feet, whose impressive eastern face is seen far out on the plains. Steep limestone reefs border the eastern boundary of the area, giving way to sharp peaks, high mountain grasslands, and trees to the west. Parts of the area were burned in the 1920's and are now large grasslands.

Benchmark/Elk Creek - This area is south of Benchmark and borders the Scapegoat Wilderness. Three mountains border its western edge: Patrol Mountain, at 8,031 feet; Crown Mountain, at 8,401 feet; and Steamboat, at 8,565 feet. The area consists of high rugged mountains formed by thrust faults with steep side slopes bisected by numerous valleys and streams. It contains occupied grizzly bear habitat. The Benchmark Road to the north of this area is the most popular access route to the Bob Marshall on the east side. Elk Creek Road is becoming a popular access point to the Scapegoat Wilderness. Patrol Mountain and Steamboat, both popular day hikes, provide spectacular views of the surrounding wilderness to the west and foothills prairie to the east.

Silver King/Falls Creek - This area is located about 20 miles southwest of Augusta and lies to the east of the Scapegoat Wilderness. It includes the Falls Creek drainage and the Dearborn River drainage east of the Scapegoat Wilderness, and also another Falls Creek drainage southwest of the Continental Divide. This area straddles the Continental Divide. Twin Buttes, Caribou Peak, Burned Point, and Steamboat Mountain are found here. Falls Creek drainage, which is dominated by Caribou Peak (8,773 feet) high on the Continental Divide, is located in the area. Silver King Mountain, at 7,771 feet, dominates the area south of the Continental Divide. The Dearborn River drainage consists of a steep-walled canyon with a scenic gorge in the Devil's Glenn area. The river itself is a series of rapids and deep pools which offer excellent cutthroat trout fishing. The Falls Creek drainage consists of the open, broad-valleyed

east fork and the heavily timbered west fork. Both drainages have steep, rugged headwalls along the Continental Divide.

Middle Fork Flathead - This area, located in the northern portion of the Bear-Marshall-Scapegoat-Swan Roadless Area, contains steep to very steep terrain with broken and diverse country, especially the areas bordering the Great Bear Wilderness. It contains important grizzly bear habitat and travel corridors. Areas within 1/2 mile of the Middle Fork River have been designated as bald eagle habitat. A small mountain goat population inhabits Slippery Bill Mountain. Some important bull trout spawning area in the Middle Fork drainage is located in portions of this roadless area. Challenge, Granite, Dodge, Morrison, and Puzzle Creeks are closed to fishing by the Montana Department of Fish, Wildlife and Parks and designated as spawning streams.

Recreation use is light to moderate depending on the locale and access availability. The majority of the use in the area is by hunters, fishermen, snowmobilers, cross-country skiers, hikers, and people using stock to gain access into the Great Bear Wilderness. The Big Bill, Granite Creek, and Morrison Creek Trails are the major routes to the Great Bear Wilderness. Numerous smaller trails are used as access to lakes within the Great Bear Wilderness. They provide good day hike opportunities.

East South Fork Flathead - This area is located within the South Fork Flathead River drainage. It is bordered to the northeast by the Great Bear Wilderness and to the south by the Bob Marshall Wilderness. The area to the southwest is managed for timber with main access roads in the valley bottoms.

The area is moderately steep to steep, reaching from heavily timbered to subalpine land forms with scattered rock outcroppings. The higher elevations have shallow soils and are low in productivity. Some open ridges exist along the Great Bear Wilderness boundary. Hungry Horse Reservoir is the dominant feature seen from this area. Great Northern Mountain dominates the view to the east. Some extensive lodgepole pine stands regenerated from the 1929 Half Moon fire occur near Desert Mountain. Elk migrating out of the Middle Fork and a portion of the Bob Marshall Wilderness use part of this area as their migration route to and from winter habitat. The area also includes important spring grizzly bear habitat.

The major dispersed recreation use of this area is hiking or big game (elk, deer, and bear) hunting. The Big Bill Trail which accesses the Great Bear Wilderness and the Spotted Bear Trail which accesses the Bob Marshall Wilderness are heavily used. Other access trails are available but receive little use. Outstanding views can be seen from the high ridges.

Extensive limestone caves are found in the southeast portion just north of Sargeant Mountain.

Swan Crest - This area extends from Badrock Canyon on the north to Sixmile Mountain on the south. The east side parallels the Hungry Horse

Reservoir and borders on timber managed land. The area varies from 3 to 5 miles in width and is approximately 30 miles long. It is an extension of the Swan Front and is not adjacent to any designated wilderness.

A variety of scenes surround this roadless area. Directly to the east, Hungry Horse Reservoir and existing logging activities dominate the view. Past logging activities, parts of the Great Bear Wilderness, and Glacier National Park can be seen further to the east and northeast. To the west, the Flathead and Swan Valleys, the Whitefish Range, and the Mission Mountains Wilderness can be seen. The Jewel Basin Hiking Area is in the center of the area.

The terrain is steep as a result of uplifting that occurred when the Swan Range was formed along the Swan Fault. The break in topography in the Strawberry Lake area is a result of two cross-faults. Although the basin walls are steep, the east side of the divide is more gentle than the west slope. Elevation varies from 3,500 feet to over 7,500 feet.

The Jewel Basin Hiking Area is a specially designated back-country use area consisting of 15,349 acres of high mountains. It includes 28 alpine lakes, many picturesque mountain streams, meadows, rocky peaks, subalpine timber, and a variety of flowers. The Alpine Trail, which runs along the top of the Swan Divide, offers spectacular views of both the Flathead Valley and Hungry Horse Reservoir. Other trails and lakes outside the Jewel Basin are also special features. This area is easily accessed for day and weekend use. The Strawberry Lake area, just outside Jewel Basin, is also a popular day use area.

Major uses in the area include hunting, fishing, hiking, horseback riding, snowmobiling, and trail bike use. Most trail bike use occurs around Columbia Mountain.

Swan Front - This area extends from Sixmile Mountain south to Morrell Mountain. It is bounded on the east by the Bob Marshall Wilderness for approximately 2/3 of its length and by the South Fork of the Flathead River and Hungry Horse Reservoir to the northeast. The area involves the west facing slope of the Swan Range down to private land and presently roaded areas. It also includes the Bunker Creek-Sullivan Creek drainages.

A continuous chain of high, and often treeless, rugged mountains form the backbone of the Swan Front. Among the highest are Swan Peak (9,289 feet), Union Peak (8,825 feet), and Holland Peak (9,356 feet). Below the high peaks and ridges lie a series of alpine and subalpine basins or hanging valleys. Most of the lakes in this area are found here, several of which are stocked with fish. Below the high basins is an area that is often called the canyon zone. Here the streams of the Swan Front plunge down narrow bottoms between steep side slopes until they reach the gentler terrain of the Swan Valley. Rocks and cliffs prevail in much of the canyon zone. On the northern end, the east facing slopes are broken by major drainages with high ridges leading toward Hungry Horse Reservoir.

Grizzly use the area for summer habitat and winter denning sites. Important mountain goat habitat is also found here.

The major dispersed recreation use of this area is hiking, horseback riding, or big game hunting. Gorge Creek Trail, Napa Point, Smith Creek, and Holland Lake Trails are major access points to the Bob Marshall Wilderness. The Holland Lake Trail is the most used trail into the Bob Marshall Wilderness. Several outfitters operate within the Hall-Trinkus Lake and Lion Creek areas. The Alpine Trail passes through this area from north to south along the crest of the Swan Range, ending at Inspiration Point. Here it enters the Bob Marshall Wilderness and ties to the Gorge Creek Trail. A variety of outstanding views can be seen from the Swan Divide.

Several falls are found in Bond, Lion, Condon, Rumble, Morrell, and Holland Creeks. Best known is Holland Falls. The trails to Holland Falls and Morrell Falls are popular National Recreation Trails. In the Lion Creek Canyon is a mature cedar grove. Lion Creek passes through the grove in a series of cascades and falls.

The Swan Front is considered to be an important part of the Swan Valley watershed. Likewise, the Bunker and Sullivan Creek drainages are considered important to the water quality of the South Fork of the Flathead River.

Monture - This area is adjacent to the Bob Marshall Wilderness on the north and the Scapegoat Wilderness on the east side. Terrain ranges from steep barren mountain slopes to heavily timbered valleys. Elevations range from 4,600 feet to 8,700 feet. Monahan Mountain, Morrell Mountain, and Fenn Mountain rise above 8,000 feet, along with numerous other mountains which border along the two adjacent wildernesses. Approximately 60 percent of the area is forested. The remainder of the area is evenly divided between a mosaic of forest, shrubs, and rockland. Cirque basins, tarn lakes, U-shaped valleys, and serrated ridges caused by alpine glaciation can be seen at the head of the Monture Creek drainage. All of the major streams drain into the Blackfoot River.

Fisheries are good in the area, with Monture Creek and the North Fork Blackfoot River the main fishable streams. Lake Otatsy, Canyon Lake, and Camp Lake are fishable lakes. Monture is also critical for wildlife. It contains important grizzly bear habitat as well as elk migratory routes between the Bob Marshall Wilderness and the Blackfoot-Clearwater Game Range.

Portions of the area receive heavy use, especially around some of the lakes and entrances to the Bob Marshall Wilderness. Use includes backpacking, horseback riding, and hunting. Several outfitter base camps are located here. During the summer and fall, outfitters use the trails in the valleys to access the Bob Marshall and Scapegoat Wildernesses. A few trails receive light levels of trail bike and snowmobile use.

Stonewall Mountain - This area is situated along the southern boundary of the Scapegoat Wilderness. Topography varies widely within the area, from rolling mountains in the Alice Creek portion to more rugged mountain

peaks, cliffs, avalanche paths, and tallus slopes in the rest of the area. Glacial cirque basins and steep glaciated valleys occur in all portions of the area except for Alice Creek. Most of the area west of Stonewall Mountain and Copper Creek is very steep and rocky. The area east of Stonewall Mountain to Copper Creek is steep and well timbered on north facing slopes. It contains open growing stands of timber with small grassland parks on south and west facing slopes. The Alice Creek drainage is a moderately steep area. Elevations range from 4,900 feet in the Blackfoot Valley to 9,411 feet on Red Mountain. Red Mountain is the highest peak for this part of the Rockies south of Glacier National Park. Numerous peaks are over 7,500 feet in elevation.

A unique vegetative community exists on the southeast slopes of Red Mountain consisting of both white bark and limber pine. These two species are growing together at an elevation of about 8,000 feet. This area has been recommended for a 4,000-acre Research Natural Area by the Intermountain Experiment Station.

Fisheries are very good in the area. Arrastra Creek and Landers Fork of the Blackfoot River are the main fishable streams. Copper Lakes and Silver King Lake (mostly on private land) are the only fishable lakes. Cutthroat trout is the principle species in both streams and lakes.

Recreation use consists mainly of hunting, with hiking and horseback riding also popular. Snowmobilers use the Stonewall Mountain Trail to travel to the Upper Copper Creek Basin and use the Alice Creek/Lewis and Clark Pass area. Most of the drainage bottoms have access trails with the Reservoir Lake Trail in Arrastra Creek receiving the most use. Fishermen regularly visit Copper Lake.

II. Analysis of Wilderness Suitability

A. Capability

1. Wilderness Attributes

The Bear-Marshall-Scapegoat-Swan surrounds the Bob Marshall, Scapegoat, Great Bear Wilderness Complex. It contains 866,330 acres with all but 1,152 acres in National Forest System land. It has had some disruption in natural integrity and natural appearance. Human activities in some of the area are evident, although most impacts are concentrated along road corridors and the exterior boundaries. In other areas the only disruptions are trails which access the Bob Marshall, Scapegoat, or Great Bear Wildernesses.

Most of the plant and animal species that existed in this roadless area when the Lewis and Clark Expedition passed south of here nearly 200 years ago are still present. Most mammal species present then are still present now; however, some are considered threatened or endangered. The integrity of the fisheries has been altered by the stocking of grayling and rainbow trout. Rainbow trout hybridizes readily with the native cutthroat trout. Many miles of unaltered cutthroat streams remain. Some plant species, such as spotted knapweed, leafy spurge, thistle, and clover have been introduced

accidentally into the area through livestock use. These species are found mainly along the trails. Off trail, the plant community has changed little except for successional changes and those brought about by naturally occurring fires. To the untrained eye, the natural appearance of this area is high.

In general, the Bear-Marshall-Scapegoat-Swan Roadless Area possesses high opportunities for solitude because of its size and the influence of the adjacent Bob Marshall, Scapegoat, and Great Bear Wildernesses. Much of it contains highly dissected topography that easily screens people from one another in a short distance. Some portions are influenced by adjacent roads and other developments.

The area offers high opportunities for primitive recreation. A variety of topography challenges the visitor with its high mountain tops and steep valleys. The large size of the area offers the opportunity to get away from the man-influenced environment and experience excellent primitive recreation activities such as fishing, camping, hunting, backpacking, hiking, and horseback riding.

Other features include a high diversity of wildlife and wildlife habitat; spectacular views; unique geographical features and vegetation; an extensive trail system; outstanding hunting; important, high quality watersheds; and a specially designated hiking area. Wildlife species include all the major game species. The Sun River elk and bighorn sheep herds (some of the largest in Montana) migrate through the eastern portions of this roadless area. The entire area contains essential habitat for the threatened grizzly bear and endangered gray wolf. Views of Glacier National Park; the Bob Marshall, Scapegoat, Great Bear, and Mission Mountain Wildernesses; and the surrounding prairies and valleys can be seen from many of the peaks and ridges in this area. Limestone caves are found near the South Fork Flathead River and a unique cedar grove exists in the Lion Creek drainage in the Swan Front. Many miles of national recreation trails have been designated here. People nationwide are attracted by the outstanding hunting and backcountry experiences here and in the adjacent wildernesses. The area contains important watersheds for the Sun River, Dearborn River, Swan River, and the South Fork Flathead River. The heavily used Jewel Basin Hiking Area is located in this roadless area.

2. Manageability and Boundaries

Because this area surrounds the Bob Marshall, Scapegoat, Great Bear Wilderness Complex, it consists of several long narrow segments which are usually separated by road corridors. The boundary along the adjacent Bob Marshall, Scapegoat, and Great Bear Wildernesses are usually well defined by high ridges and major topographic features. Other boundaries parallel existing roads or land survey lines which are sometimes difficult to identify.

In 1977, the Forest Service inventoried 758,454 acres in the Bear-Marshall-Scapegoat-Swan Roadless Area for RARE II. Currently,

the inventory contains 865,178 acres. The following chart displays how the inventory changed.

From this inventory, the Bear-Marshall-Scapegoat-Swan Roadless Area was combined into 12 areas instead of 18. The 18 areas were based on administrative boundaries and divided the A1485 roadless portion into noncontiguous areas. The 12 areas listed below are based on geographic differences only.

ID	ROADLESS AREA	NATIONAL FOREST	NET ACRES	GROSS ACRES
C1485	Badger/Two Medicine	Lewis & Clark	102,100	102,100
T1485	Teton	Lewis & Clark	63,133	63,133
P1485	Deep Creek/Reservoir North	Lewis & Clark	45,922	45,962
W1485	Renshaw	Lewis & Clark	57,591	57,611
A1485	Benchmark/Elk Creek	Lewis & Clark	32,314	32,314
F1485	Silver King/Falls Creek	Lewis & Clark	35,568	35,568
F1485	Silver King/Falls Creek	Helena	7,215	7,215
MF485	Middle Fork Flathead	Flathead	42,450	42,450
ES485	East South Fork Flathead	Flathead	57,640	57,640
SC485	Swan Crest	Flathead	106,870	106,870
SF485	Swan Front	Flathead	141,990	141,990
SF485	Swan Front	Lolo	20,840	21,540
Q1485	Monture	Lolo	100,060	100,400
A1485	Stonewall Mountain	Helena	51,485	51,537
	TOTAL		865,178	866,330

In the Rocky Mountain Front, adjacent to National Forest lands, are three roadless areas being studied for their wilderness potential by the Bureau of Land Management. The three areas are: Blindhorse Creek, Chute Mountain, and Deep Creek/Battle Creek. These areas comprise 11,218 acres and are adjacent to the Teton and Deep Creek/Reservoir North portions of the Bear-Marshall-Scapegoat -Swan Roadless Area. They have been recommended for Outstanding Natural Area designation in the Headwaters Final Environmental Impact Statement published by the Bureau of Land Management's Butte District in November 1983. Management of these areas emphasizes roadless management and scenic values.

In discussions between the Bureau of Land Management and Forest Service, it was agreed that the two agencies would consider complementary management alternatives for their adjacent lands and that coordinated recommendations be submitted to Congress. The range of alternatives in the Bureau of Land Management Final Environmental Impact Statement are within the range of alternatives in this study.

Current uses which may not conform with wilderness management include oil and gas leasing. Of the 865,178 acres, 718,481 acres have been leased.

C. Highlights of Wilderness Attributes and Wilderness Manageability for Individual Areas

Wilderness suitability of the individual areas in the Bear-Marshall-Scapegoat-Swan area are now discussed beginning with the areas east of the Continental Divide.

Badger/Two Medicine - The Badger/Two Medicine area is a contiguous parcel of National Forest System land. Boundaries are well defined by existing wildernesses, major terrain features, and the Forest boundary. An old road system and present motorized use would make wilderness management difficult.

Human activity in this area has left extensive impacts. A primitive road system, resulting from seismic activity during the late 1950's and early 1960's, is located within the area. Although much of the system is now designated for administrative purposes and trail vehicles, snowmobilers and motorcyclists use this system. Human activity is evident although most impacts are concentrated along roads and the exterior boundaries.

The area is large enough and the topography such that persons visiting the area feel they are in a natural area, away from ordinary human activity and development. Old seismic roads and motorized use distract from the natural appearance of the area.

In the southeast Two Medicine valley, opportunities for primitive recreation and solitude are high. Natural integrity and apparent naturalness have been impacted by the extensive unimproved road system, trail oriented use, and livestock grazing. In the Badger Creek drainage, opportunities for solitude and primitive recreation are very high. Apparent naturalness and natural integrity have been impacted by seismic roads, but these impacts can be easily excluded by boundary adjustments.

The Badger/Two Medicine Roadless Area is within the area that was once part of the Blackfoot Indian Reservation. The Treaty of 1855 and Agreements of 1888 and 1896 between the Blackfoot Indian Nation and the United States established for members of the Blackfoot Indian Nation certain use rights on these lands. The Agreement of 1896 specifically provides to the Blackfoot Tribe the following:

> "Provided, that said Indians shall have, and do hereby reserve to themselves, the right to go upon any portion of the lands hereby conveyed so long as the same shall remain public lands of the United States, and to cut and remove therefrom wood and timber for Agency and school purposes, and for their personal uses for houses, fences, and all other domestic purposes: and provided further, that the said Indians hereby reserve and retain the right to hunt said lands and to fish in the streams thereof so long as the same shall remain public lands of the United States under and in accordance with the provisions of the game and fish laws of the State of Montana."

These treaty rights place a lien on the land which is incompatible with wilderness classification or would make management of wilderness and these uses very difficult. This was borne out by Congress in the passage

of PL-94-557 requiring the Great Bear Wilderness Study. The original bill (S. 392) included 20,000 acres of treaty rights area; however, the 20,000 acres were removed by Congress from the Great Bear Study Area before passage of the final law.

Oil and gas leases have been granted for this entire area with some restrictions on occupancy. Seismic activity in recent years has been extensive and oil and gas potential is very high. These leases grant the operator a reasonable opportunity to explore for and develop oil and gas resources. Leases grant pre-existing rights that could reduce natural integrity and appearance and would make wilderness management difficult.

Teton - This area is a contiguous parcel of National Forest System land. Boundaries along the western and northern edge of this area are well defined along topographic features of the adjacent Bob Marshall Wilderness. The eastern boundary is defined along the Forest boundary and by road corridors which intrude into the area and are difficult to identify.

The Teton area consists of three units. The North Fork Teton drainage offers moderate opportunity for solitude and high opportunities for primitive recreation. Natural integrity and apparent naturalness are impacted by trail oriented use, livestock grazing, and seismic roads along Blackleaf Creek. Opportunities for boundary adjustments to exclude man's activities are limited because the North Fork Teton Road traverses the entire drainage. The Middle Fork Teton drainage offers high opportunities for solitude and primitive recreation. Natural integrity and apparent naturalness are impacted by trail use. The South Fork is similar to the North Fork in wilderness attributes. Opportunities for solitude are only moderate due to heavy recreational use at Our Lake and Headquarters Pass. The headwaters of the South Fork and Middle Fork drainages, which form the spectacular Teton Peaks, would rate very high in all the wilderness attributes.

The Teton River area is separated by two major road corridors. The southeast roads provide access which would help in administration, but decrease the wilderness attributes.

Oil and gas leases have been granted for this entire area with some restrictions on occupancy. Seismic activity in recent years has been extensive and oil and gas potential is very high. These leases grant the operator a reasonable opportunity to explore for and develop oil and gas resources. Leases grant pre-existing rights that could reduce natural integrity and appearance and would make wilderness management difficult.

Deep Creek/Reservoir North - Deep Creek/Reservoir North is a sizable, compact unit. Boundaries are fairly well definable on major terrain features or proclaimed Forest boundaries. In a few locations, terrain features are less prominent and boundaries will be difficult to locate on the ground.

Deep Creek/Reservoir North shows some disruption of natural integrity and apparent naturalness. Opportunities for solitude and primitive recreation are high.

Human activity impacted some drainages. The area contains two roads (constructed in the 1960's for seismic exploration) and two recreation residences. The roads are located in Hannan Gulch and Deep Creek, but can be excluded by major boundary adjustments. The recreation residences are scheduled for termination by 1992.

Deep Creek/Reservoir North possesses opportunities for solitude because of its large size and topographic relief. The area offers a variety of topography to challenge the visitor with its narrow valley bottoms, rolling hills, and high mountain peaks. There are excellent recreation opportunities such as hunting, scenic viewing, hiking, and horseback riding in primitive recreation settings.

There are some opportunities to modify the boundary. The north/south and east/west ridgetops provide several alternative locations. The size of the area would be greater than 30,000 acres. Boundary adjustments to reduce conflict with possible oil and gas activities would reduce the area to about 10,000 acres.

This area has been designated a Wilderness Study Area. It has been leased for oil and gas with restrictions on occupancy and only permits exploratory drilling and not production of oil and gas. This leasing decision was based on the need to acquire more information on the area's oil and gas resources. These leases will expire in 1991 if no discoveries are made. Once the oil and gas potential of the area is determined, a recommendation regarding wilderness will be made through an amendment or revision of the Lewis and Clark National Forest Plan.

Renshaw - The Renshaw area is a contiguous parcel of National Forest System lands. It is a long, narrow unit. Boundaries are defined by existing wildernesses and major and minor terrain features.

This area consists of three basic units. Patricks Basin (Lange Creek) is a broad, forested drainage that offers high opportunities for solitude and primitive recreation. Natural integrity and apparent naturalness are high and man's activities and influence are not apparent. The South Fork Sun River unit is a large valley with extensive use by recreationists. Opportunities for solitude are moderate because of large numbers of recreationists traveling through the area to the adjacent Bob Marshall Wilderness. Natural integrity and apparent naturalness are high, with most influences resulting from trail- oriented use and use along the river. The Plateau area consists of large open hillsides and timbered riparian areas. Opportunities for primitive recreation and solitude are high. Apparent naturalness and natural integrity have been impacted by livestock grazing. Driveways, drift fences, and watershed protection fences are located throughout the area and detract from apparent naturalness.

The area offers a variety of topography to challenge the visitor with its high mountain tops and broad plateaus. The large size of the area offers the opportunity to get away from the man-influenced environment and experience excellent primitive recreation activities.

Benchmark/Elk Creek - The Benchmark/Elk Creek area is a long narrow unit. The western boundary is defined by the high ridges and major topographic features along the Scapegoat Wilderness. The eastern boundary parallels the Benchmark Road and the Forest boundary. This boundary is difficult to identify.

The Benchmark/Elk Creek area has had some disruption in natural integrity and natural appearance. Solitude and primitive recreation opportunities are high because of its size and the influence of the adjacent Bob Marshall and Scapegoat Wildernesses. Much of the area contains highly dissected topography that easily screens people from one another in a short distance. Some areas are influenced by adjacent roads and other developments.

Human activity in the area is evident although most impacts are concentrated along roads and the exterior boundaries. Human activity and influences in the area include timber cutting along the Beaver-Willow and Benchmark Roads.

Seismic activity in recent years has been extensive and oil and gas potential is very high. Oil and gas leases have been granted for this entire area with restrictions on occupancy. These leases grant the operator a reasonable opportunity to explore for and develop oil and gas resources. Leases grant pre-existing rights that could reduce natural integrity, appearance, and would make wilderness management difficult.

Silver King/Falls Creek - The Silver King/Falls Creek area is a contiguous parcel of National Forest System lands. The area is a compact unit with boundaries well defined by existing wildernesses, major terrain features, and on proclaimed Forest boundaries. The eastern boundary is very difficult to define and identify on the ground. Vegetation management and range use in some areas may be a wilderness management problem. The area has had little disruption in natural integrity, natural appearance, and solitude. Solitude and primitive recreation opportunities are high becase of its size and the influence of the adjacent Scapegoat Wilderness.

The Dearborn Canyon in the Devil's Glenn area offers very high opportunities for primitive recreation and provides high opportunities for solitude. Natural integrity and apparent naturalness are impacted only by an old logging road constructed in the 1920's that is used as a trail along the Dearborn River. Some livestock grazing also occurs in the lower portions of the canyon. The Falls Creek area consists of the East and West Forks of Falls Creek. The East Fork is open and lightly forested and offers moderate opportunities for solitude and primitive recreation. Natural integrity and apparent naturalness have been impacted by trail oriented use and domestic livestock grazing and range improvements. The West Fork of Falls Creek is heavily timbered and offers high opportunities for solitude and primitive recreation. Trail oriented use and limited livestock grazing in the lower reaches of the drainage have impacted apparent naturalness and natural integrity. Another Falls Creek drainage, south of the Continental Divide, is very remote and offers high opportunities for solitude and primitive recreation.

Middle Fork Flathead - West of the Continental Divide, the natural integrity and appearance of the Middle Fork Flathead portion remains high. Maintained trails which access the Great Bear Wilderness detract from the area's natural integrity. Other impacts on the natural integrity of this roadless area are the television antenna site and an old four wheel drive trail located on Mule Ridge. Noise from the railroad and Highway 2 along the Middle Fork River detracts from the naturalness of the area.

Opportunities for solitude are few due to the off-site intrusion of noise from the highway and railroad along the Middle Fork River. Heavy use in the area during certain times of the year, especially hunting season, makes it hard to get away from other users.

Opportunities for primitive recreation are present in this area but lessened due to the evidence of past activities in the adjacent areas. The winter climate and steep terrain provide opportunities for challenging recreation activities.

Portions of this area were studied during the Great Bear Wilderness Study and not recommended for wilderness. This area may be difficult to manage due to boundaries which parallel existing roads that were built to access timber harvest activities.

East South Fork Flathead - The natural integrity of this area is high except for several trails and a mining claim in the Silver Basin area. The area has retained its natural appearance due to the difficulty of access. The natural appearance is impacted somewhat by the activities along the Hungry Horse Reservoir.

Opportunities for solitude are limited due to the close proximity of timber management and main access roads used by fishermen, campers, outfitters, as well as by administrative traffic. Except in some of the hidden basins, man's activities can usually be seen or heard throughout most the area.

Primitive recreation includes big game hunting or hiking in steep and rugged terrain.

Portions of this area were studied during the Great Bear Wilderness Study and not recommended for wilderness.

Swan Crest - The natural integrity of the Swan Crest is very high except for the existing trails and the scars of skid trails used to haul materials to the electronic site near Jewel Basin. The Jewel Basin Hiking Area includes six pit toilets and several fire pits. Being the closest roadless area to population centers in the Flathead Valley, this area receives heavy use. It is impacted only slightly by the developments in the area. The view of man's activities within the Flathead Valley or east along Hungry Horse Reservoir do not detract from the natural appearance of the area itself. There is presently one special use electronic site on the Divide overlooking Jewel Basin which is quite evident to users of Jewel Basin.

Opportunities for solitude exist on the major portion of this roadless area but may be compromised due to the proximity to timber management access roads. The area is narrow with projecting fingers of unroaded land providing limited opportunity for solitude. The area does have good topographic screening in some areas and good vegetative screening near Columbia Mountain.

Opportunities for primitive recreation in the form of hiking, cross-country skiing, fishing, or hunting are present in this area. Hiking to the high alpine lakes can offer a challenging experience to some people, especially to those lakes not accessed by trails. Because this roadless area is located at higher elevations, drastic weather changes can offer the hiker and camper a wide range of experiences. The abundance of lakes along the Swan Crest is a major attraction to the area.

Boundaries along the east side of this area follow roads and existing timber harvest units. Large, continuous areas do exist, especially in the Columbia Mountain/Lake Blaine area to the north. Much of the area consists of high elevation lands with boundaries following old harvest activity areas which make it difficult to manage.

Swan Front - The Swan Front's natural appearance has been altered only along the established trails cutting through to the Bob Marshall Wilderness. Generally, the natural integrity of this area is still very high.

Due to the narrowness of the area at some points, natural appearance is low when a visitor is near off-site logging activities or along major access trails. An administrative cabin and a snow course are located near Upper Holland Lake; also, an old lookout shelter exists on the main ridge just to the north of Thunderbolt Mountain, and a cabin exists on the Divide near Trinkus Lake.

Opportunity for isolation from the sights and sounds of man and his activities are high in this area. Some areas, such as Lion Creek, Lost Creek, Upper Holland Lake Basin, and Squeezer Creek, provide some outstanding chances for solitude.

The steep and rugged terrain, along with drastic weather changes, can offer the visitor a challenging experience in mountaineering. The views from the Swan Divide into the Bob Marshall Wilderness and across the Swan Valley to the Mission Mountain Wilderness are spectacular.

The area around Napa Point and south to the Swan Peak area is notable due to the glacial activity that has occurred, and is still occurring.

The western boundary of this area is delineated by past harvest practices and private ownership. The northeastern boundary winds its way up and down drainages following roads and existing timber harvest units. The remaining eastern boundary, adjacent to the Bob Marshall Wilderness, is easily defined by the crest of the Swan Range.

Monture - The Monture area is relatively free of external influences. Natural integrity and appearance are high. A few past management activities impact the area. These activities include logging and roading of an area near Coopers Lake, two patented mining claims in West Fork Lake Creek, several trapper cabins, and a radio repeater on Lake Mountain. Overall, these activities have had very little impact on the natural appearance of the area.

There is an outstanding opportunity for solitude due to high topographic screening, dense vegetative screening, and the large size of the area. The adjacent wildernesses add significantly to the area's value for solitude as well as primitive recreation and wildlife. In the southeast portion, background views of logging, ranching, and U.S. Highway 200 may affect the feeling of solitude.

Primitive recreation opportunities are outstanding due to very diverse terrain and many challenging situations for the visitor. The unit is also in close proximity to the Clearwater Valley Chain of Lakes which is a popular recreation area.

The Monture portion is basically linearly shaped. It will add almost 50 miles of boundary crossing 33 travel routes (16 trails, 1 road, and 16 streams and ridges). About half the boundary is on prominent topographic features. Much of the remaining boundary traverses broken terrain. Many sectors (about 23 miles) are point-to-point directions. A 5-mile sector in Monture Creek is defined as 300 feet back from the trail. About 7-1/2 miles in Lake Creek and McDermott Creek are defined by contour lines. Potential for nonconforming vehicle use is mostly limited to the trail access points; cross-country vehicle travel is seldom practical. Motorcycles use the trails in the Lake Creek-Lake Otosky area. Although defining the boundary would be relatively difficult, controlling motorized use should be relatively easy.

Stonewall Mountain - The impact from human activity is evident in some places. In the past, and more recently (the 1960's), some hardrock mining exploration has occurred. These areas are located in the Cotter Basin, Copper Camp, Alice Creek, and Stonewall Creek areas. Most of this activity lies on the fringes of the area. There are old roads associated with these activities. The area with the largest impact is Bear Creek in the Alice Creek drainage. Most roads are still driveable but only with off-road vehicles. Evidence of past earth moving activity is present in all these areas. Some clearcuts are in the Alice Creek, Beaver Creek, and Arrastra Creek drainages. These logging units are on the edge of the roadless area. Silver King Lookout is the only Forest Service maintained structure in the area. One special use cabin is in the Alice Creek drainage, as well as fences used for controlling livestock. Seismic exploration has occurred here in recent years.

The area is large enough and the topography is such that any person visiting the area would gain the feeling that they are in a natural area free from human activities and development. The high peaks afford the viewer with vistas of part of the Scapegoat Wilderness mountain ranges to the south and many of the major drainages in the district. Some distant roads and timber harvesting areas can be seen from these high points.

This area possesses very high opportunities for solitude. Screening of the more developed areas occurs over most of the area. Sounds of vehicles, chainsaws, and logging activity are screened from most of the area due to the topography and lay of the terrain.

The area offers a variety of topographic features to challenge the visitor. The high peaks, steep slopes, flat valley bottoms, and numerous streams, offer a different primitive recreation experience to visitors.

This area is also noted for other features. Red Mountain is the highest peak from Lincoln to Glacier National Park, rising 9,411 feet above sea level. It is one of the few sites in the United States where limber pine and white bark pine grow together.

The Lewis and Clark Trail passes up Alice Creek over Lewis and Clark Pass. This is of historical interest to many Forest users.

The area also supports a small herd of Rocky Mountain goats near Red Mountain.

3. Availability

a. Resource Potentials

See Resource Summary Tables.

The discussion that follows refers to resources present within this roadless area other than the previously discussed wilderness resource.

The Resource Summary Table displays a summary of the different resources for the Bear-Marshall-Scapegoat-Swan Roadless Area and each of its portions.

All of the area offers high opportunity for primitive recreation.

RESOURCE SUMMARY TABLES

	Gross Acres	Net Acres	Recreation - Current Use (RVD's/Year) Primitive	Semiprimitive Nonmotorized	Semiprimitive Motorized	Roaded Natural
TOTAL	866,330	865,178	7,600	162,950	136,650	5,240
Badger/Two Medicine	102,100	102,100	0	3,600	11,200	700
Teton	63,133	63,133	0	18,000	56,300	500
Deep Creek/Reservoir North	45,962	45,922	0	2,900	1,500	300
Renshaw	57,611	57,591	200	0	2,150	0
Benchmark/Elk Creek	32,314	32,314	0	9,200	28,900	300
Silver King/Falls Creek	42,783	42,783	100	250	2,300	20
Middle Fork Flathead	42,450	42,450	0	800	500	20
East South Fork Flathead	57,640	57,640	400	1,300	300	400
Swan Crest	106,870	106,870	2,600	11,300	1,400	2,300
Swan Front	163,530	162,830	1,900	20,600	5,800	700
Monture	100,400	100,060	0	95,000	25,000	0
Stonewall Mountain	51,537	51,485	2,400	0	1,300	0

	Range		Timber		
	Suitable Acres	AUM's	Suitable Acres	Standing Volume	Max. Potential Yield-MMBF/Yr.
TOTAL	35,620	7,713	275,608	1,629.1	43.80
Badger/Two Medicine	4,594	1,092	16,136	53.0	1.94
Teton	6,754	1,100	6,278	29.7	.75
Deep Creek/Reservoir North	3,160	615	4,575	36.5	.55
Renshaw	10,460	2,735	15,870	118.1	1.90
Benchmark/Elk Creek	2,854	1,109	10,925	79.9	1.31
Silver King/Falls Creek	1,567	644	11,929	89.2	1.43
Middle Fork Flathead	0	0	16,910	100.5	3.92
East South Fork Flathead	0	0	22,700	179.2	5.27
Swan Crest	610	0	33,120	305.5	7.68
Swan Front	0	0	44,303	297.1	8.40
Monture	800	64	59,304	157.9	4.78
Stonewall Mountain	4,821	354	33,558	182.5	5.87

RESOURCE SUMMARY TABLES

	Oil and Gas					
	Potential				# of	Area
	Very High	High	Moderate	Low	Leases	Leased
TOTAL	353,312	511,866	0	0	481	718,481
Badger/Two Medicine	102,100	0	0	0	42	102,100
Teton	63,133	0	0	0	43	62,957
Deep Creek/Reservoir North	45,922	0	0	0	19	41,838
Renshaw	57,591	0	0	0	17	26,287
Benchmark/Elk Creek	32,314	0	0	0	19	30,314
Silver King/Falls Creek	42,783	0	0	0	0	0
Middle Fork Flathead	0	42,450	0	0	42	42,450
East South Fork Flathead	0	57,640	0	0	58	57,640
Swan Crest	0	106,870	0	0	67	104,230
Swan Front	0	162,830	0	0	93	155,940
Monture	0	100,060	0	0	49	46,450
Stonewall Mountain	9,469	42,016	0	0	32	48,275

RESOURCE SUMMARY TABLES

	Fisheries		Lakes		Water	Grizzly Situation	
	Stream Miles	Stream Habitat	Number	Acres	Developments	1	2
TOTAL	329.5	769.3	53	898.7	1	755,059	83,561
Badger/Two Medicine	43.9	160.0	0	0	0	102,100	0
Teton	18.1	43.9	1	14.0	0	63,133	0
Deep Creek/Reservoir North	13.6	33.0	0	0	0	45,922	0
Renshaw	17.8	32.4	1	5.0	0	57,591	0
Benchmark/Elk Creek	6.0	14.6	0	0	0	32,314	0
Silver King/Falls Creek	95.5	283.5	0	0	0	42,783	0
Middle Fork Flathead	18.5	15.7	1	18.3	0	42,450	0
East South Fork Flathead	20.0	56.8	2	21.0	0	50,140	7,500
Swan Crest	12.0	18.8	22	540.5	0	73,050	33,820
Swan Front	17.5	9.1	9	157.8	1	157,710	0
Monture	38.6	37.5	10	47.1	0	79,926	0
Stonewall Mountain	28.0	64.0	7	95.0	0	7,940	42,241

	Big Game Winter Range	Minerals				
		Very High	High	Moderate	Low	Claims
TOTAL	44,405	0	3,677	84,525	778,901	153
Badger/Two Medicine	6,407	0	0	0	102,100	0
Teton	5,993	0	0	0	63,133	0
Deep Creek/Reservoir North	4,530	0	0	0	45,922	0
Renshaw	6,292	0	0	0	57,591	0
Benchmark/Elk Creek	1,230	0	0	0	32,314	0
Silver King/Falls Creek	556	0	0	3,200	42,760	0
Middle Fork Flathead	0	0	0	0	42,450	0
East South Fork Flathead	7,600	0	0	57,640	0	37
Swan Crest	3,960	0	0	0	106,870	0
Swan Front	2,880	0	0	0	162,830	0
Monture	1,103	0	2,177	23,045	74,838	0
Stonewall Mountain	3,854	0	1,500	640	48,093	116

Currently, a total of 7,713 AUM's are produced on 35,620 acres of suitable range. Most cattle and sheep grazing occurs on the east side. Some of the grazing is by recreational pack stock.

Of the 864,000 acres in the Bear-Marshall-Scapegoat-Swan, 276,000 acres are classified as tentatively suitable. Timber opportunities are much greater on the west side than on the east. Less than 20 percent of the land on the east side is classified as tentatively suitable as opposed to over 42 percent on the west side. The east side usually contains "pockets" of commercial timber (mostly spruce and lodgepole pine) in drainages on north-facing slopes. On the west side the area is much more heavily forested, on more productive sites and on lower slopes. The total potential yield for the area is 44 MMBF/year, with 82 percent from the west side. This is the maximum yield if every tentatively suitable acre was scheduled for timber management.

Most of the area is classified as Management Situation 1 for the grizzly bear. This roadless area is part of the Northern Continental Divide Ecosystem. The population for grizzly bears is estimated to be 440 to 680 bears for this ecosystem. About 15 percent of the occupied habitat in this ecosystem is found here. This area also provides habitat for the gray wolf.

The diversity and abundance of wildlife, both game and nongame species, is an important resource for this roadless area. Some habitat improvement can be done to increase wildlife populations. This is especially true on the east side, where 25,000 acres of winter range exist. Improving winter range, which is considered the limiting factor for big game species, would improve the habitat for many species, especially elk and deer.

Hardrock potential is generally moderate or low, although in the Stonewall Mountain area some portions are rated high.

The potential for oil and gas is rated very high on the east side and high on the west side. The entire roadless area is part of the Overthrust Belt, a zone that is currently considered as having some of the highest oil and gas potential in the Rocky Mountain region. The unique combination of source and reservoir rocks and favorable orientation of trapping rocks may allow for accumulation of large amounts of oil and gas. Opportunity for oil and gas exploration and development is generally in valley bottoms and side slopes. Occupancy opportunities are limited in certain areas by no-surface occupancy and limited use stipulations.

Of particular interest on the east side are the Teton, Deep Creek/Reservoir North, Renshaw, and Silver King/Falls Creek areas. All these areas have been leased except for the RARE II recommended wilderness portions in Renshaw and Silver King/Falls Creek. An active drill site in Blackleaf Canyon in the Teton portion indicates that productive source reservoir rocks are adjacent to these areas.

On the west side, all the roadless area has been leased except for the RARE II recommended wilderness portion in the Monture area. The Swan Crest, Swan Front, and the Monture areas have had seismic surveys recently, although presently no drill sites are active here.

The following is a summary of significant resource potentials and important management considerations of individual portions of the Bear-Marshall-Scapegoat-Swan Roadless Area.

Badger/Two Medicine - Cattle use most of this area. In one allotment, sheep grazing is scheduled to be phased out because of possible conflicts with grizzly bears.

Water from Birch Creek is impounded for irrigation use into Swift Reservoir to the southeast of the roadless area. This project is being studied for possible hydro power production.

The Upper Two Medicine Valley is suitable for timber management activities. Other areas are marginal or contain a large percentage of noncommercial forest land.

Fire burned portions of the area between 1889 and 1910. Part of the area was burned in the Hungry Man Creek Fire in 1941. Although large fires occurred in the area, the number of fires occurring annually is low. Natural vegetation succession is replacing many open/grassland areas with trees and shrubs. This encroachment is beginning to limit the amount of forage and browse production for wildlife and livestock. These trends are expected to continue.

Teton - Nine developed sites such as the Teton Pass Ski Area and Waldon Creek Snowmobile Parking Area, plus many special use permit recreation residents and resorts are immediately adjacent to the area. These provide "jump-off" points for most of the recreation activity in the area.

As in the Badger/Two Medicine portion, shrub encroachment limits forage and browse production for livestock.

Deep Creek/Reservoir North - This area is very lightly forested, with only about 10 percent classified as commercial forest land.

Big-game winter habitat is found at lower elevations throughout the area. Big George Gulch and Hannan Gulch/Wagner Basin provide major opportunities for wildlife habitat improvement through burning.

The RARE II study concluded that even though Deep Creek/Reservoir North rated very high in wilderness attributes, a rational decision as to whether or not wilderness classification is in the National interest could not be made until the oil and gas resources of the area are determined. The oil and gas leases include 34,664 acres of no-surface occupancy. Approximately 25,000 acres have timing restrictions to protect big game concentration areas. The leases contain the "Further Planning Stipulation" which allows for

exploration but no production or field development until a decision on wilderness classification is made. A suit has been filed in U.S. District Court to review these leases.

Access to the area along the eastern boundary would be a problem as no right-of-ways exist.

Renshaw - Approximately 28 percent of the area is classified as commercial forest land. Very little of the Renshaw area is suitable for timber management activities. Most areas are marginal or contain a large percentage of noncommercial forest land.

Watersheds within the Renshaw, Deep Creek/Reservoir North, and Teton areas are characterized by steep slopes, shallow soils, and sparse vegetative cover. This combination severely limits the on-site storage capacity with rapid runoffs frequently resulting in floods. Major floods were in 1894, 1906, 1916, 1927, 1938, 1948, 1953, 1964, and 1975.

Portions of these areas provide water to several reservoirs. Water from these reservoirs irrigate approximately 233,000 acres of land in north central Montana each year. Gibson and diversion dams in the Sun Canyon are potential hydro power producers.

Benchmark/Elk Creek and Silver King/Falls Creek - These areas have very little land suitable for timber management activities. Most areas are marginal or contain a large percentge of noncommercial forest land.

Water from the Dearborn River is diverted for irrigation just outside the Forest boundary.

Middle Fork Flathead - In this area, improvements are possible for bull trout spawning habitat.

Timber harvesting is possible in some portions of the area, but logging methods would be expensive and, in most cases, would not be considered economical. The mountain pine beetle and the spruce bark beetle are major problems within the area. Because of the large amounts of fuel buildups caused by insects and diseases, and because of varied wind conditions, most of the area is considered high risk to fire.

East South Fork Flathead - The stands of timber consist of smaller trees and, for the most part, less desireable species. Timber harvesting is possible in some portions of the area but logging methods would be expensive. The mountain pine beetle, the Douglas-fir bark beetle, and the spruce bark beetle are currently the major problems in the area. Root rots are also affecting some species of trees.

Swan Crest - Along the lower slopes, wildlife populations may be increased through wildlife habitat improvement. The upper basins and alpine areas are good habitat for grizzly and black bears.

Several productive sites within this roadless area consist of stands of timber which could be harvested in the future, especially those stands on the west side facing Hungry Horse Reservoir. Road building and harvest systems will be expensive in most of these areas.

The spruce bark beetle is currently active in some of the higher basins. The Douglas-fir bark beetle is also affecting some of the Douglas-fir in the lower areas. Certain root rots can also be found on some sites.

Swan Front - Timber resources are limited, as is site suitability. Minor or no timber values exist in the high elevations and moderate to good timber values exist on lower slopes and valley floors. Road building and harvest systems will be expensive in most of these areas.

This unit contains the headwaters that form numerous major fish spawning streams flowing into the South Fork of the Flathead River. Sullivan Creek, which flows into Hungry Horse Reservoir, and Bunker Creek are the two major streams. A few small lakes form the headwaters but in most cases the lakes found in this unit are sinkholes resulting from glacial action.

Monture - In this area, the timber potential is greater than in other portions of the Bear-Marshall-Scapegoat-Swan Roadless Area. About one-third of this area can be managed cost efficiently for timber management.

All the Monture area is leased for oil and gas except for the RARE II recommended wilderness areas.

Stonewall Mountain - Most of this area has low timber production potential because of high elevation, rocky terrain, and severe climate; however, there are some areas with moderate timber production potential located in the valley bottoms.

4. Need

a. Proximity to Other Designated Wildernesses

Nearby wilderness areas and distances from population centers are given in Table C-1, Parts A and B. Wilderness use has risen rapidly through the 1970's; wilderness use is projected to continue to rise, although not as rapidly, in the next few decades. Recreation use projections for the surrounding National Forests show that in the next few decades Forests will be unable to meet the quantity of use demanded for wilderness recreation with the existing wilderness allocation.

The Bear-Marshall-Scapegoat-Swan Roadless Area is currently not a heavily used area, with the exception of the Swan Crest which receives heavy day use from Kalispell. From a National view point,

the adjacent wildernesses (Bob Marshall, Scapegoat, and Great Bear) are not heavily used. According to estimates in 1983, the Bob Marshall ranked fourteenth in the Nation and second in Montana (behind the Absaroka-Beartooth Wilderness) in recreation visitor days. This is probably due to the remoteness and the fact that the Bob Marshall complex receives very little or no day use. Nonetheless, the Bob Marshall complex, which has been called the "Crown Jewel" of the National Wilderness Preservation System, remains a very popular place to visit for people from all parts of the country.

b. Contribution to National Wilderness Preservation System

Nearly all habitat types found in this roadless area are also found in the adjacent Bob Marshall, Scapegoat, and Great Bear Wildernesses. In some cases habitat types would be enhanced by the addition of portions of the roadless areas. For example, the cedar grove in the Lion Creek area of the Swan Front would add to the western red cedar/queencup beadlily habitat type which is found only as an ecotone in the Bob Marshall Wilderness. The high elevation Fairview and Ford Creek Plateaus in the Renshaw area are also excellent examples of mountain grassland habitat types. Plateaus with these habitat types are not found in any of the adjacent wildernesses. Also, a unique vegetative community exists on the southeast slopes of Red Mountain in the Stonewall Mountain area. Both white bark pine and limber pine grow in the same area at an elevation of 8,000 feet.

This roadless area contains essential habitat for the grizzly bear and the gray wolf. Most of the habitat has been classified as Situation 1 for the grizzly bear. Activities in Situation 1 habitat must maintain or benefit the grizzly bear.

The wildlife in the eastern portion of this roadless area is unique. It is one of the few places in the country where elk, bighorn sheep, and deer are found in high densities and in adjacent habitats. The bighorn sheep herd which uses the Deep Creek/Reservoir North and Renshaw areas is one of the largest in the country.

c. Public Involvement

The Bear-Marshall-Scapegoat-Swan Roadless Area and the Bob Marshall Wilderness complex, which includes the Great Bear, Bob Marshall, and Scapegoat Wildernesses, have had controversial pasts. Originally, most of the area that was later to become the Bob Marshall Wilderness was set aside in the early 1930's in three primitive areas - the South Fork, Pentagon, and Sun River. Establishment of these primitive areas received wide, general public support. A 31,000 acre strip of National Forest System land was not included in the original Pentagon Primitive Area because of the possibility of constructing a road connecting Spotted Bear on the South Fork of the Flathead across the Continental Divide to Benchmark on the Sun River. This area, following considerable

controversy and discussion, was added to the Pentagon Primitive Area in 1939. In 1940, the Bob Marshall Wilderness area was created by combining and reclassifying the three existing primitive areas.

In 1954, the Forest Service proposed harvesting the heavily insect infested timber in the Bunker Creek drainage. This included some areas presently in the Swan Front portion of the Bear-Marshall-Scapegoat-Swan Roadless Area. The Flathead Lake Wildlife Association opposed this action and, with support from outside groups, presented a petition to the Secretary of Agriculture requesting that 279,000 acres of roadless National Forest System land between the northern boundary of the wilderness and near the southern boundary of Glacier National Park, including the Bunker Creek drainage, be added to the Bob Marshall Wilderness. The Forest Service, at that time, determined that the area would better serve the needs of the Nation if it were not managed as wilderness. Several groups, including the Rocky Mountain Sportsmen of Columbia Falls, the Kalispell Chamber of Commerce, and the Flathead County Commissioners, were in favor of the Forest Service Plan. However, late in 1954 salvage plans and road plans were dropped.

Other groups wished to extend the southern boundary of the Bob Marshall Wilderness to include another 50,000 acres of roadless area on the North Fork of the Blackfoot River. A memorandum to Congress from the Montana Legislature asking for this extension was unsuccessful.

Roading and timber harvesting began in the Middle Fork Flathead River area in the 1960's. In 1964, the Wilderness Act was passed, formally designating the Bob Marshall a unit of the National Wilderness Preservation System. A Coordinated Resource Management Study was instigated in 1969 which resulted in a moratorium on timber harvest activities in the Middle Fork Flathead River area. In 1971, the Forest Service's Roadless Areas Review and Evaluation (RARE I) selected this area, along with other areas north of the Bob Marshall Wilderness, as new Wilderness Study Areas. However, Congress directed that these areas were to be studied for wilderness under the Omnibus Wilderness Act of 1976. The Great Bear Wilderness was designated as wilderness in 1978 as a result of this study. Many people supported wilderness classification. Most of the controversy was over the proposed boundaries and power transmission corridor. Lands not designated as wilderness have been included in this roadless evaluation.

Also, in the 1950's, controversy over the management of the area known as the Lincoln Backcountry began. This area had never been classified as a primitive area and had not been managed for wilderness purposes by the Forest Service. Consequently, the area had not been subject to wilderness review procedures. Any proposed plans to develop the area were rejected by the public. In 1972, the Scapegoat Wilderness was established.

Past public involvement in 1979 for RARE II showed varying amounts of support for wilderness designation of the different portions of the Bear-Marshall-Scapegoat-Swan Roadless Area. Public response for all the portions showed no moderate or strong support for either wilderness or nonwilderness designation; response was generally split.

The final recommendation from RARE II allocated 140,349 acres to wilderness, 41,838 to Further Planning, and 513,365 to nonwilderness. Areas recommended for wilderness were Renshaw (31,304 acres), Silver King/Falls Creek (38,300 acres), south end of the Swan Front (3,800 acres), and Monture (66,945 acres). Deep Creek/Reservoir North (41,838 acres) was recommended for Further Planning and all other acres were recommended for nonwilderness.

In the summer and autumn of 1983, the public was again asked to comment on the portions of the Bear-Marshall-Scapegoat-Swan Roadless Area. Again, response was generally split. Areas receiving the most interest for wilderness designation were the upper part of the Swan Crest, the Swan Front, Monture, Silver King/Falls Creek, Renshaw, Deep Creek/Reservoir North, and the western part of the Teton area. This proposal, commonly called Alternative "W", involves boundary adjustments in many of the areas to lessen management conflicts. Of particular interest is Deep Creek/Reservoir North which conservation groups have declared as one of the first places to protect as part of the Nation's wilderness heritage.

Support for wilderness classification has been mixed. Local landowners and residents adjacent to the area have expressed strong support for managing the area to retain its present characteristics and uses. This group has expressed desire for a much smaller area of wilderness to be added to the Bob Marshall than Alternative "W". This would include a portion of Deep Creek/Reservoir North and the Lange Creek and South Fork Sun River portion of Renshaw.

Many people who do not support wilderness advocate road closures for wildlife if an area is roaded; others want to see the area open to most uses. Oil and gas interests support nonwilderness status until the oil and gas potential of the area is determined. Timber interests also support nonwilderness status for this roadless area. Even though boundaries may be adjusted so that very little commercial timber may be involved in a wilderness recommendation, they feel more land designated as wilderness would increase pressure on commercial forest lands to meet wildlife or other nontimber targets.

The Governor's wilderness recommendation for the State of Montana proposed 294,440 acres as wilderness in this roadless area. This included: 15,360 acres, Swan Crest; 64,000 acres, Swan Front; 39,040 acres, Teton; 42,240 acres, Silver King/Falls Creek; 40,320 acres, Deep Creek/Reservoir North; 36,480 acres, Renshaw; and 57,000 acres, Monture. The completion of certain ecosystems partially represented by existing wilderness areas was a key aspect

of this recommendation of which the most notable among these is the Bob Marshall Complex. This recommendation also emphasized restoring big game habitat "of the Sun River and Rocky Mountain Front."

Public comments were again received in the spring and summer of 1985 on this roadless area when the four Forests published the roadless area analysis in the supplemental and draft EISs. The Bear-Marshall-Scapegoat-Swan Roadless area was one of the most commented on areas of all the roadless areas analyzed for wilderness suitability. Very few responses were concerned with the roadless area in its entirety; instead, most people commented on specific areas that they were familiar with, with many of these areas being the same areas in Alternative "W". On the east side of this roadless area, many people wanted these unroaded lands added to the wilderness system. High wilderness quality and a disire to protect the area from development were stated. Several respondents felt that the grizzly bear, other wildlife, and recreation values would be better protected under wilderness classification. One respondent stated that there is no guideline in the wilderness act stipulating that oil and gas potential should eliminate an area from wilderness consideration. Many reviewers identified specific areas they felt should be classified as wilderness, such as Renshaw and Silver King/Falls Creek. Other respondents felt that careful nonwilderness management of the areas would protect these areas as will as provide the opportunity to explore for oil and gas resources and provide for diverse recreatinal opportunities. On the west side, many people commented on the Swan Crest, Swan Front, and the Monture areas. Most people agreed with the Forest Service recommendation for the Swan Front and the Monture areas. The Swan Crest also received strong wilderness support; however, some people were concerned wilderness classification would reduce motorized recreation opportunities. Also some people were concerned that the Jewel Basin Hiking area would be opened to horse use if wilderness classification included this area. Elimination of horse use in the hiking area was controversial and continues to be so.

5. Alternatives and Environmental Consequences

a. Management Prescription Assignments by Alternative

The Bear-Marshall-Scapegoat-Swan Roadless Area is managed by four National Forests - the Lewis and Clark, Flathead, Lolo, and Helena. In formulating alternatives for this roadless area, 12 alternatives were developed which correspond to the Forest Plan alternatives from each Forest. The following is a brief discussion of each alternative.

Alternative I - This alternative allocates all the inventoried roadless area to wilderness, except for the Badger/Two Medicine area and the Deep Creek/Reservoir North area (see discussion under Section II. Capability for reasons for not recommending wilderness for these two areas).

Alternative II (Current Direction) - This alternative is the current direction of managing the roadless area. The portion of the roadless area designated as wilderness would follow the RARE II recommendation (16 percent of the area).

Alternative III - This alternative emphasizes the development of the roadless area. Only a minimal amount is allocated to wilderness.

Alternative IV (Preferred Alternative) - This alternative is the combination of the Forestsfeet preferred alternatives. Approximately 19 percent of the roadless area is recommended for wilderness. Total forest outputs are at the level of the preferred alternative.

Alternative V - This alternative emphasizes the amenity values of the Forest. The Forest is not intensively managed for commodity outputs. Approximately 42 percent of the roadless area is managed for wilderness.

Alternative VI - This alternative emphasizes a moderate to high level of Forest outputs with 42 percent of the roadless area managed for wilderness.

Alternative VII - This alternative emphasizes a moderate to high level of outputs with 31 percent of the roadless area managed for wilderness.

Alternative VIII - This alternative emphasizes a moderate to high level of outputs with 57 percent of the roadless area managed for wilderness.

Alternative IX - This alternative emphasizes a moderate to high level of outputs with 67 percent of the roadless area managed for wilderness.

Alternative X - This alternative emphasizes intensive management of the Forestsfeet resources. The portion of the roadless area managed for wilderness follows the RARE II recommendation. The portion not recommended for wilderness is developed for other uses.

Alternative XI - This alternative emphasizes the RARE II recommendation with limited development in the portion of the roadless area not recommended for wilderness management. The forest is managed at a moderate intensity.

Alternative XII - This alternative emphasizes the RARE II recommendation with low or no development in the portion of the roadless area not recommended for wilderness management. The forest is managed at a low intensity for commodity values.

The following table displays the crosswalk of each Forest Plan alternative with the roadless area alternative. For example, Alternative IV (Preferred) for this roadless area corresponds to

Alternative 11 in the Flathead Forest Plan alternatives; Alternative G for the Lewis and Clark; Alternative D for the Lolo; and Alternative E for the Helena. Each Forest studied their portion of this roadless area in the Forest Plan alternatives. The roadless area alternatives (I through XII) combine Forest Plan alternatives with the same emphasis so that this area may be studied in its entirety.

Crosswalk of Forest Alternatives

Bear-Marshall Scapegoat-Swan	Flathead	Lewis & Clark	Lolo	Helena
I	9	H	g	J
II (Current Direction)	2,7	Current Plan	a	A
III	4,6	J	e	C
IV (Preferred)	11	G	d	E
V	10	I	b	G
VI	14	I	d	G
VII	12,13	G	c	G
VIII	15	K	d	F
IX	16	H	f	F
X	6,4	A,B	c	B
XI	8,3	D,F	d	D
XII	1,5	C,E	b	H

Resource Summary Tables
Acres of Areas under Management for each Emphasis by Alternative

Management Emphasis*	ALTERNATIVES I	II (Current Dir)	III	IV (Preferred)	V	VI
Wilderness	717,156	139,769	29,505	164,949	367,012	366,915
Wilderness Study	41,838	41,838	41,838	41,838	41,838	41,838
Roadless	84,321	369,349	546,666	440,816	291,202	269,149
Wildlife/Range	21,863	59,883	76,495	80,024	68,960	72,948
Timber Without Roads	0	4,430	24,889	26,230	4,637	16,196
Timber With Roads	0	249,909	145,785	111,322	91,529	98,132
TOTAL	865,178	865,178	865,178	865,178	865,178	865,178

Summary of Management Emphasis:

	Decade					
Roaded	1	0	29,846	33,483	25,293	12,570	25,663
	5	7,600	331,454	212,335	167,140	99,303	128,883
Roadless	1	148,022	695,563	802,190	674,937	485,596	472,600
	5	140,422	393,955	623,338	533,090	398,863	369,380
Wilderness		717,156	139,769	29,505	164,948	367,012	366,915

	ALTERNATIVES					
	VII	VIII	IX	X	XI	XII
Wilderness	266,561	492,871	583,149	139,769	139,769	139,769
Wilderness Study	41,838	41,838	41,838	41,838	41,838	41,838
Roadless	360,799	196,140	143,831	424,250	464,758	455,283
Wildlife/Range	64,826	36,770	69,852	81,723	79,206	197,318
Timber Without Roads	16,186	15,716	124	3,578	26,230	431
Timber With Roads	114,968	81,843	26,384	174,020	113,377	30,539
TOTAL	865,178	865,178	865,178	865,178	865,178	865,178

Summary of Management Emphasis:

	Decade					
Roaded	1	23,858	14,930	10,100	33,483	25,933	12,650
	5	162,828	99,313	39,757	288,986	206,386	50,411
Roadless	1	574,759	357,377	271,929	691,926	699,476	712,759
	5	435,789	272,994	242,272	436,423	519,023	674,998
Wilderness		266,561	492,871	583,149	139,769	139,769	139,769

* Mineral resource development is subject to the General Mining Law, Mineral Leasing Laws, and related laws and regulations. See Section V, Part B, Manangement Prescription - Roadless, of this roadless area writeup for further discussion.

ALTERNATIVE I

	Wilderness	Wilderness Study	Roadless	Wildlife/ Range	Timber W/Out Roads	Timber With Roads	Total
Badger/Two Medicine	0	0	80,674	21,426	0	0	102,100
Teton	63,133	0	0	0	0	0	63,133
Deep Creek/Reservoir North	0	41,838	3,647	437	0	0	45,922
Renshaw	57,591	0	0	0	0	0	57,591
Benchmark/Elk Creek	32,314	0	0	0	0	0	32,314
Silver King/Falls Creek	42,783	0	0	0	0	0	42,783
Middle Fork Flathead	42,450	0	0	0	0	0	42,450
East South Fork Flathead	57,640	0	0	0	0	0	57,640
Swan Crest	106,870	0	0	0	0	0	106,870
Swan Front	162,830	0	0	0	0	0	162,830
Monture	100,060	0	0	0	0	0	100,060
Stonewall Mountain	51,485	0	0	0	0	0	51,485
TOTAL	717,156	41,838	84,321	21,863	0	0	865,178

ALTERNATIVE II (Current Direction)

	Wilderness	Wilderness Study	Roadless	Wildlife/ Range	Timber W/Out Roads	Timber With Roads	Total
Badger/Two Medicine	0	0	83,022	13,330	0	5,748	102,100
Teton	0	0	44,170	13,386	0	5,577	63,133
Deep Creek/Reservoir North	0	41,838	3,263	821	0	0	45,922
Renshaw	31,304	0	18,169	5,752	0	2,366	57,591
Benchmark/Elk Creek	0	0	22,462	6,979	0	2,873	32,314
Silver King/Falls Creek	39,215	0	2,410	821	0	337	39,215
Middle Fork Flathead	0	0	10,072	0	0	32,378	42,450
East South Fork Flathead	0	0	26,360	330	3,390	27,560	57,640
Swan Crest	0	0	52,925	0	0	53,945	106,870
Swan Front	3,690	0	93,217	2,653	1,040	62,230	162,830
Monture	65,560	0	6,328	5,339	0	22,833	100,060
Stonewall Mountain	0	0	6,951	10,472	0	34,062	51,485
TOTAL	139,769	41,838	369,349	59,883	4,430	249,909	865,178

ALTERNATIVE III

	Wilderness	Wilderness Study	Roadless	Wildlife/ Range	Timber W/Out Roads	Timber With Roads	Total
Badger/Two Medicine	0	0	85,466	13,460	3,174	0	102,100
Teton	0	0	46,318	13,865	0	2,950	63,133
Deep Creek/Reservoir North	0	41,838	3,261	823	0	0	45,922
Renshaw	21,880	0	28,572	5,882	0	1,257	57,591
Benchmark/Elk Creek	0	0	23,653	7,143	0	1,518	32,314
Silver King/Falls Creek	7,625	0	27,087	2,357	0	5,714	42,783
Middle Fork Flathead	0	0	26,958	457	6,293	8,742	42,450
East South Fork Flathead	0	0	33,842	738	2,533	20,527	57,640
Swan Crest	0	0	68,530	0	1,089	37,251	106,870
Swan Front	0	0	112,470	2,390	11,800	36,170	162,830
Monture	0	0	69,996	11,339	0	18,725	100,060
Stonewall Mountain	0	0	20,513	18,041	0	12,931	51,485
TOTAL	29,505	41,838	546,666	76,495	24,889	145,785	865,178

ALTERNATIVE IV (Preferred)

	Wilderness	Wilderness Study	Roadless	Wildlife/ Range	Timber W/Out Roads	Timber With Roads	Total
Badger/Two Medicine	0	0	84,845	12,728	0	4,527	102,100
Teton	5,040	0	41,134	12,810	0	4,149	63,133
Deep Creek/Reservoir North	0	41,838	3,461	623	0	0	45,922
Renshaw	19,144	0	31,253	5,435	0	1,759	57,591
Benchmark/Elk Creek	3,630	0	19,948	6,599	0	2,137	32,314
Silver King/Falls Creek	19,030	0	23,130	623	0	0	42,783
Middle Fork Flathead	0	0	32,933	167	3,402	5,948	42,450
East South Fork Flathead	5,187	0	28,786	79	1,393	22,195	57,640
Swan Crest	0	0	65,582	1,396	13,759	26,133	106,870
Swan Front	47,357	0	67,031	14,429	7,676	26,337	162,830
Monture	65,560	0	17,222	5,462	0	11,816	100,060
Stonewall Mountain	0	0	25,491	19,673	0	6,321	51,485
TOTAL	164,948	41,838	440,816	80,024	26,230	11,322	865,178

ALTERNATIVE V

	Wilderness	Wilderness Study	Roadless	Wildlife/ Range	Timber W/Out Roads	Timber With Roads	Total
Badger/Two Medicine	0	0	68,429	25,100	0	8,571	102,100
Teton	39,845	0	17,175	5,042	0	1,071	63,133
Deep Creek/Reservoir North	0	41,838	3,402	682	0	0	45,922
Renshaw	45,864	0	4,239	5,711	0	1,777	57,591
Benchmark/Elk Creek	26,027	0	940	4,078	0	1,269	32,314
Silver King/Falls Creek	42,783	0	0	0	0	0	42,783
Middle Fork Flathead	0	0	32,143	343	2,827	7,137	42,450
East South Fork Flathead	0	0	37,295	602	0	19,743	57,640
Swan Crest	60,826	0	22,707	0	1,810	21,527	106,870
Swan Front	86,107	0	49,945	1,218	0	25,560	162,830
Monture	65,560	0	29,183	2,451	0	2,866	100,060
Stonewall Mountain	0	0	25,744	23,733	0	2,008	51,485
TOTAL	367,012	41,838	291,202	68,960	4,637	91,529	865,178

ALTERNATIVE VI

	Wilderness	Wilderness Study	Roadless	Wildlife/ Range	Timber W/Out Roads	Timber With Roads	Total
Badger/Two Medicine	0	0	68,429	25,100	0	8,571	102,100
Teton	39,845	0	17,175	5,042	0	1,071	63,133
Deep Creek/Reservoir North	0	41,838	3,402	682	0	0	45,922
Renshaw	45,864	0	4,239	5,711	0	1,777	57,591
Benchmark/Elk Creek	26,027	0	940	4,078	0	1,269	32,314
Silver King/Falls Creek	42,783	0	0	0	0	0	42,783
Middle Fork Flathead	0	0	32,933	167	3,402	5,948	42,450
East South Fork Flathead	0	0	33,794	258	1,393	22,195	57,640
Swan Crest	60,826	0	20,839	0	5,608	19,597	106,870
Swan Front	86,010	0	44,432	2,715	5,793	23,880	162,830
Monture	65,560	0	17,222	5,462	0	11,816	100,060
Stonewall Mountain	0	0	25,744	23,733	0	2,008	51,485
TOTAL	366,915	41,838	269,149	72,948	16,196	98,132	865,178

ALTERNATIVE VII

	Wilderness	Wilderness Study	Roadless	Wildlife/ Range	Timber W/Out Roads	Timber With Roads	Total
Badger/Two Medicine	0	0	84,845	12,728	0	4,527	102,100
Teton	5,040	0	41,134	12,810	0	4,149	63,133
Deep Creek/Reservoir North	0	41,838	3,461	623	0	0	45,922
Renshaw	19,144	0	31,253	5,435	0	1,759	57,591
Benchmark/Elk Creek	3,630	0	19,948	6,599	0	2,137	32,314
Silver King/Falls Creek	26,245	0	15,915	623	0	0	42,783
Middle Fork Flathead	0	0	32,933	167	3,402	5,948	42,450
East South Fork Flathead	0	0	33,794	258		1,393	22,195
57,640							
Swan Crest	60,826	0	20,839	0	5,608	19,597	106,870
Swan Front	86,116	0	40,830	614	5,783	29,487	162,830
Monture	65,560	0	10,103	1,236	0	23,161	100,060
Stonewall Mountain	0	0	25,744	23,733	0	2,008	51,485
TOTAL	266,561	41,838	360,799	64,826	16,186	114,968	865,178

ALTERNATIVE VIII

	Wilderness	Wilderness Study	Roadless	Wildlife/ Range	Timber W/Out Roads	Timber With Roads	Total
Badger/Two Medicine	0	0	69,824	28,022	0	4,254	102,100
Teton	63,133	0	0	0	0	0	63,133
Deep Creek/Reservoir North	0	41,838	3,513	571	0	0	45,922
Renshaw	57,591	0	0	0	0	0	57,591
Benchmark/Elk Creek	32,314	0	0	0	0	0	32,314
Silver King/Falls Creek	42,783	0	0	0	0	0	42,783
Middle Fork Flathead	8,839	0	24,909	0	3,443	5,259	42,450
East South Fork Flathead	24,220	0	15,467	0	882	17,071	57,640
Swan Crest	60,826	0	20,839	0	5,608	19,597	106,870
Swan Front	86,120	0	44,366	2,715	5,783	23,846	162,830
Monture	65,560	0	17,222	5,462	0	11,816	100,060
Stonewall Mountain	51,485	0	0	0	0	0	51,485
TOTAL	492,871	41,838	196,140	36,770	15,716	81,843	865,178

ALTERNATIVE IX

	Wilderness	Wilderness Study	Roadless	Wildlife/ Range	Timber W/Out Roads	Timber With Roads	Total
Badger/Two Medicine	0	0	80,674	21,426	0	0	102,100
Teton	63,133	0	0	0	0	0	63,133
Deep Creek/Reservoir North	0	41,838	3,647	437	0	0	45,922
Renshaw	57,591	0	0	0	0	0	57,591
Benchmark/Elk Creek	32,314	0	0	0	0	0	32,314
Silver King/Falls Creek	42,783	0	0	0	0	0	42,783
Middle Fork Flathead	34,746	0	6,989	0	0	715	42,450
East South Fork Flathead	57,640	0	0	0	0	0	57,640
Swan Crest	60,826	0	24,415	15,276	0	6,353	106,870
Swan Front	115,102	0	13,166	27,402	124	7,036	162,830
Monture	67,529	0	14,940	5,311	0	12,280	100,060
Stonewall Mountain	51,485	0	0	0	0	0	51,485
TOTAL	583,149	41,838	143,831	69,852	124	26,384	865,178

ALTERNATIVE X

	Wilderness	Wilderness Study	Roadless	Wildlife/ Range	Timber W/Out Roads	Timber With Roads	Total
Badger/Two Medicine	0	0	79,547	19,687	0	2,866	102,100
Teton	0	0	40,907	19,446	0	2,780	63,133
Deep Creek/Reservoir North	0	41,838	3,198	886	0	0	45,922
Renshaw	31,304	0	16,808	8,299	0	1,180	57,591
Benchmark/Elk Creek	0	0	20,804	10,077	0	1,433	32,314
Silver King/Falls Creek	39,215	0	2,514	886	0	168	42,783
Middle Fork Flathead	0	0	25,476	0	409	16,565	42,450
East South Fork Flathead	0	0	38,060	0	830	18,750	57,640
Swan Crest	0	0	68,530	0	1,089	37,251	106,870
Swan Front	3,690	0	102,162	614	1,250	55,114	162,830
Monture	65,560	0	10,103	1,236	0	23,161	100,060
Stonewall Mountain	0	0	16,141	20,592	0	14,752	51,485
TOTAL	139,769	41,838	424,250	81,723	3,578	174,020	865,178

ALTERNATIVE XI

	Wilderness	Wilderness Study	Roadless	Wildlife/ Range	Timber W/Out Roads	Timber With Roads	Total
Badger/Two Medicine	0	0	87,380	12,265	0	2,455	102,100
Teton	0	0	48,216	12,536	0	2,381	63,133
Deep Creek/Reservoir North	0	41,838	3,364	720	0	0	45,922
Renshaw	31,304	0	19,958	5,306	0	1,023	57,591
Benchmark/Elk Creek	0	0	24,630	6,458	0	1,226	32,314
Silver King/Falls Creek	39,215	0	2,702	722	0	144	42,783
Middle Fork Flathead	0	0	32,933	167	3,402	5,948	42,450
East South	0	0	33,794	258	1,393	22,195	57,640
Swan Crest	0	0	65,582	1,396	13,759	26,133	106,870
Swan Front	3,690	0	107,659	15,738	7,676	28,067	162,830
Monture	65,560	0	17,222	5,462	0	11,816	100,060
Stonewall Mountain	0	0	21,318	18,178	0	11,989	51,485
TOTAL	139,769	41,838	464,758	79,206	26,230	113,377	865,178

ALTERNATIVE XII

	Wilderness	Wilderness Study	Roadless	Wildlife/ Range	Timber W/Out Roads	Timber With Roads	Total
Badger/Two Medicine	0	0	82,860	19,240	0	0	102,100
Teton	0	0	43,395	19,738	0	0	63,133
Deep Creek/Reservoir North	0	41,838	2,964	1,120	0	0	45,922
Renshaw	31,304	0	17,924	8,363	0	0	57,591
Benchmark/Elk Creek	0	0	22,159	10,155	0	0	32,314
Silver King/Falls Creek	39,215	0	3,348	220	0	0	42,783
Middle Fork Flathead	0	0	39,365	150	0	2,935	42,450
East South Fork Flathead	0	0	48,280	3,260	220	5,880	57,640
Swan Crest	0	0	70,728	26,207	0	9,935	106,870
Swan Front	3,690	0	73,760	82,124	211	3,045	162,830
Monture	65,560	0	29,183	2,451	0	2,866	100,060
Stonewall Mountain	0	0	21,317	24,290	0	5,878	51,485
TOTAL	139,769	41,838	455,283	197,318	431	30,539	865,178

III. Impacts

Each of the four Forests had many different management prescriptions applied to this roadless area in various alternatives. These management prescriptions were grouped into six different management emphases. This grouping is based on how the wilderness attributes (natural integrity, natural appearance, opportunities for solitude, and opportunities for primitive recreation) are affected by each management emphasis. The six emphases are listed below.

Wilderness - Includes wilderness management.

Wilderness Study - Includes management activities which preserve the roadless resource until a recommendation can be made for wilderness.

Roadless - Includes management activities where the intent is to preserve the roadless resource. Some roading may occur due to development of subsurface resources, such as oil and gas. Management prescriptions include wild and scenic river management, Jewel Basin Hiking Area management, dispersed recreation management, and minimum level management.

Wildlife/Range - Includes mangement activities where investments are made for wildlife or range management. Management activities, such as prescribed burning, watering tanks, and fencing would be evident. Some unscheduled roading may occur. Management prescriptions include wildlife management, grizzly bear management, and range management.

Timber Without Roads - Includes management activities where timber may be removed with aerial logging systems. No road construction would occur, although road construction may occur in adjacent areas. This managment prescription is only found west of the Continental Divide for this roadless area.

Timber With Roads - Includes management activities where roads and timber removal are scheduled. Timber management may not be the only intent of the prescription; wildlife management prescriptions may involve timber harvesting but with constraints. Management prescriptions include timber management, timber/wildlife management, riparian timber management, mule deer and elk management, and whitetail deer management.

Designation: Wilderness
Management Prescription: Wilderness

Alternatives I through XII examine a wide range of management options. Alternative I recommends nearly all (83 percent) of the roadless area to wilderness. Alternatives II through IX allocate varying amounts of the roadless area to wilderness. Alternatives X through XII examine nonwilderness management options with wilderness allocations following RARE II recommendations. Wilderness would preserve or enhance wilderness attributes. Current uses involving motorized recreation, trail maintenance, wildlife habitat improvement, and other uses or facilities not compatible with wilderness management would be eliminated. Timber harvest would not be permitted.

Current oil and gas leases, special uses, or grazing permits and other pre-existing rights and uses would continue. Because most of the roadless area is leased for oil and gas, wilderness attributes could be affected. Options to

retain the wilderness characteristics under the recommended wilderness management emphasis are:

A. Honor the lease until expiration. If no discovery was made, then the area would be withdrawn (FLPMA Section 204). If discovery is made in or near the roadless area, then oil and gas development could preclude the retention of the wilderness characteristics in some or all of the area.

B. Buy back the lease through Congressional initiative.

C. Negotiate with leaseholder to relinquish lease or accommodate wilderness resource to the extent possible.

Within the wilderness management emphasis, the area would be withdrawn after expiration if a discovery is not established.

The effects on nonpriced components are as follows:

- Existing visual conditions would be maintained.
- Grizzly bear, elk, and other wildlife species would have continued security.
- Diversity would tend towards climax vegetation. This would depend on what type of fire management programs were implemented.
- Water quality and fisheries quality would be maintained at natural levels.
- Local employment and income may decrease from current levels due to a reduced timber base and motorized recreational opportunities.
- Use of prescribed fire may be restricted to natural fires and would result in decreases in cover/forage ratios and available wildlife forage.
- Nonrecreation wilderness values, such as clean air and water, natural landscapes, and spiritual fulfillment, would be maximized.
- Tourism may increase due to the increased primitive recreation opportunities.

The economic and social effects would be greatest in Alternative I which allocates all the roadless area to wilderness. The future capacity of the Forest to produce timber and accommodate semiprimitive recreation use would be reduced more than in other alternatives. Maximum displacement of existing uses would occur. Primitive recreation opportunities would increase, while semiprimitive motorized recreation opportunities would decrease.

Alternative IV (Preferred) projects no significant adverse economic or social consequences from allocating approximately 19 percent of the area to wilderness. Social and economic effects of Alternatives VII through IX range between Alternative I and IV (Preferred).

Effects of alternative allocations of wilderness on local geographic areas are discussed below:

Badger/Two Medicine - The Badger/Two Medicine area is considered unavailable for wilderness classification because of the Blackfoot Treaty Rights on the area.

Teton - Alternatives I, III, VIII, and IX would fully protect and enhance all wilderness attributes. Some boundaries would be difficult to identify because they would follow limited development along the North and South Forks of the

Teton Roads. Alternatives V and VI recommend wilderness classification for the Choteau Mountain and the upper drainages of the Teton River. Alternatives IV (Preferred) and VII allocate the Teton Peaks area to wilderness. These alternatives protect the areas with the highest wilderness values, including Route Creek and Headquarters Passes. All of the area is leased for oil and gas.

Deep Creek/Reservoir North - This area was not considered for wilderness classification under any alternative. It was selected for Further Planning.

Renshaw - Alternatives I, VIII, and IX would fully protect and enhance all wilderness attributes. Alternatives V and VI would exclude areas of limited development and would improve management boundaries. Alternatives II, X, XI, and XII allocate the Renshaw RARE II area to wilderness. Boundaries along the Ford and Fairview Plateaus would be difficult to identify. Alternatives IV (Preferred) and VII would allocate the Allen Mountain-Lange Creek-Patricks Basin area to wilderness. These alternatives protect the area with the highest wilderness values and least resource conflicts. A small part of the area is leased for oil and gas, with no-surface occupancy.

Benchmark/Elk Creek - Alternatives I, VIII, and IX would fully protect and enhance wilderness attributes. The Benchmark Road penetrates about 12 miles into the area, making wilderness boundaries and conflicts along this area difficult to manage. Alternatives V and VI would establish a more manageable boundary and some conflicts would be reduced. Alternatives IV (Preferred) and VII allocate only the area with significant wilderness values, few conflicts, and manageable boundaries.

Silver King/Falls Creek - Alternatives I, V, VI, VIII, and IX would fully protect and enhance all wilderness attributes. Alternatives II, X, XI, and XII, which follow the RARE II wilderness recommendation, would exclude areas of limited development and would improve some management boundaries. Alternatives IV (Preferred) and VII would protect the highest wilderness attributes while providing some opportunity to explore for oil and gas resources. Only a small part of the area is currently leased.

Middle Fork Flathead - Alternative I allocates the roadless area to wilderness. Impacts on existing uses and potential social and economic effects are the highest under this alternative. All wilderness attributes would be protected. Alternative IX allocates all the area to wilderness except the area adjacent to the Lewis and Clark National Forest. Both Alternatives I and IX recommend wilderness designation for areas adjacent to the Great Bear Wilderness which were considered in Forest Service and Congressional reviews of the Great Bear Wilderness but were not designated by Congress. The Slippery Bill Mountain portion of this area was allocated to wilderness in Alternative IX and would change the range of recreation opportunities and reduce timber production potential in the area.

East South Fork Flathead - Most of this area is adjacent to the Great Bear Wilderness and was considered for wilderness during Forest Service and Congressional reviews leading to designation of the Great Bear Wilderness. Alternative IV (Preferred) proposes the Limestone Cave area as wilderness. This area would be added to the Bob Marshall Wilderness. There would be little adverse social or economic effect from this recommendation and the boundary would offer improved manageability over the current situation. Most of the area

does not contain lands capable of timber management and the tentatively suitable lands would not be managed for timber in all nonwilderness alternatives. Alternative VIII expands the wilderness allocation to include all the roadless lands south and east of Spotted Bear. This alternative increases conflicts with future timber and big game habitat management needs, but provides additional security for elk and grizzly bear. Alternative VIII would have significant effects on potential economic and social use of the area but less than Alternatives I and IX which allocates the area to wilderness. Alternatives I and IX would offer maximum protection of wilderness attributes, but would be difficult to manage due to boundary locations.

Swan Crest - Alternative I would fully protect and enhance all wilderness attributes of the area, including designating the Jewel Basin Hiking Area wilderness. The change to wilderness would require additional controls, especially on motorized use, being placed on recreational use. Alternatives V, VI, VIII, and IX recommend wilderness allocation on 60 percent of the Swan Crest area. These alternatives recommend classification of the portion of the area with the highest value wilderness attributes, minimizes the conflicts with timber production, and establishes the most manageable boundary for wilderness purposes. The Jewel Basin Hiking Area would be managed as wilderness in all these alternatives. Effects of these alternatives on the Jewel Basin area would be similar to Alternative I. Social and economic effects of these alternatives would result in less adverse change than Alternative I but significantly more than Alternative IV (Preferred).

Swan Front - Five alternatives (Alternatives I, and V through VIII) would allocate wilderness in the Swan Front. Portions of the roadless area not included in this wilderness proposal are fringe areas with high timber values and areas with undesireable management boundaries. Alternative IV (Preferred) recommends wilderness from Inspiration Point south along the same boundary as in Alternatives V through VIII. This area includes the lands with the highest value wilderness attributes in Lion Creek, Upper Squeezer, Bethal, and Lost Creeks and Grizzly Basin. It minimizes displacement of existing use which are incompatible with wilderness. The manageability of the boundary for Alternative IV is improved over other wilderness alternatives from a fire management and protection standpoint. Alternative IX proposes additions in the Bunker Creek, Bruce Ridge, and Upper Sullivan Creek areas providing additional security for grizzly bear and elk. This alternative would affect social and economic relationships less than Alternative I, but more than Alternatives VII through IX.

Monture - Alternatives X through XII propose about one-half of the area for wilderness based on the RARE II recommendation. Portions of this area not recommended for wilderness are those areas with high timber values. The upper drainages of Lake, Falls, Monture, Lodgepole, and Dunham Creeks are recommended for wilderness. Alternative III recommends none of the area for wilderness; however, over one-half of the area is allocated to roadless management because of steep terrain and inaccessibility to timber in the area, consequently protecting the wilderness values. Alternative IX deletes a portion of the unit between McCabe Peak and East Spread Mountain and adds the Monture drainage to the wilderness recommendation. Alternative I would fully protect and enhance all wilderness attributes by allocating all acres to wilderness.

Stonewall Mountain - Alternatives I, VIII, and IX would fully protect and enhance all wilderness attributes of the area. These alternatives would designate the entire area as wilderness.

Designation: Wilderness Study
Management Prescription: Wilderness Study

Deep Creek/Reservoir North is designated Wilderness Study in all alternatives. It has been leased for oil and gas with restrictions on occupancy and only permits exploratory drilling and not production of oil and gas. This leasing decision was based on the need to acquire more information on the area's oil and gas resources. These leases will expire in 1991 if no discoveries are made. Once the oil and gas potential is determined, a recommendation regarding wilderness will be made through an amendment or revision to the Lewis and Clark National Forest Plan.

Designation: Nonwilderness
Management Prescription: Roadless

Management of areas for roadless recreation would maintain wilderness attributes.

Vegetation management practices for wildlife habitat or other purposes involving prescribed burning may occur. Motorized equipment such as chainsaws, helicopters, motorbikes, and snowmobiles, are often used to facilitate cost efficient management or maintenance of recreation opportunities. These activities are short-term and limited in scope and would maintain wilderness attributes.

The effects on nonpriced components are as follows:

- Existing visual conditions would be maintained. Man's activities would not dominate the natural landscape and would not be noticed by the average visitor.
- Semiprimitive and primitive recreation opportunities would be maintained.
- Grizzly bear and other wildlife security would be high. Prescription fire would provide for maintenance or improvement of wildlife forage.
- Diversity would be maintained at current or higher levels.
- Water quality and fisheries would be maintained or improved.
- Employment and income from wood products would not be provided.
- Many nonpriced benefits of the roadless resource, such as landscapes, spiritual values, and high quality watersheds, would be provided.

The roadless resource could be impacted by exploration and development of mineral resources. This resource development is subject to the General Mining Law, Mineral Leasing Laws, and related laws and regulations. The Bureau of Land Management is the final authority for Federal mineral management. If such development is proposed and implemented, it would be integrated into surface resource management to the extent that is reasonable. The most probable mineral development in this area is oil and gas. Oil and gas activity is highly speculative and seldom proceeds beyond preliminary exploration or exploratory drilling. The probability of occurrence of a particular activity sharply diminishes with each step.

Although these activities would be mitigated to be consistent with roadless management objectives, some of the nonpriced components would be affected in the field development stage as follows:

- Existing visual conditions may be temporarily lowered.
- Introduction of roads and exploration activities adversely affect the quality of the recreation setting.
- Wildlife security would be reduced and temporary displacement from normal seasonal ranges may occur.
- Employment and income from the oil and gas resource would be provided.

All alternatives provide for varying amounts of roadless management areas. Effects on local area wilderness attributes are discussed below.

Badger/Two Medicine - All alternatives range between 67 and 85 percent of the area for roadless recreation. In addition, Alternatives I, IX, and XII manage about 20,000 acres for range and wildlife in a roadless setting. Under these Alternatives, the entire area would be roadless.

Teton - Alternatives II, III, IV (Preferred), VII, and X through XII allocate 63 to 76 percent of the Teton area to roadless recreation. In addition, Alternative XII allocates the rest of the area to wildlife and range in a roadless setting. Under this alternative the entire area would be roadless. Alternatives V and VI allocated 27 percent of the area to roadless recreation.

Deep Creek/Reservoir North - All alternatives allocate a small portion of the area to roadless recreation. Most of the area is in wilderness study.

Renshaw - Alternatives II, III, IV (Preferred), VII, X, XI, and XII allocate 28 to 54 percent of the Renshaw area to roadless recreation. In addition, Alternative XII allocates the rest of the area to wildlife and range in a roadless setting. Under this alternative the entire area would be roadless. Alternatives V and VI allocate 7 percent of the area to roadless recreation (83 percent is allocated to wilderness). All Alternatives, except I, VIII, IX, and XII allocate a small part of the area to development for timber management purposes.

Benchmark/Elk Creek - Alternatives II, III, IV (Preferred), VII, and X through XII allocate 59 to 75 percent of the Benchmark area to roadless recreation (0 to 11 percent is allocated to wilderness). In addition, Alternative XII allocates the rest of the area to wildlife and range in a roadless setting. Under this alternative the entire area would be roadless. Alternatives V and VI allocate 3 percent of the area to roadless recreation (81 percent is allocated to wilderness).

Silver King/Falls Creek - Alternatives II, IV (Preferred), and VII allocate 36 to 64 percent to roadless. In addition, Alternatives IV (Preferred) and VII allocate the rest of the area to wildlife and range in a roadless setting. Under these alternatives the entire area would be roadless. Alternatives II, X, XI, and XII allocate 6 percent of the area to roadless recreation.

Middle Fork Flathead - Most areas that would be managed as roadless in Alternatives X through XII are areas unsuitable for timber management. Alternative XII maintains wilderness attributes in the Slippery Bill Mountain area.

East South Fork Flathead - Alternatives X through XII allocate from 46 to 85 percent of the roadless area for roadless recreation. Most areas that would be managed as roadless are not capable of timber production except the Dean Ridge area on the Spotted Bear River where a large area of tentatively suitable lands are allocated to roadless because of economic unsuitability. Alternatives V through VIII allocate from 26 to 62 percent of the inventoried roadless acres as roadless. In general, wilderness attributes are maintained in a roadless emphasis in all alternatives.

Swan Crest - Alternatives X through XII maintain a roadless resource from Columbia Mountain to Sixmile Mountain contiguous to the Swan Front area and would not change management of the Jewel Basin Hiking Area. All alternatives that do not recommend wilderness for the Swan Crest maintain the wilderness attributes. Alternatives differ in how the lower elevation fringe areas would be managed. Alternatives II and III would have the most potential to reduce wilderness attributes by allocating less area to roadless management and more to timber management.

Swan Front - Alternative XII would manage the Swan Front as roadless. Areas in Grizzly Basin, Lion Creek, and Upper Rumble, Pony, Bethal, and Lost Creek drainages would have high wilderness attributes maintained. Alternative III would manage for roadless recreation along ridgetop trails. Alternatives II and III allocate areas which are not capable for timber management for roadless management. Wilderness attributes would be affected by management activities on adjacent lands. Alternative V and Alternatives VII through IX allocate ridges unsuitable for timber outside the wilderness recommendations for roadless management. Wilderness attributes would be maintained in most areas. Alternative IV (Preferred) allocates high ridges to roadless management from Inspiration Point to Sixmile Mountain.

Monture - Alternatives I, IV (Preferred), and VI through XI allocate from 7 to 15 percent of the area to roadless management. Alternative V proposes another 36 percent to roadless, protecting wilderness values in nearly the entire unit. Alternative III recommends over one-half of the unit to roadless management, with the remainder of the area allocated to a variety of management prescriptions allowing development.

Stonewall Mountain - Alternatives II through VII and X through XII allocate from 14 to 50 percent to roadless management. Areas to the north and west of Stonewall Mountain are managed as roadless in all these alternatives. These alternatives also allocate from 20 to 47 percent of the area to wildlife and range which would also be managed in a roadless setting.

Designation: Nonwilderness
Management Prescription: Wildlife/Range

All alternatives, except Alternative I, allocate some roadless areas in which commodity outputs or recreation uses are subordinate to wildlfe and range

management. Development and vegetative manipulation may be required to achieve the habitat and forage management objectives. In areas with commercial timber stands, timber may be a byproduct of achieving or maintaining habitat objectives. Timber harvest would occur if enough timber is available and could be used to achieve habitat objectives. Other management activities may include prescribed burning for wildlife or range. On the east side, structural improvements such as installation of watering tanks and fences, may be required to maintain or increase grazing.

Wildlife security and cover requirements include restrictions on human activities and development. Although habitat management activities result in some reductions in wilderness attributes, they are usually short term and limited in scope. Opportunities for solitude and primitive recreation would remain high.

The effects on nonpriced components are as follows:

- Existing visual conditions would change. Man's activities would be noticed by the average visitor but would not dominate the natural landscape.
- Semiprimitive recreation opportunities would be provided.
- Grizzly bear and other wildlife species would have a high level of security and habitat management would maintain, or improve, cover/forage ratios and increase forage.
- Diversity and nongame species habitat would be provided.
- Water quality and fisheries habitat would be maintained or improved.
- Employment associated with livestock production would be maintained or increased.

Oil and gas activity may occur even though it is not allocated. Effects from this activity would be the same as discussed under the Roadless Management prescription.

Local effects of the management designation are discussed below:

Badger/Two Medicine - All alternatives allocate between 14 and 23 percent of the area to range and wildlife management. Emphasis is on the Badger, Little Badger, and Sawmill areas.

Teton - Alternatives II, IV (Preferred), V, VI, VII, X, XI, and XII allocate between 5 and 20 percent of the area to range and wildlife management. Emphasis is on the Deep Creek, Middle Fork Teton, Jones Creek, and Clary Coulee areas.

Deep Creek/Reservoir North - Wildlife habitat management and range management are an important part of the Deep Creek/Reservoir North area; however, most of the area is allocated to wilderness study. Small acreages are allocated to wildlife under all alternatives.

Renshaw - Alternatives II, III, IV (Preferred), VII, X, XI, and XII allocate between 7 and 12 percent of the area to range and wildlife management. Alternatives V and VI allocate about 3 percent of the area to range and wildlife management. Emphasis is on the Willow Creek and Ford Plateau areas.

Benchmark/Elk Creek - Alternatives II, III, IV (Preferred), V, VI, VII, X, XI, and XII allocate between 14 and 23 percent of the area to range and wildlife

management. Emphasis is on the Smith Creek, Cyanide-Baily, Elk Creek, and Steamboat areas.

Silver King/Falls Creek - Alternatives II, III, IV (Preferred), VII, X, XI, and XII allocate between 1 and 6 percent of the area to range and wildlife management. Emphasis is on the East Fork of Falls Creek.

Middle Fork Flathead - Only small areas in Challenge Creek are allocated in some of the alternatives. No impact on wilderness attributes would occur.

East South Fork Flathead - Alternative XII would manage roadless lands in the Spotted Bear area for grizzly bear habitat. No impact on roadless lands would occur.

Swan Crest - Alternatives IX and XII allocate significant areas to grizzly bear habitat south and east of Jewel Basin. The wilderness attributes would be maintained. In addition, all alternatives, except Alternative I, allocate some land on the west side of Columbia Mountain as big game habitat. Prescribed burning to increase forage production would have little effect on wilderness attributes.

Swan Front - All alternatives, except Alternatives II, III, and XII, allocate large areas to wildlife. The Bunker Creek drainage would be managed for grizzly bear habitat in Alternatives IV (Preferred), VI, VII, VIII, and XI. No management activities would occur that would modify wilderness attributes. Alternatives IX and XII expand the grizzly emphasis north from Bunker Creek to include all the Bruce Ridge and Upper Sullivan drainage to Sixmile Mountain. These management practices, which include prescribed burning, would have little effect on wilderness attributes.

Monture - None of the alternatives allocate large areas for these uses. However, Alternatives III and IV (Preferred) emphasize management within essential grizzly bear habitat. Alternative I allocates all acres to wilderness. Some wildlife needs are met through wilderness and roadless allocations.

Stonewall Mountain - Alternatives II through VII and X through XII allocate between 20 and 47 percent of the area to range/wildlife. Most of the area under this management would remain roadless.

Designation: Nonwilderness
Management Emphasis: Timber Management Without Roads

Only the west side has areas allocated to timber management without roads. This includes areas with commercial timber on steep, rugged terrain mostly within 1 mile of a road. Logging would employ aerial yarding systems, and no roads would be constructed. Implementation would impact the vegetation and would not reach long distances into roadless areas. Because the land would not be roaded, wilderness attributes could be easily reclaimed after implementation by vegetative growth. Implementation would proceed slowly for all alternatives with this emphasis. Only a few hundred acres would be affected in decades one and two. Most areas would schedule harvesting by decade five when economic efficiency is the best. This management would not have any significant economic or social effects until decade four, when implementation would increase. The

first decade timber harvest scheduled under this prescription could be relocated to other areas without affecting objectives or outputs of the alternative.

The effects on nonpriced components are as follows:

- Existing visual conditions would change and would be noticed by the average visitor. Man's activities may dominate the landscape in some local areas.
- Semiprimitive nonmotorized recreation opportunities would be provided. Wilderness attributes would be retained.
- Elk and grizzly security would be maintained.
- Diversity of plant and animal communities would be maintained or improved in the long term.
- Water quality and fisheries would not be affected.
- Some support of local employment and income would occur in Decade 4 and later.

All alternatives, except Alternative I, manage portions of this area for timber management without roads. Alternatives which make the most extensive use of these prescriptions are Alternatives IV (Preferred), VII, X, and XI. Alternatives IV (Preferred), VII, and XI would have the greatest effect. This prescription would not be implemented in the Swan Front or Swan Crest until after the first decade. Alternative III would affect the Slippery Bill, Lion Creek, and Squeezer Creek drainages of the Swan Front in decade five.

Oil and gas activity would be limited to seismic surveys. Because all slopes in this management prescription are greater than 60 percent, all areas leased contain no-surface occupancy stipulations.

Designation: Nonwilderness
Management Emphasis: Timber Management With Roads

All alternatives, except Alternative I, allocate some portions of the area for timber. The consequences of this management decision are a loss of wilderness attributes at the time timber harvest and roading occurs. The wilderness attributes are foregone if this management direction is implemented.

The effects on nonpriced components are as follows:

- Existing visual conditions would change and man's activities may dominate the landscape and would be noticed by the average visitor.
- Wilderness attributes would be foregone.
- Elk security and big game hunting opportunities would be reduced.
- Diversity would increase.
- Water quality and fisheries would be adversely affected.
- Grizzly bear and gray wolf habitat would become less effective.
- Local economic stability would be provided by supporting the highest level of wood products industry jobs.

Oil and gas activities would be compatible with this emphasis.

These prescriptions provide for a wide range of multiple use benefits, both priced and nonpriced.

Badger/Two Medicine - Alternative X would develop all of the Badger/Two Medicine area. Alternative XI would develop about 50 percent of the area. Alternatives II and VIII would develop about 25 percent of the area. Alternatives I, III, IV (Preferred), V, VI, VII, and IX would develop about 7 percent of the area. Road construction and timber harvest would take place in the Two Medicine drainage. Mitigation measures would be implemented to protect the grizzly bear. Lodgepole pine and Douglas-fir stands would be accessed with roads and harvesting would be scheduled starting in the second decade. All of the area would be available for wilderness reevaluation during the next planning period. Alternatives IV (Preferred), V, VI, and VII allocate some acres (3,000 to 4,000) to wildlife where timber harvest is used to achieve habitat objectives. Alternatives II, III, VIII, X, and XI allocate small acres (136 to 370) to a wildlife/timber prescription.

Teton - Alternative X would develop all of the Teton area, Alternative II would develop 90 percent of the area, Alternative XI would develop about 50 percent of the area, Alternatives IV (Preferred) and VII would develop about 30 percent, and Alternatives V and VI would develop about 10 percent of the area. Road construction and timber harvest would be extended into the West Fork and South Fork of the Teton. Mitigation measures would be implemented to protect grizzly bear habitat. Lodgepole pine and Douglas-fir stands would be accessed with roads and harvesting would be scheduled starting in the second decade.

Deep Creek/Reservoir North - Timber management activities are not scheduled in the Deep Creek/Reservoir North area.

Renshaw - Alternative X would develop 45 percent of the Renshaw area. Alternative II would develop about 35 percent of the area. Alternative XI would develop about 23 percent of the area. Alternatives III, IV (Preferred), and VII would develop about 14 percent and Alternatives V and VI would develop about 5 percent of the area. Road construction and timber harvest would take place along the Beaver-Willow Road. Mitigation measures would be implemented to protect grizzly bear habitat. Lodgepole pine and Douglas-fir stands would be accessed with roads and harvesting would be scheduled starting in the second decade.

Benchmark/Elk Creek - Alternative X would develop all of the Benchmark/Elk Creek area. Alternative II would develop about 90 percent of the area. Alternative XI would develop about 50 percent of the area. Alternatives IV (Preferred) and VII would develop about 30 percent, and Alternatives V and VI would develop about 10 percent of the area. Most development would take place along the Benchmark Road. Roads would also be constructed into the Elk Creek drainage. Mitigation measures would be implemented to protect grizzly bear habitat. Lodgepole pine and Douglas-fir stands would be accessed with roads, and harvesting would be scheduled stocking in the second decade. All of the area would be available for wilderness reevaluation during the next planning period.

Silver King/Falls Creek - Alternative X would develop a small portion of the Silver King/Falls Creek area. About 3,500 acres in the lower Falls Creek drainage would be developed starting in the second decade. The topography of much of the area consists of high elevation alpine ridges not capable of commercial timber production. These lands form the bulk of the area. Lower elevation fringe areas and stringers of tentatively suitable timber lands in drainages intrude into the area. These lands are usually located along roads.

Areas may have future opportunities to be evaluated for inclusion in the wilderness system. All of the area would be available for wilderness reevaluation during the next planning period.

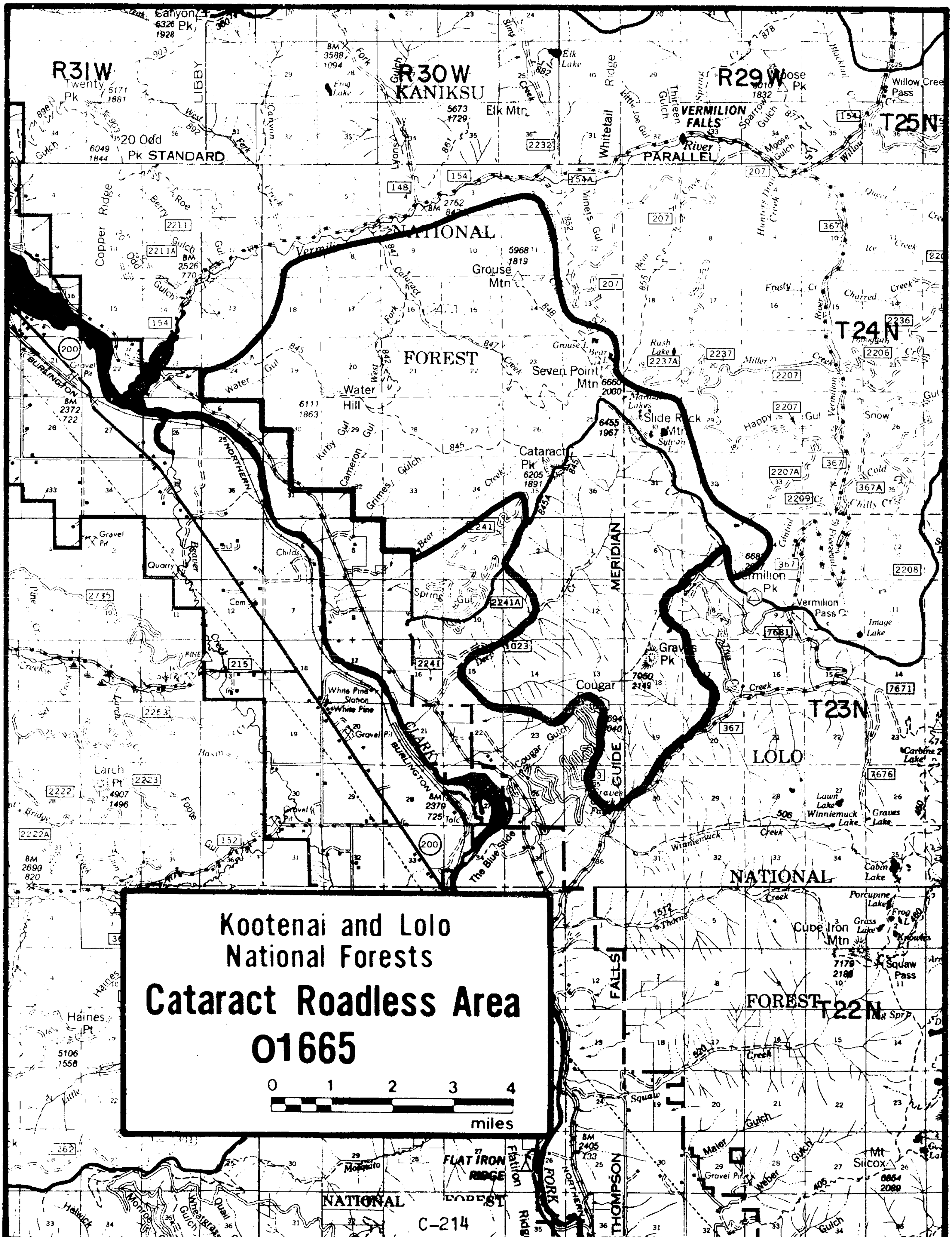
Middle Fork Flathead and East South Fork Flathead - Timber harvest would affect fringes of the East Side and Middle Fork geographic areas in all alternatives except Alternatives I and IX. Economic and social effects would be greatest under Alternative III. Alternative III would implement the highest level of timber harvest and roading. It would provide the highest level of support to local employment and income and the most significant reduction of roadless acres and wilderness attributes. Alternative IV (Preferred) recommends areas with high timber values and lowest wilderness values for timber management. Other alternatives examine variations within the roadless area of the effects of timber management on local areas.

Swan Crest - Portions of the Swan Crest are allocated to timber management in all alternatives except Alternative I. Alternatives II, III, and X would make significant intrusions into this area. This includes the Fawn Creek/Aurora Creek drainages which would be accessed in decade one. All other alternatives allocate timber harvesting in the highly productive fringe areas, leaving at least 70 percent in a roadless setting.

Swan Front - Implementation of these prescriptions in Lion Creek and the upper reaches of Squeezer and Bethal Creeks would make significant intrusions into areas considered high in roadless values. Alternative II, III, and X would schedule timber harvest in Lion Creek below the falls in decade one. The mature cedar grove would not be included in the timber harvest area, but wilderness attributes of the grove would be affected. Morrell Falls is protected in all alternatives.

Monture - The Monture drainage, which serves as an important entrance to the established wilderness area, is not developed in any alternative. Alternatives II and X propose development in the timber areas located at the lower elevations along the boundary of the roadless area. Alternative II also applies visual prescriptions in most timber management areas. In all alternatives which allocate acreage to timber management, a core in the upper drainages of this area remains roadless. Timber management would include lower elevation and fringe areas.

Stonewall Mountain - Alternative II develops about two-thirds of the area and only excludes high elevation, nonproductive land. Alternatives III through VII and X through XII allocate the fringe areas of highly productive land to timber management. This includes Yukon Creek, Telegraph Creek, and Porcupine Basin. The majority of the area would remain in a roadless setting in these alternatives.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Seven Point Mtn
Water Hill
Cataract Pk
Slide Rock Mtn
Vermilion Pk
Vermilion Pass
Graves Pk
Cougar
Larch Pt
Haines Pt
Cube Iron Mtn
Squaw Pass
Mt Silcox
Elk Mtn
MERIDIAN
GUIDE
FALLS
THOMPSON
BURLINGTON
NORTHERN
CLARK
The Blue Slide
FLAT IRON RIDGE
C-214

Acreage:

Total Gross Acres:	27,700	Total Net Acres:	27,600
Kootenai.....	17,800	Kootenai.....	17,700
Lolo.....	9,900	Lolo.....	9,900

I. Description

A. Location and Access

The area is located on the southern end of the Kootenai Forest in Sanders County. A portion of the area extends into the Lolo Forest. The area is readily accessible via the Vermilion Road (No. 154) which can be taken from State Highway 200. There are many trails in the area including a trail up Cataract Creek, a trail up West Fork Cataract Creek which connects with a ridge line trail between Cataract Peak and Water Hill, and a ridge line trail from Grouse Mountain to Seven Point Lakes.

B. General Description

The Cataract drainage is the dominant landform in the area. The drainage is a tributary of the Vermilion River and is nearly enclosed by surrounding mountains. The drainage has severely rugged topography with many cliffs, rock slides, and vertical rock ribs. The area also contains the smaller headwater sections of Bear Creek and several gulches which feed directly into the Clark Fork River. The highest point in the area is Seven Point Peak (6,600 feet). The Lolo portion is characterized by open parks at the higher elevations. Massive rock outcrops, bluffs, and cliffs are also present. Elevation ranges from 2,700 feet to 7,000 feet.

Vegetation types include mountain hemlock, bear grass, and cedar along the stream courses. Patches of larch, grand fir, white pine, and Douglas-fir are also found.

The ecosystems represented in the area include western ponderosa forest, Douglas-fir forest, and western spruce fir forest.

Except for the east and southwest sections of the area, developments around the area are minimal. Cataract is separated from the Galena Roadless Area to the northwest by the Vermilion River Road.

Elk and deer are common to the area, with the south face of the area considered prime winter range. The area is also grizzly habitat. A cutthroat trout fishery exists in the longer gradient streams which attracts use.

The area is presently used for hunting, fishing, and hiking and is characterized as light (1,000 RVD's).

II. Analysis of Wilderness Suitability

A. Capability

1. Wilderness Attributes

a. Naturalness - Impacts on the natural integrity and appearance of the area include several miles of recreation hiking trail and the fire lookout on Seven Point Mountain. There are several low standard mining exploration roads on the east side of Seven Point Mountain, but these are just outside the roadless boundary.

The naturalness of the Lolo portion has been altered somewhat by domestic livestock grazing.

b. Opportunities for Solitude - Opportunities for solitude are very high within the Cataract drainage. Cataract is a "hanging valley" watershed so even the lower reaches are out of sight and sound of the road across the Vermilion River at the mouth of Cataract Creek.

Solitude is less but still high in the Seven Point Mountain area, as currently there is little human activity in the area. Solitude is significantly less along the southwest slopes of Water Hill, which face out into the busy Clark Fork Valley.

c. Primitive Recreation Opportunities - There are several opportunities for primitive recreation throughout the area. The Cataract Creek canyons are known for their quality hunting opportunities, and the creek itself provides excellent fishing for native trout. The alpine lakes along the Seven Point - Vermilion Peak ridge do not support fish but offer quality settings for camping and day hiking. There are many miles of hiking trails throughout the area.

Rock climbing in the Seven Point Mountain area and rugged cross-country travel along the ridges and canyons of Cataract Creek offer challenging experiences to the visitor.

d. Other Features - Special features would include the resident elk herd and the native cutthroat trout in the low gradient stream of the Cataract hanging valley.

2. Manageability and Boundaries - The Cataract roadless area was identified in the RARE II inventory. The recommendation at that time was for a nonwilderness designation and most of the area was allocated to roadless management. Thus, the area has remained largely intact through the interim.

There have been no changes in the original RARE II inventory.

Gross Acres	Net Acres	
28100	28000	RARE II inventory
-1200	-1200	Timber sale activity
+300	+300	Additional acres identified in the 1983 reinventory
27200	27100	1983 roadless inventory

There is a 100-acre patented mining claim in Cataract Creek which constitutes the major nonconforming use in the area.

Much of the acreage in the Kootenai portion of the Cataract area is within the Cataract drainage itself. For the most part, this portion has a good boundary in terms of manageability. The south and east boundaries in the Seven Point Mountain area are not as well defined and would probably need some adjustment to stronger topographic features to make them more manageable. The size of the area is sufficient to allow for these adjustments while still retaining the wilderness resource.

The Lolo portion of the Cataract area has an irregularly shaped boundary which is not well defined by natural terrain or other features. For the most part, the boundary is difficult to locate on the ground. There are no nonconforming uses or private land which would necessitate boundary changes.

B. Significant Resource Potentials

1. Recreation

The area has the potential to provide 5,200 RVD's of wilderness recreation. Current use is estimated at about 1,000 RVD's.

2. Wildlife and Fish

The area contains grizzly bear and elk habitat. Important elk winter range occurs along the south facing slopes.

Cataract Creek, a popular stream and tributary to the Vermilion River, is in this area, as are numerous small tributaries to the Vermilion and Clark Fork Rivers.

3. Timber

There are approximately 16,100 acres of suitable timber land capable of producing at least 20 cubic feet per acre per year of timber growth. Over 90 percent of this timber land is located on slopes in

excess of 55 percent. Road construction will be difficult and costly and logging will require use of cable and helicopter logging methods.

4. Minerals

There are over 130 unpatented mining claims in the area (75 on the Kootenai and 58 on the Lolo). There is also one patented mining claim on the Kootenai but it has not been worked for many years. There are about 10,700 acres of high and very high mineral potential combined, in both portions of the area.

There are a total of 10 oil and gas lease applications on all portions covering the entire 27,600 acre area.

C. Other Resources

1. Range

There are no grazing allotments in the area and the grazing potential is all transitory range.

2. Cultural Resources

Known historic cultural sites include a lookout atop Seven Point Mountain, as well as the mining remains on the patented land. The area has not been surveyed for prehistoric sites. However, based upon surveys in similar locales, it is estimated that the probability for prehistoric sites occurring is low.

3. Water

Mean annual precipitation varies from 30 to 80 inches depending on elevation. Runoff varies from 8 to 45 inches with the same elevation influence. Water quality in the area is excellent with cold, clear streams during all but the highest of runoff events.

D. Resource Situation

Category	Unit	Kootenai	Lolo
Gross Acres	Acres	17800	9900
Net Acres	Acres	17700	9900
Recreation			
Semiprim. Nonmotor.	RVDs	1000	7400
Roaded Natural	RVDs	0	24750
Range			
Suitable Acres	Acres	0	0
AUMs	AUMs	0	0
Timber			
Suitable Acres	Acres	9300	6800
Standing Volume	MMBF	110	51

Category	Unit	Kootenai	Lolo
Corridors			
Existing & Potential	No.	0	0
Wildlife - T&E			
Grizzly Bear Habitat			
Situation 1	Acres	17200	8000
Situation 2	Acres	0	0
Situation 3	Acres	0	0
Wildlife - Big Game (Elk, Deer)			
Summer Range Total	Acres	4500	0
Winter Range Total	Acres	1600	300
Special Uses Existing	No.	0	0
Existing Facilities	No.	0	0
Significant Fisheries			
Stream Miles	Miles	4	2
Stream Habitat	Acres	0	2
Lakes	No.	0	0
Lake Habitat	Acres	0	0
Water Developments			
Existing	No.	0	1
Minerals			
Hardrock Potential			
Very High	Acres	0	9300
High	Acres	800	600
Moderate	Acres	400	0
Low	Acres	16200	0
Mining Claims	No.	75	58
Oil & Gas Potential			
Very High	Acres	0	0
High	Acres	0	0
Moderate	Acres	17700	9900
Low	Acres	0	0
Unknown	Acres	0	0
Oil & Gas Leases			
Leases	No.	6	4
Leased Acres	Acres	17700	9900

E. Management Considerations

1. Land Use Authorizations

There are no special uses.

2. Fire

The roadless area was burned over in 1910, leaving much of the area brush covered, especially south facing slopes. Recent fire occurrence has been low (no fires in the last 10 years). The fuels situation is considered both dense and sparse conifers with thick and thin layers of ground fuels.

3. Insect and Disease

There are no mature stands of lodgepole pine susceptible to mountain pine beetle, nor is there insect and disease activity in the area.

4. Non-Federal Lands

Private land consists of a 100-acre patented mining property located in Cataract Creek.

F. Need

1. Proximity to Other Wilderness and to Population Centers

The Cataract roadless area is about 10 miles south of the existing Cabinet Mountains Wilderness. The Cabinets are now getting more than 40,000 RVD's per year and this use is beginning to increase rapidly.

The Cataract area is approximately 125 miles from both Missoula, Montana and the Spokane, Washington areas.

2. Contribution to National Wilderness Preservation System

This area is representative of the Cabinet-Yaak grizzly bear ecosystem which is uncommon in the existing wilderness system.

3. Public Interest

Public opinions solicited during the RARE I inventory indicated that the people, at the time, wanted the area to remain roadless and some were in favor of a wilderness designation.

Comments received during the Unit Plan process indicated some support for wilderness classification but the response was not large.

During the RARE II public review period, over 3,100 people commented on the area, most of whom (53 percent) were opposed to wilderness in the area. The Montana Wilderness Association's Alternative "W" (1978) recommended that the area be wilderness.

During the public reveiw period for the DEIS, there were few additional comments on the Cataract Area. Several comments favored wilderness designation for all existing roadless areas. Other responders opposed further additions to the wilderness system.

G. Alternatives and Environmental Consequences

1. Management Prescription Assignment by Alternative

Multiple use management prescriptions were grouped into categories (management emphases) which have similar impacts on the wilderness and roadless resources. The following table displays how the roadless area acreage was designated in each alternative. In addition, the summary of management emphasis further defines the rate of development that is expected to occur in some alternatives as well as the future disposition of the inventoried roadless area.

The management emphasis for the Cattaract Roadless Area is a combination of management prescriptions and alternatives from two National Forests, the Lolo, and Kootenai. Because resources, uses, and land conditions are somewhat different on each Forest, neither the alternatives nor the management emphasis are fully integrated. Because the Kootenai Forest is the lead Forest for this roadless area, for purposes of this evaluation, the alternatives and management emphasis from the Lolo Forest have been integrated into those of the Kootenai Forest as close as possible on the basis of goals and objectives common to each Forest's alternatives and management emphasis.

Further information on the specific alternatives and management emphasis for the Kootenai National Forest's areas can be found in its Forest's draft Environmental Impact Statement for the Forest Plan.

The proposed wilderness/nonwilderness designation for area 1665 is made and documented in the Kootenai Envirommental Impact Statement. This proposed designation has priority over all other land designations and none of the two Forests can undertake any management activity other than current direction until such time that a record of decision is issued in conjunction with this document.

Table 2

Management Emphasis	Alternatives														
Kootenai Alternatives	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. F	Alt. G	Alt. H	Alt. I	Alt. J	Alt. K	Alt. L	Alt. M	Alt. N	Alt. O
Lolo Alternatives	e	c	c	c	f	c	b	g	a	d	d	e	e	e	c
Nonwilderness															
Primitive/Semiprimitive Recreation, Viewing, Minimum Use Areas															
Kootenai:	11.8	10.6	10.6	10.7	3.6	10.1	0	0	13.6	13.8	13.8	9.4	11.6	11.8	17.0
Lolo NF:	7.6	3.4	3.4	3.4	7.6	3.4	6.7	0	1.3	7.6	7.6	7.6	7.6	7.6	3.4
Big Game Winter Range															
Kootenai:	.7	.7	.7	.7	.7	.7	0	0	.8	2.1	2.1	.7	.7	.7	.7
Lolo NF:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Timber Harvest With Wildlife and/or Viewing Management, Minimum Use Areas due to Steep Slopes or Regeneration Problems															
Kootenai:	5.2	6.4	6.4	6.3	1.1	6.8	0	0	3.3	1.8	1.8	7.6	5.4	5.2	0
Lolo NF:	2.3	6.5	6.5	6.5	2.3	6.5	3.2	0	8.6	2.3	2.3	2.3	2.3	2.3	6.5
Wilderness															
Recommended Wilderness															
Kootenai	0	0	0	0	12.3	0	17.7	17.7	0	0	0	0	0	0	0
Lolo	0	0	0	0	0	0	0	9.9	0	0	0	0	0	0	0

Table 2 (continued)

Summary of Management Emphasis:	Alternatives														
Kootenai Alternatives	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. F	Alt. G	Alt. H	Alt. I	Alt. J	Alt. K	Alt. L	Alt. M	Alt. N	Alt. O
Lolo Alternatives	e	c	c	c	f	c	b	g	a	d	d	e	e	c	c
Nonwilderness															
Developed - Decade 1:															
Kootenai:	0	0	0	0	0	0	0	0	0	0	0	1.0	0	0	0
Lolo NF:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Decade 5:															
Kootenai:	5.2	6.4	6.4	6.3	1.1	6.8	0	0	3.3	1.8	1.8	7.6	5.4	5.2	.7
Lolo NF:	2.3	6.5	6.5	6.5	2.3	6.5	3.2	0	8.6	2.3	2.3	2.3	2.3	2.3	6.5
Roadless - Decade 1:															
Kootenai:	17.7	17.7	17.7	17.7	17.7	17.7	0	0	17.7	17.7	17.7	16.7	17.7	17.7	17.7
Lolo NF:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Decade 5:															
Kootenai:	11.8	10.6	10.6	10.7	3.6	10.1	0	0	13.6	13.8	13.8	9.4	11.6	11.8	17.0
Lolo NF:	7.6	3.4	3.4	3.4	7.6	3.4	6.7	0	1.3	7.6	7.6	7.6	7.6	7.6	3.4
Recommended Wilderness															
Kootenai	0	0	0	0	12.3	0	17.7	17.7	0	0	0	0	0	0	0
Lolo NF	0	0	0	0	0	0	0	9.9	0	0	0	0	0	0	0
Total Acres - Kootenai	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7
Total Acres - Lolo	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9
Total Acres	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6

III. Impacts

Designation: Wilderness
Management Emphasis: Wilderness

The amount of wilderness (established and proposed) for the Cataract roadless area, is dependent on the goals and objectives for a particular alternative. Alternatives E, G, and H each allocate a portion of the area to wilderness with Alternative H designating the entire 27,600 acre area as wilderness. There are no specific ground-disturbing management activities associated with wilderness areas although the establishment of these areas may, in itself, have effects on other resources and uses.

Wilderness classification will preserve the existing wilderness characteristics of the area. The naturalness of the area will be maintained along with the higher solitude opportunities available within the Cataract drainage. Primitive recreation opportunities would be maximized as well as protection of old-growth timber and associated wildlife.

There are about 16,100 acres of suitable timber lands within the area, with about 9,300 acres located in the Kootenai portion and 6,800 acres in the Lolo. All 16,100 acres of suitable timberland would be within designated wilderness in Alternative H, about 9,300 acres would be located in wilderness in Alternative G, and about 8,200 acres would be located in wilderness in Alternative E.

Opportunities to manage timber and wildlife habitat resources would be forgone in Alternative H and portions of Alternatives E and G.

Grizzly bear habitat (Situation 1 - critical to the recovery of the species) covers practically the entire roadless area. Wilderness management would provide security for the bear by prohibiting roading and minimizing human activity in the area. However, increases in forage through management activities such as burning and timber harvest would not occur.

Opportunities to burn big-game winter range (about 1,900 acres) with planned ignitions would be foregone. Likewise, opportunities to create openings in big-game summer range would be prohibited.

Wilderness restricts the opportunity for the exploration and development of the minerals, oil, and gas resources. This affects about 10,700 acres of land considered very high to high in mineral potential. The entire area is considered to have moderate oil and gas potential, with 10 lease applications pending the outcome of the wilderness study for the area.

Activities permissable in wilderness, when authorized by the 1964 Wilderness Act or wilderness management plans, cost more than activities in areas without the restrictions. Restrictions apply primarily to mode of transportation, use of chainsaws in the wilderness, and removing signs of the intrusion after project completion. When permitted, activities such as mineral exploration, disease and pest control, and fire suppression, would be conducted while protecting the wilderness values which, in turn, requires more time, adherence to more stringent requirements, and more money being spent.

Social and economic affects would center around the resource values of recreation, wildlife, wilderness, and timber. Semiprimitive recreation activities such as hunting in a roadless setting would continue. Timber land would not be available at all in Alternative H, and partially unavailable in Alternatives E and G; thus, not supporting the wood products industry. Those publics valuing wilderness would be supported by this management emphasis.

Designation: Nonwilderness
Management Emphases: Primitive/Semiprimitive Nonmotorized Recreation, Viewing, Minimum Use Areas

All alternatives, except Alternative H, contain roadless acreage, ranging from 71 percent of the area in Alternative F, to 51 percent in Alternatives B and C, 42 percent in Alternative E, to 16 percent in Alternative G. There are few, if any, ground-disturbing management activities specifically associated with unroaded management. Activities are associated primarily with dispersed recreation including hunting and fishing.

The roadless character within this emphasis will be maintained as well as provide for semiprimitive recreation opportunities. Old-growth habitat will also be maintained and grizzly habitat will be protected. Security for big game would be maintained. The landscape would remain as natural appearing but the buildup of natural fuels could increase risks of wildfire.

Like wilderness, roadless allocations require stiffer requirements for conducting activities, requirements that are designed to protect the qualities inherent in a roadless allocation. Restrictions on access and mode of travel are major limitations for conducting activities, often making the activity too expensive to accomplish. Such activities can include wildlife and fish habitat improvements, mineral, oil and gas exploration/development, insect and disese control, and wildfire suppression.

The social and economic effects are primarily the benefits of semiprimitive recreation opportunities.

Designation: Nonwilderness
Management Emphasis: Big Game Winter Range

About 2 percent of the area, or 700 acres, is designated big-game winter range in alternatives A through F. This emphasis is located primarily along the south facing slopes looking into the Clark Fork River Valley. The intent is to manage winter range habitat for the benefit of the elk and deer. Prescribed burning is the primary management activity associated with this emphasis.

The impact on the wilderness and roadless character would be short term in nature. The naturalness of the area is altered by the human activity of burning. However, vegetative regrowth after burning would make this activity less apparent in the long term.

Impacts on the timber and mineral resources are insignificant in this emphasis in this roadless area.

Social and economic effects would be primarily one of support of those publics who value the wildlife in the area.

Designation: Nonwilderness
Management Emphases: Timber Harvest with Wildlife and/or Viewing Management, Minimum Use Areas due to Steep Slopes or Regeneration Problems

All alternatives, except Alternative H, designate some portion of the area to this emphasis. They range from 31 percent of the area in Alternatives B and C, 25 percent in Alternative A, 10 percent in Alternative E, to 7 percent in Alternative G. Timber harvest and associated activities, such as road building, have more affect on the physical and biological environment than any of the other forest management activities. The extent of the effects are dependent on management regimes selected.

In no alternative is timber harvest and road building scheduled to take place during the first decade. In all alternatives, development would occur in the third decade with about 1 MMBF harvested annually. About 1 mile of road would be required to harvest this amount in all alternatives.

The wilderness resource and roadless character of the area would be maintained in the first 10 years under all alternatives but, by the fifth decade, developmental activities would alter the naturalness of the area. Harvest cutting units, roads, and other evidence of development would be present to modify the landscape. Roading precludes the consideration of the area for wilderness in the long term and reduces the opportunity for primitive recreation and experiences of solitude.

Timber harvest and associated roading could result in a reduction in big-game cover and security if mitigation measures are not taken. Mitigation can include closing roads promptly after project completion to maintain security and scheduling harvest so that hiding cover is always maintained.

Benefits to wildlife from timber harvest include the creation of forage.

Timber management can directly affect the grizzly population in the short term during logging activities and, in the long term, by providing road access into an area. Access into an area can displace the bear and increase the opportunity for human/bear encounters. Timber management activities, if coordinated with wildlife needs, can produce positive benefits by producing more desireable forage for grizzlies through certain timber harvest and site preparation practices, such as small clearcuts and broadcast burning instead of tractor piling. Roads would be closed promptly upon completion of the activity.

Social and economic effects are related primarily to the resource values of timber, wildlife, wilderness, and recreation. The harvest of timber is important to the economic base of communities in the Forest. Timber from the Cataract roadless area could contribute timber to the local timber industry. Hunting experiences could be altered because of the change in the roadless setting to a roaded natural setting. Road closures would retain the area closer to its existing character. Those publics desiring wilderness or roadless management for the area would not be supported by this emphasis. Concerns about impacts on grizzly bear, big game, and other species could be raised by the activities scheduled in this emphasis, but should be addressed by the efforts to mitigate the impacts.

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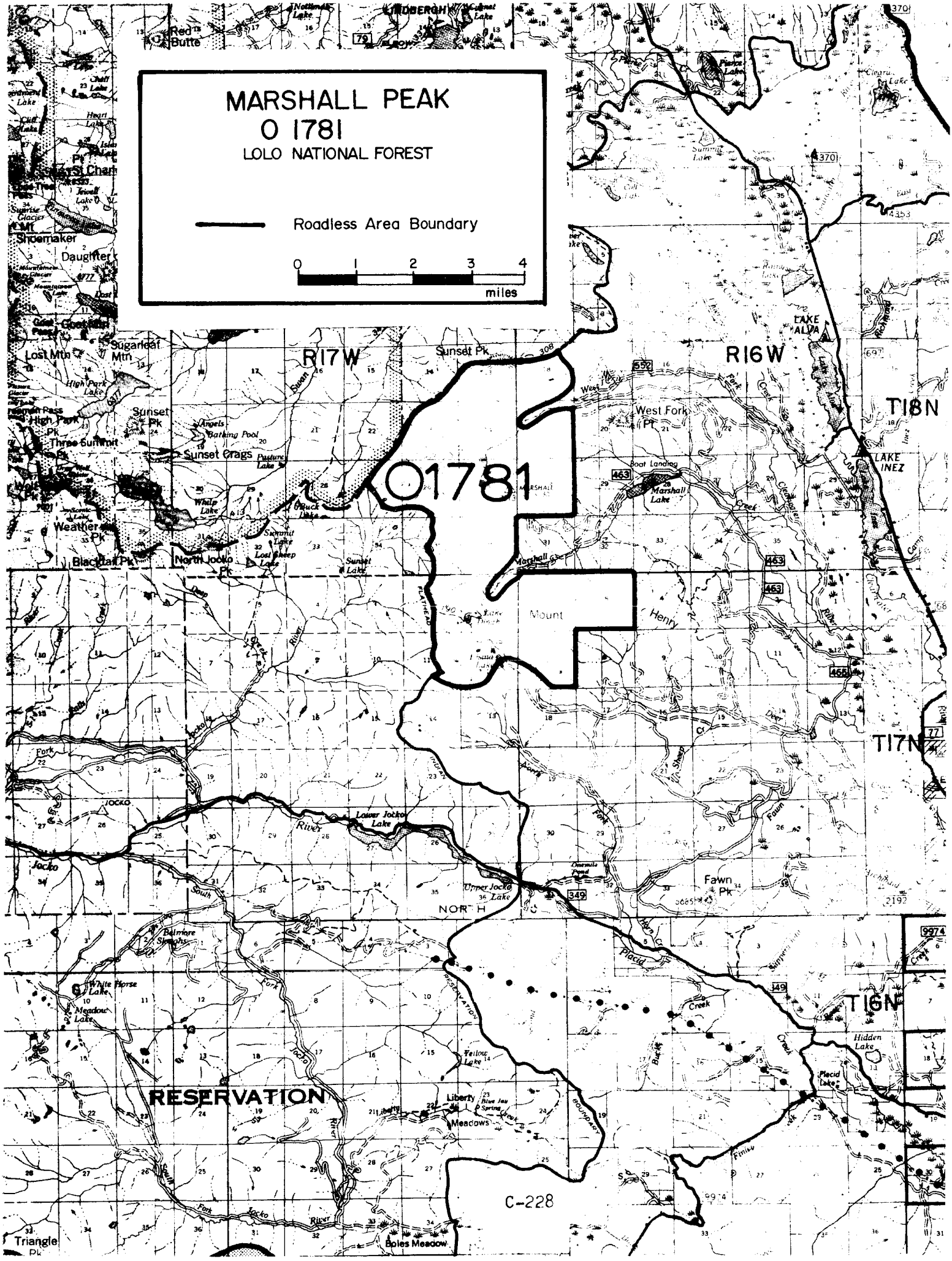
MARSHALL PEAK
O 1781
LOLO NATIONAL FOREST
Roadless Area Boundary
0 1 2 3 4
miles
O1781
R17W
R16W
T18N
T17N
T16N
RESERVATION
C-228
Red Butte
Sugarleaf Mtn
Lost Mtn
Sunset Pk
Sunset Crags
Weatherman Pk
Blacktail Pk
North Jocko Pk
West Fork Pk
Boat Landing
Marshall Lake
Mount Henry
Fawn Pk
Lower Jocko Lake
Upper Jocko Lake
Liberty
Meadows
Boles Meadow
Triangle Pk
LAKE ALVA
LAKE INEZ

MARSHALL PEAK #01781

Acreage:

Gross Acres: 9,400
Net Acres: 9,400

I. Description

A. Location and Access

The Marshall Peak Roadless Area is situated at the southeastern base of the Mission Mountains some 12 miles northwest of the community of Seeley Lake. Vehicle access is available to the eastern border via a complex of logging roads built along the West Fork of the Clearwater River, Deer Creek, and Marshall Creek. There are portions of two system trails totaling 10 miles which cross the unit. This area also contains a popular snowmobile route. Refer to Table C-4 for proximity information.

B. General Description

The Jocko-Clearwater Divide forms the western boundary. From it, the West Fork, Deer, and Marshall Creeks originate and flow eastward into the Clearwater River. A series of ridges separate and parallel these creeks. The upper regions have been modified by alpine glaciation which resulted in U-shaped valleys and low, rolling hills punctuated by pothole depressions. Lake Dinah forms the source of Marshall Creek, and Elsina Lake is found at the head of Placid Creek. Relief in this unit is approximatly 2,000 feet.

Except for scattered rock outcroppings, lush vegetation dominates this area. Subalpine fir and spruce are common on the moist and gentle slopes. Douglas-fir is prevalent on some of the drier, steeper areas. Thick understories of menziesia, alder, and huckleberry are common. The lack of available soil moisture in several areas allow only stands of low brush and forbs.

The Marshall Peak Roadless Area provides habitat for a variety of game and nongame wildlife species commonly found in western Montana including black bear, bobcat, cougar, lynx, marten, wolverine, elk, moose, bald eagle and, cutthroat trout. Hoary marmots occupy the rocky domain.

Regional geologic mapping indicates that Precambrian Age Missoula Group strata underlies the Marshall Peak Unit. The Shepard and Mount Shields Formations, lower to middle members of the Missoula Group, are the rock units associated with the area. These units contain red, gray, and green argillites and siltites exhibiting mud cracks, cross-bedding, and ripple marks. All of this study unit is leased for oil and gas.

The upper lakes, Elsina and Dinah, receive moderate fishing and camping pressure. The Dinah Lake Loop Trail is popular with snowmobilers.

Backpacking is moderate during the summer and hunting is moderate during the fall.

II. Analysis of Wilderness Suitability

A. Capability

1. Wilderness Attributes

a. Naturalness - The forces of nature are readily apparent to the most casual observer. There are large slab rocks which were scraped barren by glacial action which are still absolutely devoid of soil. Constant reminders are presented that the shallow soils are tenuously providing a toehold for the shrubs, trees, and other vegetation. Only an abundant water supply can explain how trees find sustenance in a rock crevise. Areas of lush vegetation are easily revealed to be only a facade of a shallow sponge on top of bedrock.

b. Inspirational Values - A visitor can stand on bedrock, view nearby rock rubble, gaze down into the Clearwater Valley, and imagine how the glacier scoured out the drainage. The viewer can imagine that nature shaped the area and draped it with a carpet of green and with just enough openings to provide variety.

c. Recreational Values - This is not a very welcoming area. Access roads are not well maintained, primarily because heavy runoff makes retaining fine material on roads very difficult. The parent material is somewhat marginal for roads of native material; washouts are common.

The few trails are lower standard, again primarily because of unstable terrain and very heavy brush. Cross-country travel is a series of conquering impenetrable brush, finding a passable route through ledges and talus slopes, having a brief respite on a relatively level slab rock, (either barren or covered with lichens, mosses, or other successional vegetation), and always facing another challenge of finding a path of least resistance.

Campsites are mostly a matter of finding a level spot which is not too brushy, wet, or rocky. Recurrently used camp spots are very rare except for portions of the shoreline of Elsina and Dinah Lakes. Drinkable water is abundant.

Although novice outdoors people may be repelled by the physical character of the area, people willing to meet its terms will find that being absorbed into the area can be complete and enchanting. A feeling of being subservient to the permanent inhabitants can easily prevail because of the presence of the grizzly bear.

d. Cultural/Historical Values - No historic or prehistoric sites have been identified within the area.

e. Educational/Scientific Values - There is an opportunity to study the grizzly bear in its natural habitat, either through casual observance or in a more formal program.

f. Unique Values - The area is not recognized as having unique vegetative communities to be used as benchmarks or unusual or scarce ecosystem representatives. Gene pools do not differ appreciably from the surrounding area. The ecosystems in this area are well represented in existing wilderness areas.

2. Manageability and Boundaries

The Marshall Peak area is a relatively compact unit. The unit would have about 23 miles of additional wilderness boundary to manage. There are 10 access routes including three trails and two roads. The boundary on the west and north would be a well defined ridge, but the remainder of the boundary would be private property lines over irregular topography. The roadless boundary in Deer Creek, Marshall Creek, and the West Fork Clearwater is based on past logging activity. Long term wilderness resource and boundary management would benefit by including the timber harvest areas referred to below. The logging activity is largely recovered and none of the roads are maintained except Lake Elsina Road No. 465. Although wheeled vehicle access is limited to the Dinah Lake Trail, oversnow vehicle access is readily available in Deer Creek and Marshall Creek.

The only nonconforming use in the unit is snowmobiling by ardent winter sports enthusiasts. Much conflict would occur if this use were made illegal. Enforcing vehicle restrictions to keep snowmobilers from the area would be difficult.

Although the area is under lease application for oil and gas development, the activity is highly speculative. However, existing development rights would have to be accommodated.

The area is mostly free of external influences because of topographic and vegetative barriers. Development is near the boundary on the north, east, and south sides. No development will occur on the west border so long as the tribal council chooses to manage the area as wilderness.

B. Other Resources Found in the Area

This area has accommodated a small amount of logging in Marshall Creek and repelled at least one timber sale contract in the West Fork Clearwater. The physical attributes of the area combined with economic factors and equipment limitations have dictated management in the area. If the past is any indication of the future, the imprint of human intrusion in this area will be minimal regardless of what political category is placed on the land.

The area provides habitat for a wide variety of game and nongame wildlife species commonly found in western Montana, (see Appendix B-2, Proposed Lolo Forest Plan, RDEIS). There are 7,400 acres of essential grizzly

bear habitat in the area as well as 432 acres of elk summer habitat. The unit also has 329 riparian acres.

Lake Elsina, Dinah Lake, and the West Fork of the Clearwater have a significant fishery resource.

Oil and gas interest runs high in the region, and the entire roadless area is leased. Prospecting permits were recently issued for land a few miles to the east. This area contains no unpatented mining claims. No acres of high or very high mineral potential for this unit are noted in the Lolo mineral inventory.

The Marshall Peak Roadless Area contains 727 acres classed as nonstocked, 328 acrs of seedlings and saplings, 420 acres of poles, 1,344 acres of immature sawtimber, 4,988 acres of mature sawtimber. Of this, 6,588 acres are classified as commercial timberland. The suitable lands presently support a standing timber inventory of 48.7 MMBF with a long-term sustained yield in the area of 1.60 MMBF annually.

The area has no range allotments.

Recreational use around Dinah lake is moderate. The Dinah Lake Trail is closed to motorcycles and trail bikes from Lake Elsina to Dinah Lake. The unit recieves light snowmobile use on the Dinah Loop Trail. About 95 percent of the area is classified as semiprimitive- nonmotorized, and 5 percent is denoted as semiprimitive motorized.

C. Resource Summary

RESOURCE SUMMARY TABLE

01781 - Marshall Peak - Roadless Area

Category					
Gross acres	Acres	9400	Bald Eagle Hab.	Acres	0
Net Acres	Acres	9400	Gray Wolf Hab.	Acres	0
			Peregrin Fal. Hab.	Acres	0
Recreation					
Primitive	RVD's	0	Wildlife - Big Game		
Semiprim. Nonmot.	RVD's	8930	Summer Habitat	Acres	432
Semiprim. Motor.	RVD's	2350	Winter Habitat	Acres	0
Roaded Natural	RVD's	0			
			Significant Fisheries		
Range			Stream Miles	Miles	2.0
Existing Obligated			Stream Habitat	Hab. Ac	1.9
Suitable	Acres	0	Lakes	No.	3
Allotments	No.	0	Lake Habitat	Hab. Ac	38.6
AUMs	AUMs	0			
Existing Vacant			Water Develop.		
Suitable	Acres	0	Existing	No.	1
Allotments	No.	0			
AUMs	AUMs	0	Hardrock Potential		

Proposed		
Suitable	Acres	0
AUMs	AUMs	0
Timber		
Tenative Suitable	Acres	6588
Standing Volume	MMBF	48.7
Corridors		
Exist. & Pot.	No.	0
Wildlife - T&E		
Grizzly Bear		
Habitat Sit. 1	Acres	9400
Habitat Sit. 2	Acres	0
Habitat Sit. 3	Acres	0

Very High	Acres	0
High	Acres	0
Moderate	Acres	0
Low	Acres	9400
Mining Claims	No.	0
Oil & Gas Potential		
Very High	Acres	0
High	Acres	9400
Moderate	Acres	0
Low	Acres	0
Oil & Gas Leases	No.	9
Leased Area	Acres	9400

3. Management Considerations

There are no management considerations for this area.

During the public reveiw period for the DEIS, there were several additional comments on the Marshall Peak Area. Several comments favored wilderness designation for this area. Other responders opposed any further additions to the wilderness system.

III. Impacts

Designation: Wilderness
Management Emphasis: Wilderness

Marshall Peak Roadless Area is allocated to wilderness in Alternatives f and g. Alternative f provides 43 percent and Alternative g provides 100 percent.

Wilderness allocation can enhance the area's wilderness attributes; however, human intrusion has been minimal. Any existing motorized activities could be eliminated.

The approximately 6,600 acres of land tentatively suitable for timber production would not be available. This would remove about 49 MMBF from the Forest timber base.

Big-game or elk management would not change much since the area contains only a small amount of summer habitat. Cover/forage ratios should not change much over time except as influenced by wildfire control.

Social effects, under wilderness allocation, are reflected in that recreation use would continue with a variety of summer and winter activities.

The nonpriced effects are:

- Visual quality would be preserved.
- Wilderness area would increase.
- Diversity would tend toward old growth without wildfire but could be improved depending on the control policy.
- Water quality and fisheries would be maintained at their present natural levels.
- Local employment may decrease slightly due to the unavailability of timber.

Economic effects would be reflected in the fact that the area represents less than 1 precent of the land base suitable for timber, and other resource values would be retained. The loss in timber volume can be mitigated by practicing intensive forestry. Mineral exploration opportunities would be foregone.

Designation: Nonwilderness
Management Emphasis: Timber/Range

Alternatives a, b, and c allocate some portion of the area to timber management. Alternative a, 10 percent; Alternative b, 20 percent; and Alternative c, 76 percent. The other alternatives do not manage for this emphasis.

Allocation to the timber prescriptions will forego the possibility of wilderness allocation sometime after the end of the first decade. The area will be accessed with roads and harvest will be scheduled up to the limit of constraints for these prescriptions. The grizzly bear habitat impacts would be mitigated in the activities associated with this emphasis.

The nonpriced effects are:

- Visual quality would be at its lowest level, maximum modification.
- Semiprimitive recreation potential would be foregone by the end of the fifth decade.
- Wilderness characteristics would be compromised in about 50 yrs.
- Diversity would tend toward younger age classes with minimum old growth.
- Water quality and fisheries effects would be mitigated.
- The greatest number of jobs, mainly in the wood products industry, would be provided.

Economic effects would be reflected in the small percentage of timber compared to the available timber on the Forest.

Designation: Nonwilderness
Management Emphasis: Wildlife

The main emphasis in this prescription is grizzly bear habitat, big game summer habitat, and old growth. Alternatives a, b, d, e, and f allocate some percent of the area to managing these components. Alternatives which show no management for grizzly bear will manage for this habitat to a minimum level according to the Threatened and Endangered Species Act.

Wildlife security and cover requirements include restrictions on human activities and development. Although habitat management activities result in

some reductions in wilderness attributes, they are usually short term and limited in scope. Opportunities for solitude and primitive recreation would remain high. Effects would be basically as stated in the timber emphasis with wildlife objectives being maintained.

Designation: Nonwilderness
Management Emphasis: Visual

Alternative a allocates 14 percent of the area and Alternative b allocates 9 percent of the area to this management emphasis. None of the other alternatives manage for visuals.

Visuals are retained in the roadless emphasis. Visual quality resource will be managed according to the management area classification. Effects do not differ appreciably from those in the timber emphasis with visual objectives being maintained.

Designation: Nonwilderenss
Management Emphasis: Riparian

All alternatives contain inclusions of riparian zones and recognize the need to manage these areas according to policy and guidelines. Alternative g is the wilderness alternative and would not impact the riparian areas. Effects are listed in the emphasis below.

Designation: Nonwilderness
Management Emphasis: Roadless

Alternative b allocates 57 percent of the area to roadless management. Alternative a, 31 percent; Alternatives c, d, and e, 6 percent; and other alternatives do not manage for this emphasis.

The nonpriced effects are:

- Visual quality will be maintained at a very high level, retention.
- Semiprimitive and wilderness attributes can be retained for a long period.
- Age class distribution and diversity would be dominated by old growth; young age classes would be minimal.
- Water quality and fisheries would not be affected.
- Few wood products related jobs would be added to the industry.

The economic effects of this emphasis would be reflected in the fact that the area represents less than 1 percent of the land base suitable for timber, and other resources would be retained.

Designation: Nonwilderness
Management Emphasis: Miscellaneous

Miscellaneous management emphases include non-forest land, administrative centers, historical or cultural sites, mineral extraction sites, transportation and utility corridors, campgrounds, picnic areas, ski areas, and areas with concentrated public use.

Alternatives a, b, and c allocate between 12 and 19 percent of the area to these sites, Alternatives d, e, and f allocate from 48 to 56 percent, and Alternative g is the wilderness management alternative.

ACRES OF AREA UNDER MANAGEMENT FOR EACH EMPHASIS BY ALTERNATIVE
(Refer to Appendix C Introduction for Management Areas under each emphasis.)

Management Emphasis	Alternatives a	b	c	d	e	f	g
NONWILDERNESS							
Timber/Range	921	1918	7163	-	-	-	-
Wild life							
Grizzly bear	-	-	-	2776	2776	300	-
Other	2500	188	-	431	431	431	-
Visual	1278	799	-	-	-	-	-
Miscellaneous	1786	1119	1598	5277	5277	4549	-
Riparian	*	*	*	329	329	120	-
Roadless	2915	5376	639	587	587	-	-
WILDERNESS							
Wilderness	-	-	-	-	-	4000	9400
Total	9400	9400	9400	9400	9400	9400	9400

* Small inclusions occur in other management emphasis items.

SUMMARY OF MANAGEMENT EMPHASIS (acres managed by decade)

Developed							
Decade 1	-	-	-	-	-	-	-
Decade 5	6485	4024	8761	8813	8813	5400	-
Roadless							
Decade 1	9400	9400	9400	9400	9400	5400	-
Decade 5	2915	5376	639	587	587	-	-
Wilderness							
Decade 1	-	-	-	-	-	4000	9400
Decade 5	-	-	-	-	-	4000	9400

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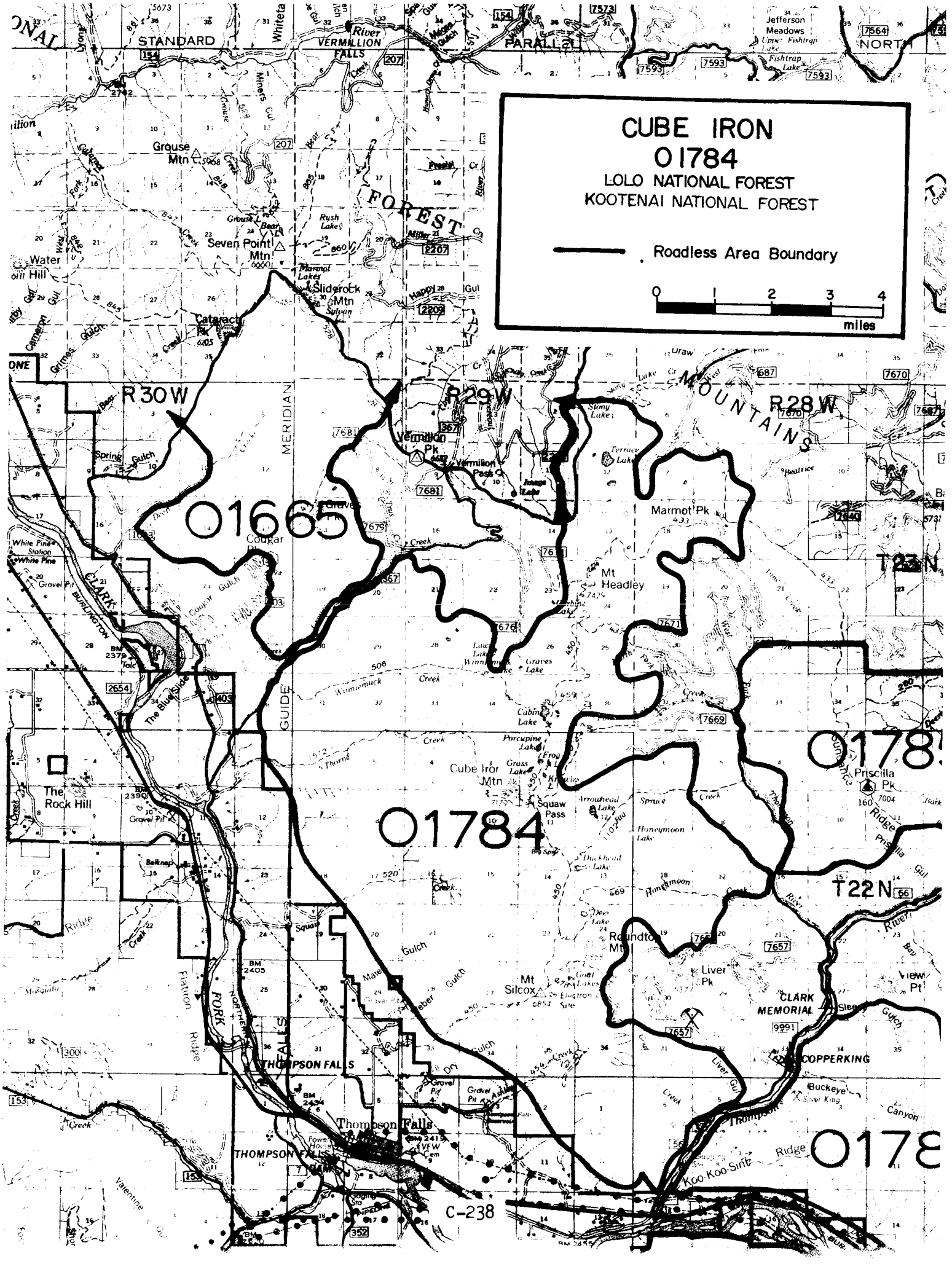

CUBE IRON
01784
LOLO NATIONAL FOREST
KOOTENAI NATIONAL FOREST
Roadless Area Boundary
0 1 2 3 4
miles
01665
01784
01785
01786
R30W
R29W
R28W
T23N
T22N
MERIDIAN
FOREST
MOUNTAINS
STANDARD
PARALLEL
NORTH
VERMILLION FALLS
THOMPSON FALLS
Grouse Mtn
Seven Point Mtn
Sliderock Mtn
Cataract Pk
Vermilion Pk
Vermilion Pass
Marmot Pk
Mt Headley
Cougar Gulch
Cube Iron Mtn
Squaw Pass
Priscilla Pk
Mt Silcox
Liver Pk
Roundtop Mtn
The Rock Hill
CLARK MEMORIAL
COPPERKING
Thompson Falls
C-238

CUBE IRON-SILCOX #01784

Acreage:	Lolo	Kootenai
Gross Acres:	39,200	400
Net Acres:	37,700	400

I. Description

A. Location and Access

The Cube Iron-Silcox Roadless Area is located three miles northeast of Thompson Falls. State Highway 200 provides access to the land from the southern and western portions. A number of dirt roads extend off of this highway to near the roadless boundary. Access to the northern part comes from the Graves Creek and Upper West Fork Fishtrap Creek Roads. Eastern access is provided by the road along the West Fork of the Thompson River. All or parts of 12 trails covering 42 miles go into or across this unit. Refer to Table C-4 for proximity information.

The original acreage in the RARE II inventory was 24,200 gross and 23,900 net acres. An area contiguous to it was not included in the RARE II analysis because it was in a completed unit plan. In the new inventory, this area will add 16,200 gross and 15,000 net acres. A Fiscal Year 1984 timber sale will reduce the area by 1,200 acres.

B. General Description

This unit is oriented generally north and south along the central ridgeline with Mount Silcox to the south and Mount Headley to the north. Alpine glaciation has carved sharp ridges and upland lakes at various places along this backbone. The major streams, Winniemuck, Thorne, Squaw, Spruce, Honeymoon, and Four Lakes Creeks flow from the main ridge in east and west directions. The total relief in the area is somewhat less than 5,000 feet.

Half of the area is in the subalpine fir habitat series with various understories. Twenty-four percent consists of various Douglas-fir habitat types. Also included in the area are habitat types of the grand fir, western red cedar, western and mountain hemlock series and mountain grassland, and scree. Higher elevations are open with grassy or brushy parks. The lower slopes are stocked with stands of conifers. Large areas of the unit are commercial timberland.

Most of the area is underlain by limestones, dolomites, and carbonaceous argillites of the Precambrian Age Wallace Formation. Also present are strata from the Ravalli and Missoula Groups. Three large north to south running thrust faults come together near Cube Iron Mountain while several normal faults displace the Belt rocks in the southeastern portion of the unit.

The Cube Iron-Silcox Roadless Area provides habitat for a variety of game and nongame wildlife species commonly found in western Montana such as cougar, ruffed grouse, Franklin's grouse, bobcat, beaver, and other furbearers. Visitors can often view deer and elk herds on summer and winter ranges in the area.

The unit is essential grizzly bear habitat. This area is the extreme southern extension of the Cabinet Mountain grizzly bear ecosystem. Special consideration needs to be made in managing this area to avoid adverse impacts on the bear.

Current recreational activities in the area include fishing the many lakes and streams, hiking, camping, mountain climbing, big game and grouse hunting, and berrypicking.

II. Analysis of Wilderness Suitability

A. Capability

1. Wilderness Attributes

a. Naturalness - Ecological processes and the natural landscape in parts of the area have been disrupted to a certain extent by past domestic grazing on a small acreage. Fifty percent of the area is in subalpine fir habitat series with understories of devils club, beadlily, menziesia, beargrass, and smooth woodrush. Twenty-four percent is in the Douglas-fir habitat series with understories of ninebark, blue huckleberry, and pinegrass. There are minor amounts of grand fir/beadlily, grand fir/beargrass, western red cedar/beadlily, western hemlock/beadlily, mountain hemlock/menzesia, and mountain hemlock/beargrass. There are also mountain grassland and scree areas.

While most of the animal species native to the area are found in the Cube Iron-Silcox Roadless Area, none is particularly dependent on wilderness for survival. Animals on summer and winter ranges can be susceptible to human activity and the area contains some acres of both. Viewing animals such as elk in their natural habitat may be closely associated with a wilderness experience to some people.

Air and water quality are considered excellent in the area.

There has been little human influence on the natural integrity of the area. The unit contains some impacts including test pits for minerals, dispersed recreation sites, foundation for the Mount Headley Lookout, a barbed wire fence on the ground, a mining access road, and a logging road.

b. Inspirational Value - The size of the area offers visitors the opportunity to experience a sense of being alone. This may contrast to their daily lives. This area is unique in that it contains numerous lakes and cirque basins which add to the recreational attractiveness.

c. Recreational Value - The extremely varied topography, wildlife, and vegetation are not affected by the human intrusions. There is a high opportunity for solitude due to good topographic screening and dense vegetation. The town of Thompson Falls, highways, and the Burlington Northern Railroad are visible from the southern portion.

Primitive recreation opportunities are high due to the long distance from the perimeter to the core area. The high mountain lakes provide a summer, semiprimitive recreation opportunity. Trail access to the southeast portion of the area is very restricted.

d. Cultural/Historic Values - There are no known historic or prehistoric sites identified in the area.

e. Educational/Scientific Values - A large part of the area is considered essential grizzly bear habitat. Natural succession is observable in a dry lake bed. The ecosystems in this area are well represented in existing wilderness areas. Scenic values are many. Glacial features are present on Cube Iron Mountain and Mount Headley.

f. Unique Values - The area contains minor amounts of the western hemlock/beadlily habitat type which is confined to the extreme northwestern part of the forest.

B. Manageability and Boundaries

As it is currently drawn, the roadless unit boundary does not follow topographic features and it contains large "arms" of land which push the boundary line inward in order to exclude areas of timber harvesting and mineral development. Additional timber sales are planned for the Spruce Creek drainage. These sales lie inside the roadless area and constitute nonconforming uses. Another nonconforming use is the electronic site (a passive reflector) on the southwest face of Mount Silcox. Along the southwest margin, access to the Cube Iron-Silcox Roadless Area is blocked by private lands adjacent to the Forest boundary. Most of the private land can be excluded by minor boundary adjustments; however, this would not improve boundary delineation.

Although there are many access points to this roadless unit, the most heavily used trailheads lead to the upper lakes. This concentrated use may eventually need regulation in order to preserve the natural characteristics.

C. Other Resources Found in the Area

1. Potential

The area provides habitat for a wide variety of game and nongame wildlife species commonly found in western Montana (see Appendix B-2, Proposed Lolo Forest Plan, RDEIS). Beaver colonies are common in the

head of Graves Creek. The area contains 1,442 riparian acres. There are also 4,476 acres of deer and elk winter range and 38 acres of elk summer habitat. The area is important as grizzly bear habitat with about 20,930 acres of essential habitat in the unit.

All or parts of 19 oil and gas lease applications occupy 95 percent of the total area. Five lease applications, encompassing about 10 percent of the area, are being delayed pending the outcome of an appeal on the Kootenai National Forest for grizzly bear habitat. These five applications lie on both the Lolo and Kootenai Forests.

There are 80 mining claims recorded in the area. Most of these are centered in the southeastern portion near Liver Peak. Beneath Liver Peak is dissiminated molybdenum and copper. Wolfranite, a tungsten mineral, has been found east of Mount Silcox. Fissure veins in the northwestern areas contain lead, zinc, and silver. The Lolo mineral inventory shows the Cube Iron-Silcox Roadless Area to contain 33,451 acres of high to very high mineral potential.

The Cube Iron-Silcox Roadless Area contains 1,156 acres classed as nonstocked, 1,311 acres of seedlings and saplings, 12,591 acres of poles, 5,531 acres of immature sawtimber, and 22,929 acres of mature sawtimber. Of this, 22,675 acres are classified as commercial timberland. The suitable lands presently support a standing timber inventory of 178.8 MMBF with a long-term sustained yield in the area of 4.61 MMBF annually.

Only portions of two small range allotments, Weber Gulch and Dry Gulch, are in the area. About 50 suitable acres out of 675 total acres of the Weber Gulch Allotment are included in the unit. The last permitted use was in 1973 for 15 cow/calf pairs and 15 animal months. About 30 suitable acres out of 440 total acres of the Dry Gulch Allotment are included in the unit. The last permitted use was in 1974 for eight cow/calf pairs and 24 animal months.

Current Recreational Opportunity System maps show the area about 90 percent semiprimitive nonmotorized and 10 percent roaded natural. The lakes east of Cube Iron Mountain are heavily used during summer months and early fall. Mount Headley serves as a starting point for hikers entering the Sundance Ridge and Cabin Lake area. Recreation opportunities in the area include camping, hiking, fishing, climbing peaks, berrypicking, and hunting.

2. Resource Summary

01784 - Cube-Iron Roadless Area

	KOOT.	LOLO		KOOT.	LOLO
Category					
Gross acres	400	39200	Bald Eagle Hab. Ac.	0	0
Net Acres	400	37700	Gray Wolf Hab. Ac.	0	0
			Peregrin Fal. Hab.	0	0
Recreation					
Primitive RVD's	0	0	Wildlife - Big Game		
Semiprim. Nonmot.RVD's	100	33930	Summer Habitat Ac.	0	38
Semiprim. Motor.RVD's	20	0	Winter Habitat Ac.	0	4476
Roaded Natural RVD's	0	37700			

Category	KOOT.	LOLO
Range		
Existing Obligated		
Suitable Acres	0	0
Allotments No.	0	0
AUMs	0	0
Existing Vacant		
Suitable acres	0	80
Allotments No.	0	2
AUMs		40
Proposed		
Suitable acres	0	0
AUMs		0
Timber		
Tenative Suitable Ac.	0	22675
Standing Volume MMBF	0	178.8
Corridors		
Exist. & Pot. No.	0	0
Wildlife - T&E		
Grizzly Bear		
Habitat Sit. 1 acres	400	20930
Habitat Sit. 2 acres	0	0
Habitat Sit. 3 acres	0	0

	KOOT.	LOLO
Significant Fisheries		
Stream Miles	0	2.0
Stream Habitat Ac.	0	1.9
Lakes No.	0	12
Lake Habitat Acres	0	39.3
Water Develop.		
Existing No.	0	2
Hardrock Potential		
Very High Acres	0	10375
High Acres	0	16127
Moderate Acres	0	0
Low Acres	0	11198
Mining Claims . No.	0	80
Oil & Gas Potential		
Very High Acres	0	0
High Acres	0	0
Moderate Acres	400	37700
Low Acres	0	0
Oil & Gas Leases No.	0	19
Leased Area Acres	0	35800

3. Management Considerations

Since this is essential grizzly bear habitat, special care should be taken in management of the area to protect this habitat.

The management emphasis for the Cube-Iron Roadless Area is a combination of management prescriptions and alternatives from two National Forests, the Lolo, and Kootenai. Because resources, uses, and land conditions are somewhat different on each Forest, neither the alternatives nor the management emphasis are fully integrated. Because the Lolo Forest is the lead Forest for this roadless area, for purposes of this evaluation, the alternatives and management emphasis from the Kootenai Forest have been integrated into those of the Lolo Forest as close as possible on the basis of goals and objectives common to each Forests alternatives and management emphasis.

Further information on the specific alternatives and management emphasis for the Kootenai National Forest's areas can be found in its draft Environmental Impact Statement for the Forest Plan.

The proposed wilderness/nonwilderness designation for area 1784 is made and documented in the Lolo Enviromental Impact Statement. This proposed designation has priority over all other land designations and none of the two Forests can undertake any management activity other

than current direction until such time that a Record of Decision is issued in conjunction with this document.

4. Public Involvement

During public reveiw of the Lolo Forest Plan DEIS, many comments were received in support of including this area in the National Wilderness Preservation System. Comments were received that opposed any additional wilderness. Few responders oppose wilderness designation for this area.

III. Impacts

Designation: Wilderness
Management Emphasis: Wilderness

The Cube-Iron Silcox Roadess Area is allocated to wilderness management in Alternatives f and g. These are the only alternatives that the total area or any portion is allocated to wilderness.

Wilderness allocation can enhance the area's wilderness attributes since there are existing uses and facilities not usually associated with wilderness allocation. Any existing motorized activities could be eliminated.

The approximately 23,000 acres of land tentatively suitable for timber production would not be available, as well as about 179 MMBF of timber.

Big game or elk management would not change much. The area contains nearly 4,500 acres of big game winter range, and about 40 acres of summer habitat. Cover/forage ratios should not change much over time except as influenced by wildfire control.

Social effects under wilderness allocation are reflected in recreation use which would continue to be dominated by a variety of summer and winter dispersed activities.

The nonpriced effects are:

- Visual quality would be preserved.
- Wilderness area would increase.
- Diversity would tend toward old growth without wildfire but could be improved depending on the control policy.
- Grizzly bear would retain a secure area.
- Water quality and fisheries would be maintained at their present natural levels.
- Local employment may decrease slightly due to the unavailablilty of timber.

Economic impacts would be reflected in the timber volume lost. This loss of volume could be mitigated by practicing intensive forestry elsewhere. Mineral potential is high and this resource would be foregone.

Designation: Nonwilderness
Management Emphasis: Timber/Range

Alternatives a through f allocate from a trace to 6 percent of the area to timber management. Alternatives f and g do not manage timber.

Allocation to the timber prescription will forego the possibility of wilderness allocation by the end of the first decade. The area will be accessed with roads and harvest will be scheduled up to the limit of constraints for this prescriptions.

The nonpriced effects are:

- Visual quality would be at its lowest level, Maximum Modification.
- Semiprimitive recreation potential would be foregone by the end of the first decade.
- Wilderness characteristics would be compromised in a short time.
- Water quality and fisheries effects would be mitigated.
- Diversity would tend toward younger age classes with minimum old growth.
- The greatest number of jobs, mainly in the wood products industry, would be provided.

Social effects might include motorized recreation opportunities which would not exist under wilderness emphasis.

Economically, the timber volume realized from the area is a small percentage of that available on the Forest. Mineral exploration would be permitted.

Designation: Nonwilderness
Management Emphasis: Wildlife

Alternatives a through e allocate some percentage of the area to wildlife management for summer range, winter range, and grizzly bear habitat. Grizzly bear habitat management is included in all alternatives to some degree but never below minimum requirements of the Threatened and Endangered Species Act.

Development and vegetative manipulation may be required to achieve the habitat and forage management objectives. Other management activities may include prescribed burning for wildlife or range. Effects do not differ appreciably from those under the timber management emphasis except wildlife objectives are maintained.

Designation: Nonwilderness
Management Emphasis: Visual

Alternatives a through e allocate from 6 to 13 percent of the area for visual management. Visuals are retained in the roadless management emphasis. Visual quality resource will be managed according to the management area classification. Effects are basically as stated under the timber management emphasis except visual objectives are maintained.
Designation: Nonwilderness
Management Emphasis: Riparian

All alternatives contain inclusions of riparin zones and recognize the need to manage these areas according to policy and guidelines.

Alternatives f and g are both wilderness alternatives and would not impact the riparian areas. Effects are basically as stated under roadless management.

Designation: Nonwilderness
Management Emphasis: Roadless

Alternatives a through e allocate from 7 percent to 45 percent of the area for roadless management.

The nonpriced effects are:

- Visual quality will be maintained at a very high level, Retention.
- Semiprimitive and wilderness attributes can be retained for a long period.
- Age class distribution and diversity would be dominated by old growth, young age classes would be minimal.
- Water quality and fisheries would not be affected.
- Few wood products related jobs would be added to the industry.

The economics of this emphasis would be affected to the extent that the area represents less than 1 percent of the land base suitable for timber, and other resources would be retained.

Designation: Nonwilderness
Management Emphasis: Miscellaneous

Miscellaneous management emphases include non-forest land, administrative centers, historical or cultural sites, mineral extraction sites, transportation and utility corridors, campgrounds, picnic areas, ski areas, and areas with concentrated public use.

Alternatives a through e provide from a trace to 3 percent of the area for these sites.

ACRES OF AREA UNDER MANAGEMENT FOR EACH EMPHASIS BY ALTERNATIVE
(Refer to Appendix C Introduction for Management Areas under each emphasis.)

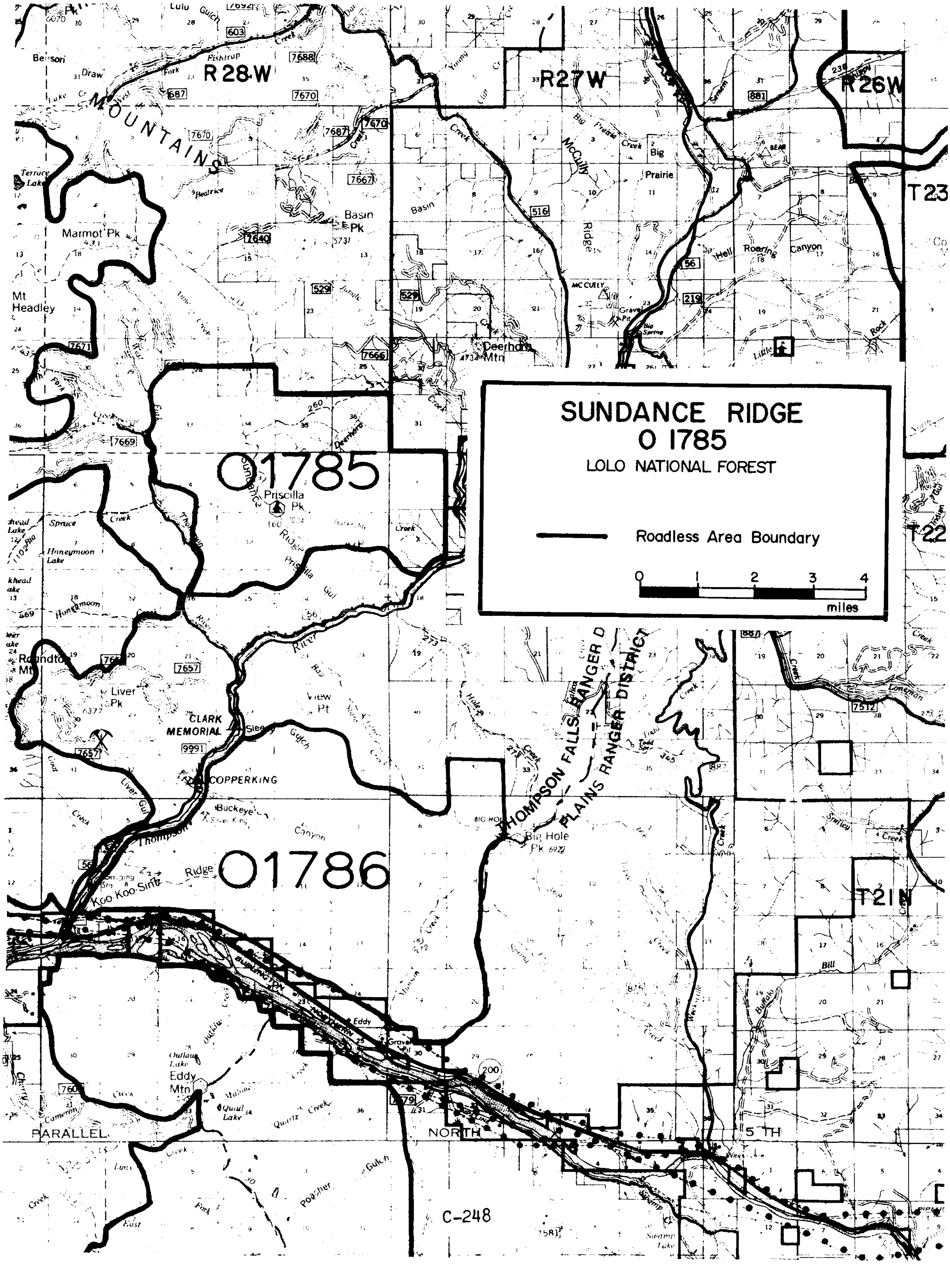
Management Emphasis	Alternatives a	b	c	d	e	f	g
NONWILDERNESS							
Timber/Range	60	1244	2224	2291	2291	-	-
Wildlife							
Grizzly bear	11612	21827	24090	9464	9464	-	-
Other	6334	5241	5543	4898	4898	-	-
Visual	1734	2526	2224	4815	4815	-	-
Miscellaneous	1131	151	943	1032	1032	-	-
Riparian	*	*	*	1464	1464	-	-
Roadless	17229	7111	3076	14136	14136	-	-

Management Emphasis	Alternatives a	b	c	d	e	f	g
WILDERNESS							
Wilderness	-	-	-	-	-	38100	38100
Total	38100	38100	38100	38100	38100	38100	38100

* Small inclusions occur in other management emphasis items.

SUMMARY OF MANAGEMENT EMPHASIS

Developed							
Decade 1	1600	1600	1600	1600	1600	-	-
Decade 5	20871	30989	35024	23964	23964	-	-
Roadless							
Decade 1	36500	36500	36500	36500	36500	-	-
Decade 5	17229	7111	3076	14136	14136	-	-
Wilderness							
Decade 1	-	-	-	-	-	38100	38100
Decade 5	-	-	-	-	-	38100	38100


SUNDANCE RIDGE
O 1785
LOLO NATIONAL FOREST
Roadless Area Boundary
0 1 2 3 4
miles
O1785
O1786
R28W
R27W
R26W
T23
T22
T21N
MOUNTAINS
Marmot Pk
Mt Headley
Basin Pk
Priscilla Pk
Deerhorn Mtn
Big Prairie
McCully Ridge
Hell Roaring Canyon
Liver Pk
CLARK MEMORIAL
View Pt
COPPERKING
Buckeye
Big Hole Pk
Koo Koo Sint
Ridge
Eddy Mtn
Outlaw Lake
Quail Lake
THOMPSON FALLS RANGER D
PLAINS RANGER DISTRICT
PARALLEL
NORTH
5 TH
C-248

SUNDANCE RIDGE #01785

Acreage:

Gross Acres: 9,440
Net Acres: 7,220

I. Description

A. Location and Access

The Sundance Ridge Roadless Area is located 9 miles northeast of Thompson Falls. The southern boundary of this unit generally parallels the Thompson River Road while the West Fork Thompson River Road marks the west side. These two roads provide good vehicle access to the area. The Sundance Ridge trail extends across the unit for 6 miles. Refer to Table C-4 for proximity information.

The original RARE II acreage was 11,800 gross and 9,100 net acres. Timber harvest has reduced the area by 2,290 gross and 2,270 net acres. In addition, a recalculation of the area increased the gross acres by 150 and the net acres by 610.

B. General Description

Sundance Ridge, which runs roughly north northwest-south southeast is the dominate physical feature in the study area. Numerous streams flow off of it to the east and west. Priscilla Peak at 7,004 feet marks the highest point along the ridge.

The Precambrian Age Wallace Formation, a subdivision of the Belt Supergroup, crops out over most of the Sundance Ridge study unit. A portion of the Missoula Group strata underlies the Priscilla Peak area. A large northwest-southeast trending normal fault cuts across the northeastern margin of the roadless area.

Vegetation is characterized by dense, mixed confier stands at low elevations grading to open, sparse whitebark pine and mountain hemlock on the high ridges. Grassy or bush parks are common on the higher slopes along with rock outcrops and bluffs.

About half of the Sundance Ridge study unit is considered to be commercial timberland with another quarter being identified grizzly bear habitat.

II. Analysis of Wilderness Suitability

A. Capability

1. Wilderness Attributes

a. Naturalness - The ecological processes in parts of the area have been shaped to a certain extent by major fires which burned across

the region in the early 1900's. The most extensive vegetative community is the mountain hemlock/beargrass habitat type. This makes up 17 percent of the unit and is associated with a moist climate. Lodgepole pine is common along with mountain hemlock, subalpine fir, spruce, and white pine. Understories are primarily beargrass and huckleberry with varying amounts of grouse whortleberry, elk sedge, and pinegrass. Timber productivity varies from low to high depending upon site conditions.

The subalpine fir/beargrass habitat group is the next most common vegetative type. It constitutes 14 percent of the area. This type occupies sites between 5,200 and 7,000 feet of elevation while the mountain hemlock/beargrass habitat type occurs from 5,500 and 6,500 feet. Two other main habitat types found in the area are the Douglas-fir/blue huckleberry and grand fir/beargrass communitites. About 10 percent of the land consists of scree and talus slopes.

About 36 percent of the Sundance Ridge Roadless Area contains grizzly bear habitat. Although no bears are known to inhabit the unit, they will be encouraged to migrate in. Winter range for deer, elk, and bighorn sheep occupies about 21 percent of the acreage.

Both air and water quality are considered good in this area.

Other than hiking trails and the Priscilla Peak Lookout tower and helipad, no other structures exist on National Forest land.

b. Inspirational Values - The topographic configuration of this area offers visitors some opportunity to experience a sense of being alone, a state which may contrast with their daily lives. The physical features in this land do not contrast appreciably with the surrounding geography and, consequently, may not inspire awe in a visual sense.

c. Primitive and Unconfined Recreation - The area ranks as moderate due to visible, outside impacts. The ridge trail provides the primary access to the area, and there is great change in elevation along the trail. Because of its small size, lack of remoteness and easy access, the unit ranks low to moderate for solitude. The Sundance Ridge trail provides views along the entire route. Roads and clearcuts outside of the area are easily visible. Overall, there is little screening to hide the off-site intrusions.

d. Cultural and Historical Values - There are no inventoried cultural or historical sites in the study area.

e. Educational and Scientific Values - In addition to grizzly bear habitat, golden and bald eagles inhabit the area. These may offer some opportunity for study and observation.

f. Uniqueness - None of the physical or biological components known to occur in the Sundance Ridge Roadless Area is considered to be

unique. The ecosystems in this area are well represented in existing wilderness areas.

2. Manageability and Boundaries

This is a small, compact unit with little of the area being remote or free from external influences. Development activities and adjacent travel routes are visible or audible from most places. About one-quarter of the Sundance Ridge Roadless Area consists of private and State lands on which nonconforming activities occur. The boundary can be adjusted to exclude most of these lands. Except for the western and part of the southern boundaries, the outer limits of this roadless unit are difficult to determine on the ground.

B. Other Resources Found in the Area

1. Potential

The area provides habitat for a wide variety of game and nongame wildlife species commonly found in western Montana (see Appendix B-2, Proposed Lolo Forest Plan, RDEIS), including mountain goats and bighorn sheep. The area contains about 2,599 acres of essential grizzly bear habitat, 1,508 acres of deer and elk winter range, and 169 riparian acres.

Although there are no mining claims staked within the roadless area boundary, the U.S. Geological Survey indicates that there is a moderate potential for the occurence of base and precious metals in vein deposits along the northeastern boundary. This is near a mineralized thrust fault zone. All of the area is under lease for oil and gas. There are no acres of high-very high mineral potential identified in the subject lands.

The Sundance Ridge Roadless Area contains 223 acres classed as nonstocked, 294 acres of seedlings and saplings, 336 acres of poles, 1,525 acres of immature sawtimber, 4,185 acres of mature sawtimber. Of this, 5,973 acres are classified as commercial timber land. The suitable lands presently support a standing timber inventory of 47.7 MMBF with a long-term sustained yield in the area of 1.34 MMBF annually.

There are no range allotments in this area.

One hundred percent of the area is shown on current Recreation Opportunity maps as semiprimitive nonmotorized. Hunting is a key use. A trail system connects this area with Mount Headley to the northwest and with the Thompson River to the southeast.

2. Resource Summary

01785 - Sundance Ridge - Roadless Area

Category		
Gross acres	Acres	9440
Net Acres	Acres	7220
Recreation		
Primitive	RVD's	0
Semiprim. Nonmot.	RVD's	7220
Semiprim. Motor.	RVD's	0
Roaded Natural	RVD's	0
Range		
Existing Obligated		
Suitable	Acres	0
Allotments	No.	0
AUMs	AUMs	0
Existing Vacant		
Suitable	Acres	0
Allotments	No.	0
AUMs	AUMs	0
Proposed		
Suitable	Acres	0
AUMs	AUMs	0
Timber		
Tenative Suitable	Acres	5973
Standing Volume	MMBF	47.7
Corridors		
Exist. & Pot.	No.	0
Wildlife - T&E		
Grizzly Bear		
Habitat Sit. 1	Acres	2599
Habitat Sit. 2	Acres	0
Habitat Sit. 3	Acres	0
Bald Eagle Hab.	Acres	600
Gray Wolf Hab.	Acres	0
Peregrin Fal. Hab.	Acres	0
Wildlife - Big Game		
Summer Habitat	Acres	0
Winter Habitat	Acres	1508
Significant Fisheries		
Stream Miles	Miles	0
Stream Habitat	Hab. Ac	0
Lakes	No.	0
Lake Habitat	Hab. Ac	0
Water Develop.		
Existing	No.	0
Hardrock Potential		
Very High	Acres	0
High	Acres	0
Moderate	Acres	0
Low	Acres	7220
Mining Claims .	No.	0
Oil & Gas Potential		
Very High	Acres	0
High	Acres	0
Moderate	Acres	7220
Low	Acres	0
Oil & Gas Leases	No.	5
Leased Area	Acres	7220

3. Management Considerations

As the boundary is now drawn, the large amount of non-Federal land would cause problems for roadless management. The large amount of lodgepole pine raises the possibility that the mountain pine beetle could attack the stands as they mature. The area is also managed to enhance grizzly bear habitat.

During the public reveiw period for the DEIS, there were few additional comments on the Sundance Ridge Area. Several comments favored wilderness designation for all existing roadless areas. Other responders opposed further additions to the wilderness system.

III. Impacts

Designation: Wilderness
Management Emphasis: Wilderness

The Sundance Ridge Roadless Area is allocated to wilderness in Alternative g but this is the only alternative that the total area or any portion is allocated to wilderness.

Wilderness allocation can enhance the area's wilderness attributes; however, there are few human intrusions in the area. Any existing motorized activities could be eliminated.

Approximately 6,000 acres of land tentatively suitable for timber production would not be available. This would remove about 48 MMBF, including a significant area of lodgepole pine which may become infested by mountain pine beetle.

Big-game and elk management would not change much. There is some big-game winter range. Cover/forage ratios should not change much over time except as influenced by wildfire control.

Grizzly bear habitat would be managed in each of the alternatives, at least at a minimum level according to the Threatened and Endangered Species Act. Bald eagle habitat would not be impacted in any alternatives.

Social effects, under wilderness allocation, would be reflected in that recreation use would continue to be dominated by hunting.

The nonpriced effects are:

- Visual quality would be preserved.
- Wilderness area would increase.
- Diversity would tend toward old growth without wildfire but could be improved depending on the control policy.
- Local employment may decrease slightly due to the unavailability of timber.
- Grizzly bear habitat and bald eagle habitat will not be impacted.

Economic effects would be reflected in the fact that the area represents less than 1 percent of the land base suitable for timber, and other resource values would be retained. The loss in timber volume can be mitigated by practicing intensive forestry. Mineral exploration opportunities would be foregone.

Designation: Nonwilderness
Management Emphasis: Timber/Range

All alternatives except g allocate from 10 to 25 percent of the area to timber management.

Allocation to timber management will forego the possibility of wilderness allocation by the end of the first decade. The possibility of infested lodgepole pine stands will necessitate continuing access and harvest in the

area. Harvest will be scheduled up to the limit of constraints for these prescriptions.

The nonpriced effects are:

- Visual quality would be at its lowest level, Maximum Modification.
- Semiprimitive recreation potential would be foregone by the end of the first decade.
- Wilderness characteristics would be compromised in a short time.
- Diversity would tend toward younger age classes with minimum old growth.
- Grizzly bear habitat and bald eagle habitat would become less effective.
- Water quality and fisheries effects would be mitigated.
- The greatest number of jobs, mainly in the wood products industry, would be provided.

Salvaging the infested lodgepole pine is probably the most significant economic factor. Social effects would include motorized recreation use.

Designation: Nonwilderness
Management Emphasis: Wildlife

The main emphasis in this prescription are grizzly bear, big-game winter range, and bald eagle habitat. Alternatives a through f manage for various amounts of these habitats. All alternatives manage the threatened and endangered species at least minimally.

Timber harvest would occur if enough timber is available and could be used to achieve wildlife habitat objectives. Other management activities may include prescribed burning for wildlife.

Old growth preservation in this area may be difficult in view of the possible mountain pine beetle infestation. Whether or not the area is entered for salvage harvesting, the stands would deteriorate as a result of the beetle kill.

Designation: Nonwilderness
Management Emphasis: Visual

Alternatives a, b, d, e, and f allocate from 6 to 25 percent of the area to visual management. Visuals are retained in the roadless and wilderness management emphasis. Visual quality resource will be managed according to the management area classification. Effects for this emphasis are listed under timber emphasis with visual objectives being maintained.

Designation: Nonwilderness
Management Emphasis: Riparian

All alternatives contain inclusions of riparian zones and recognize the need to manage these areas according to policy and guidelines. Alternative g is the wilderness alternative and would not impact the riparian areas. Effects do not differ appreciably from those listed under roadless management.

Designation: Nonwilderness
Management Emphasis: Roadless

Alternatives a through f allocate from 4 to 18 percent to roadless management.

The nonpriced effects are:

- Visual quality will be maintained.
- Semiprimitive and wilderness attributes can be retained for along period.
- Age class distribution and diversity would be dominated be old growth; young age classes would be minimal.
- Water quality and fisheries would not be affected.
- Grizzly bear and bald eagle habitat would remain secure.
- Few wood products-related jobs would be added to the industry.

Economic effects of this emphasis would be reflected in the small size of the area. Other resource values would be retained. Mineral exploration opportunities would be available.

Designation: Nonwilderness
Management Emphasis: Miscellaneous

Miscellaneous management emphases include non-forest land, administrative centers, historical or cultural sites, mineral extraction sites, transportation and utility corridors, campgrounds, picnic areas, ski areas, and areas with concentrated public use.

Alternatives b, c, d, e, and f allocate from 6 to 36 percent for management of these sites.

ACRES OF ARE UNDER MANAGEMENT FOR EACH EMPHASIS BY ALTERNATIVE
(Refer to Appendix C Introduction for Management Areas under each emphasis.)

Management Emphasis	Alternatives a	b	c	d	e	f	g
NONWILDERNESS							
Timber/Range	722	1119	1957	1826	1826	1826	-
Wild life							
Grizzly bear	1979	1863	2354	2563	2563	2563	-
Other	1357	-	-	1498	1498	1498	-
Visual	1841	1726	-	408	408	408	-
Miscellaneous	-	1278	2599	422	422	422	-
Riparian	*	*	*	158	158	158	-
Roadless	1321	1234	310	345	345	345	-
WILDERNESS							
Wilderness	-	-	-	-	-	-	7220
Total	7220	7220	7220	7220	7220	7220	7220

* Small inclusions occur in other management emphasis items.

SUMMARY OF MANAGEMENT EMPHASIS (acres managed by decade)

Management Emphasis	Alternatives a	b	c	d	e	f	g
Developed							
Decade 1	3040	3040	3040	3040	3040	3040	-
Decade 5	5899	5986	6910	6875	6875	6875	-
Roadless							
Decade 1	4180	4180	4180	4180	4180	4180	-
Decade 5	1321	1234	310	345	345	345	-
Wilderness							
Decade 1	-	-	-	-	-	-	7220
Decade 5	-	-	-	-	-	-	7220

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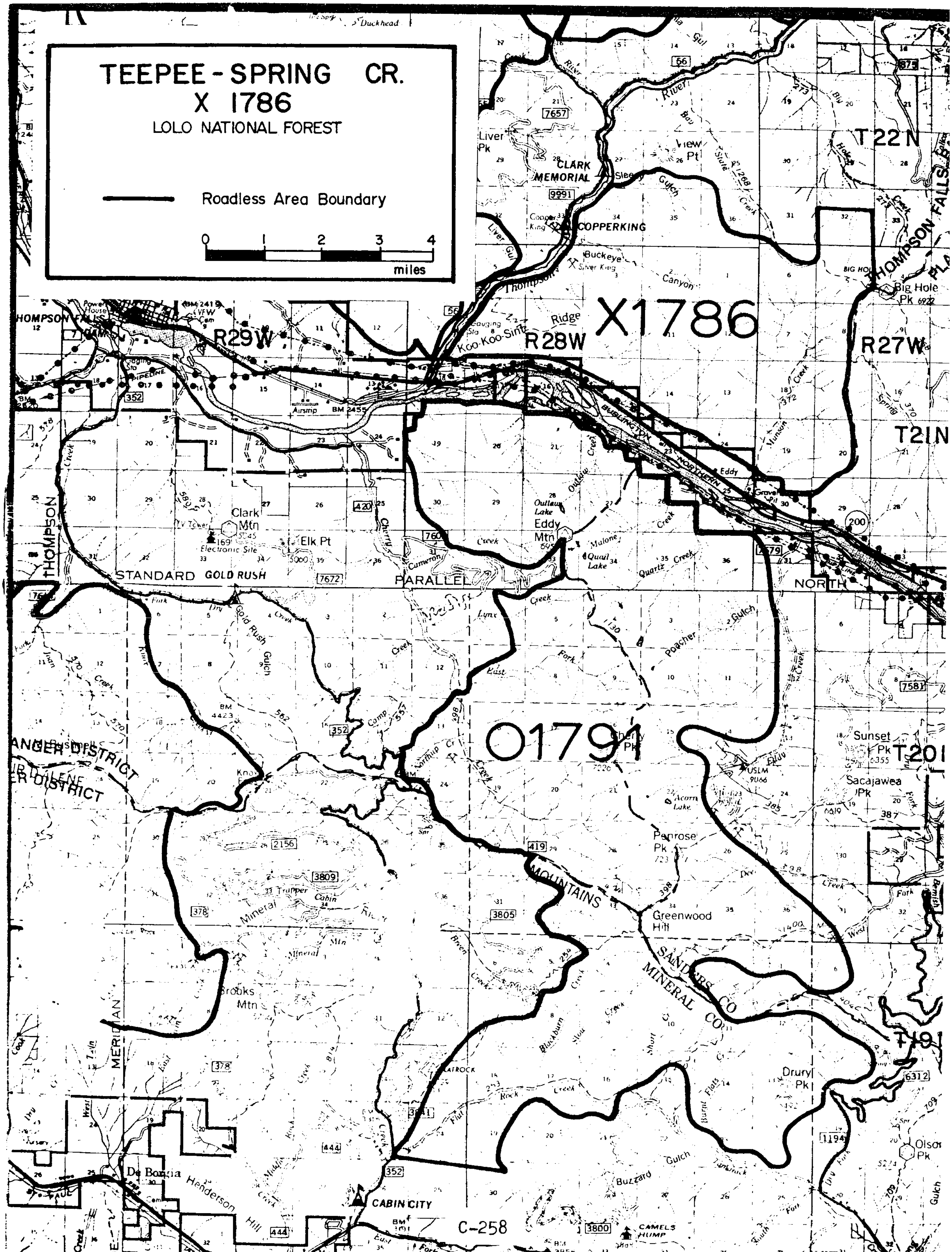
TEEPEE - SPRING CR.
X 1786
LOLO NATIONAL FOREST
Roadless Area Boundary
0 1 2 3 4
miles
X1786
O1791
R29W
R28W
R27W
T22N
T21N
THOMPSON FALLS
THOMPSON
Clark Mtn
Elk Pt
Eddy Mtn
STANDARD
GOLD RUSH
PARALLEL
NORTH
COPPERKING
CLARK MEMORIAL
Koo-Koo-Sint Ridge
BURLINGTON NORTHERN
Big Hole Pk
Sunset Pk
Sacajawea Pk
Penrose Pk
Greenwood Hill
MOUNTAINS
SANDERS CO
MINERAL CO
Brooks Mtn
MERIDIAN
De Borgia
Henderson Hill
CABIN CITY
CAMELS HUMP
Drury Pk
Olson Pk

Acreage:

Gross Acres: 15,250
Net Acres: 14,890

I. Description

A. Location and Access

The study unit lies 5 miles east of Thompson Falls. The southern boundary generally parallels State Highway 200, while the Thompson River Road forms the northern and western sides. The eastern edge of the area stops at the timber cutting units near Big Hole Peak. These roads, highway, and trails provide access to the roadless area boundaries. All or parts of four system trails totaling 16 miles extend into or traverse the Tepee-Spring Creek unit. Refer to Table C-4 for proximity information on this area.

B. General Description

Steep slopes, dense timber, and rough, rocky terrain characterize this area. Streams originating in the interior flow outward in all four compass directions. Munson, Buckeye, Bay State, Big Hole, and Spring Creeks comprise the major drainages radiating out from the interior along steep, deeply incised valleys.

Geological information from the U.S. Geological Survey indicates the Precambrian Age Revett Formation occupies the southwestern half of the study area with the Wallace Formation and the Missoula Group comprising the balance of the unit. Northwest trending faults and fold axes typify the structural features present in the Tepee-Spring Creek area.

Although vegetation types are variable, fire activity has put much of this unit into similar successional vegetation stages.

Most of the Tepee-Spring Creek unit is classified as commercial timberland. Semiprimitive roadless recreational opportunities are plentiful. There is both hardrock and energy leasing interest in the area.

II. Analysis of Wilderness Suitability

A. Capability

1. Wilderness Attributes

a. Naturalness - Ecological processes in the study unit have been disrupted by domestic grazing and past fires. Basically, vegetative communities inside the Teepee-Spring Creek Roadless Area are similar to those found outside of the boundary. The largest individual component of the unit (29 percent) is composed of barren scree and talus slopes. The Douglas-fir/ninebark vegetative

community makes up the largest habitat type (24 percent). Douglas-fir dominates with lesser amounts of ponderosa pine, larch, and lodgepole pine. Understories contain a dense, shrubby layer of ninebark and ocean spray. On drier slopes, bunchgrasses and balsam root are present.

Tree stands occur on cool and moist north and east slopes from 4,800 to 5,800 feet of elevation. Sites are moderately productive for timber growth. The next most abundant habitat type in this unit is subalpine fir/beargrass. Over 15 percent of the area contains this sequence which makes up the major portion of the higher elevation types between 5,200 and 7,000 feet on steep, dry exposures. Lodgepole pine is common along with varying amounts of subalpine and Douglas-fir. Understories are limited to huckleberry and beargrass with lesser amounts of elk sedge, grouse whortleberry, pinegrass, and heartleaf arnica. Timber productivity varies from low to moderate depending upon site conditions. The subalpine fir/menziesia, grand fir/beargrass, and the Douglas-fir/blue huckleberry vegetative types cover most of the balance of the area.

While most of the animal species native to this region can be found in the Teepee-Spring Creek unit, none are dependent upon roadless management for viability or survival. About 67 percent of the area is classified as big game winter range. Components conducive to grizzly bear habitat exists here, however the area has been identified as Situation 2 which is defined as occupied but not essential for recovery.

Air and water quality are considered good in this area.

Within this area there are three helispots, a lookout on Big Hole Peak, 3 miles of Forest Service telephone line, a water development for livestock, and a water ditch of one-tenth of a mile in Munson Creek. The Silver King Mine is also inside this unit and impacts naturalness to some extent.

b. Inspirational Values - The size and screening available in this area offers the opportunity to experience a sense of being alone. This may contrast with the daily lives of some people. The physical features of the study unit do not contrast appreciably with the surrounding geography and, consequently, may not be awe-inspiring except in the general sense.

c. Primitive and Unconfined Recreational Values - There is moderate opportunity for solitude due to the area's moderate size and the off-site intrusions. The area is well dissected topographically and provides good screening. The many hiking and climbing challenges combined with minimal facilities give a moderate to high primitive recreational value.

d. Cultural and Historical Values - No inventoried prehistoric sites exist in the area. Remains of historic mining are seen at the Silver King adit.

e. Educational, Scientific, and Unique Values - The area contains minor amounts of the western red cedar/devil's club habitat type which is uncommon on the Lolo National Forest. This type is more common in northwestern Montana and northern Idaho and is also represented in the existing wilderness system.

B. Manageability and Boundaries

While the Tepee-Spring Creek Roadless Area is a compact unit, only a few stretches of the boundary are defined by the natural terrain or other physical features. For the most part, it will be difficult to locate the line on the ground. A few interior areas remain remote and relatively free from external influences. Major travel corridors lie along the western and southern edges. Vehicles are visible and/or audible from the ridge lines and along the perimeter areas. On the northeast, a checkerboard landownership pattern intrudes into the unit. Most of these sections contain roads and harvest plots. While boundary adjustments can be made to exclude most nonconforming uses, their associated impacts, however, cannot be eliminated. The large number of access points accommodate dispersal of recreationists. Mineral activities, past and present, detract somewhat from the wilderness characteristics of "solitude" and lack of man's "imprint."

C. Other Resources Found in the Area

1. Potential

The area provides habitat for a wide variety of game and nongame wildlife species commonly found in western Montana (see Appendix B-2, Proposed Lolo Forest Plan, RDEIS), including pileated woodpeckers, bighorn sheep, and migratory waterfowl. The area contains about 9,616 acres of deer and elk winter range and approximately 300 riparian acres. The area has been identified as Situation 2 for grizzly bear. This means that while bear habitat is available, it is not essential to the recovery of the bear.

All of this unit is included in five oil and gas lease applications. Three leases covering approximately 60 percent of the area have already been leased, and the other two lease offers have been recommended for issuance. The unit encloses 31 unpatented mining claims. Lead, zinc, silver, and copper occur in the western portion. The Silver King Mine has produced substantial amounts of silver and lead ores. The study area contains 6,451 acres of high-very high mineral potential.

The Tepee-Spring Creek Roadless Area contains 2,245 acres classed as nonstocked, 86 acres of seedling and saplings, 526 acres of poles, 2,340 acres of immature sawtimber, and 7,672 acres of mature saw timber. Of this, 9,982 acres are classified as commercial timber land. The suitable lands presently support a standing timber inventory of 76.5 MMBF with a long-term sustained yield in the area of 1.99 annually.

There are two range allotments included in this roadless study area. The entire 60 acres of the Eddy allotment is included in the area. Permitted use is seven horses for 15 AUM's. The Munson Creek allotment has not been used since before 1970. The entire 500 acres of the allotment is included in the area. The allotment has a listed carrying capacity of 20 animals and 100 AUM's and has been combined with the Weeksville Allotment.

The current Recreation Opportunity map shows the area as 90 percent semiprimitive nonmotorized, and 10 percent roaded natural. There are recreational opportunities for trail users, berrypicking, big and small game hunting, scenic viewing, and fishing. Opportunities for primitive and unconfined recreation are limited to the few broad, open ridges and along stream bottoms.

2. Resource Summary

X1786 - Teepee Spring Creek- Roadless Area

Category		
Gross acres	Acres	15250
Net Acres	Acres	14890
Recreation		
Primitive	RVD's	0
Semiprim. Nonmot.	RVD's	13401
Semiprim. Motor.	RVD's	0
Roaded Natural	RVD's	14890
Range		
Existing Obligated		
Suitable	Acres	60
Allotments	No.	1
AUMs	AUMs	15
Existing Vacant		
Suitable	Acres	500
Allotments	No.	1
AUMs	AUMs	100
Proposed		
Suitable	Acres	0
AUMs	AUMs	0
Timber		
Tenative Suitable	Acres	9982
Standing Volume	MMBF	76.5
Corridors		
Exist. & Pot.	No.	0
Wildlife - T&E		
Grizzly Bear		
Habitat Sit. 1	Acres	0
Habitat Sit. 2	Acres	0
Habitat Sit. 3	Acres	14890
Bald Eagle Hab.	Acres	900
Gray Wolf Hab.	Acres	0
Peregrin Fal. Hab.	Acres	60
Wildlife - Big Game		
Summer Habitat	Acres	0
Winter Habitat	Acres	9616
Significant Fisheries		
Stream Miles	Miles	0
Stream Habitat	Hab. Ac	0
Lakes	No.	0
Lake Habitat	Hab. Ac	0
Water Develop.		
Existing	No.	1
Hardrock Potential		
Very High	Acres	5970
High	Acres	0
Moderate	Acres	0
Low	Acres	8920
Mining Claims .	No.	31
Oil & Gas Potential		
Very High	Acres	0
High	Acres	0
Moderate	Acres	14890
Low	Acres	0
Oil & Gas Leases	No.	5
Leased Area	Acres	14890

3. Management Considerations

The stands of lodgepole pine will become susceptible to the mountain pine beetle as they mature. Private lands within the boundaries present problems for roadless/wilderness management.

4. Public Involvement

During the public reveiw period for the DEIS, there were few additional comments on the Teepee-Spring Creek Area. Several comments favored wilderness designation for all existing roadless areas. Other responders opposed further additions to the wilderness system.

III. Impacts

Designation: Wilderness
Management Emphasis: Wilderness

Teepee Spring Creek Roadless Area is allocated to wilderness in Alternative g but this is the only alternative that the total area or any portion is allocated to wilderness.

Wilderness allocation can enhance the area's wilderness attributes since there are existing uses and facilities not usually associated with wilderness allocation. Any existing motorized activities could be eliminated.

The approximately 10,000 acres of land tentatively suitable for timber production would not be available. This would also remove about 77 MMBF from the Forest timber base.

Big game and elk management would not change. There is a large area of big game winter range within the boundaries. Cover/forage ratios should not change much over time except as influenced by wildfire control.

Social effects would be reflected in the fact that recreation use would continue to include a variety of dispersed activities, both summer and winter.

The nonpriced effects are:

- Visual quality would be preserved.
- Wilderness area would increase.
- Diversity would tend toward old growth without wildfire but could be improved depending on the control policy.
- Water quality and fisheries would be maintained at their present natural levels.
- Local employment may decrease slightly due to the unavailability of timber.

Economic effects are reflected in the loss of timber volume from 1 percent of the land base suitable for timber, and other resource values would be retained. The loss in timber volume can be mitigated by practicing intensive forestry. Any mineral exploration opportunities would be foregone.

Designation: Nonwilderness
Management Emphasis: Timber/Range

All alternatives except g allocate some of this area to timber prescriptions. Alternatives a through f allocate from 2 to 42 percent of the area to this prescription.

Allocation to the timber prescription will forego the possibility of wilderness allocation by the end of the first decade. The area will be accessed with roads and harvest will be scheduled up to the limit of constraints for these prescriptions.

The nonpriced effects are:

- Visual quality would be at its lowest level.
- Semiprimitive recreation potential would be foregone as well as wilderness characteristics, by the end of the first decade.
- Diversity would tend toward younger age classes, with minimum old growth.
- Water quality and fisheries effects will be mitigated.
- The greatest number of jobs, mainly in the wood products industry, would be provided.

Economic effects are reflected in the relatively small size of the area compared to the total available timber on the Forest. Social effects are shown in recreation uses, motorized use during the winter would affect the winter range acres. Mineral exploration opportunities would remain.

Designation: Nonwilderness
Management Emphasis: Wildlife

The main emphasis in this prescription is big game winter range. Alternatives a, d, e, and f provide for wildlife management.

Wildlife security and cover requirements include restrictions on human activities and development. Timber harvest would occur if enough timber is available and could be used to achieve habitat objectives. Although habitat management activities result in some reductions in wilderness attributes, they are ususally short term and limited in scope. Opportunities for solitude and primitive recreation would remain high. Effects do not differ appreciably from those listed under timber emphasis with wildlife objectives being maintained.

Designation: Nonwilderness
Management Emphasis: Visual

Alternatives b, d, e, and f allocate 4 percent of the area for visual managment. Visuals are retained in the roadless and wilderness management emphasis. Visual quality resource will be managed according to the management area classification. Effects are basically as stated under the timber emphasis with visual objectives being maintained.

Designation: Nonwilderness
Management Emphasis: Riparian

All alternatives contain inclusions of riparian zones and recognize the need to manage these areas according to policy and guidelines.

Alternative g is the wilderness alternative and would not impact the riparian zones. Effects do not change from those listed under roadless management.

Designation: Nonwilderness
Management Emphasis: Roadless

Alternatives a, b, and c allocate from 50 to 90 percent of the area to roadless management.

The nonpriced effects are:

- Visual quality will be maintained at a very high level.
- Semiprimitive and wilderness attributes can be retained for a long period.
- Age class distribution and diversity would be dominated by old growth; young age classes would be minimal.
- Water quality and fisheries would not be affected.
- Few wood products related jobs would be added to the industry.

The economic effects of this emphasis would be reflected in that the area represents less than 1 percent of the land base suitable for timber, and other resources would be retained. Due to the winter wildlife habitat in the area, motorized recreation would not be permitted.

Designation: Nonwilderness
Management Emphasis: Miscellaneous

Miscellaneous management emphasis include non-forest land, administrative sites, historical or cultural sites, mineral extraction sites, transportation and utility corridors, campgrounds, picnic areas, ski areas, and areas with concentrated public use.

ACRES OF AREA UNDER MANAGEMENT FOR EACH EMPHASIS BY ALTERNATIVE
(Refer to Appendix C Introduction for Management Areas under each emphasis.)

Management Emphasis	Alternatives a	b	c	d	e	f	g
NONWILDERNESS							
Timber/Range	313	1757	6298	1935	1935	1935	-
Wild life							
Grizzly bear	-	-	-	-	-	-	-
Other	1206	-	-	9694	9694	9694	-
Visual	-	625	-	527	527	527	-
Miscellaneous	-	-	1266	2433	2433	2433	-
Riparian	*	*	*	301	301	301	-
Roadless	13371	12508	7326	-	-	-	-

Management Emphasis	Alternatives a	b	c	d	e	f	g
WILDERNESS							
Wilderness	-	-	-	-	-	-	14890
Total	14890	14890	14890	14890	14890	14890	14890

* Small inclusions occur in other mamagement emphasis items.

SUMMARY OF MANAGEMENT EMPHASIS (acres managed by decade)

Developed							
Decade 1	480	480	480	480	480	480	-
Decade 5	1519	2382	7564	14890	14890	14890	-
Roadless							
Decade 1	14410	14410	14410	14410	14410	14410	-
Decade 5	13371	12508	7326	-	-	-	-
Wilderness							
Decade 1	-	-	-	-	-	-	14890
Decade 5	-	-	-	-	-	-	14890

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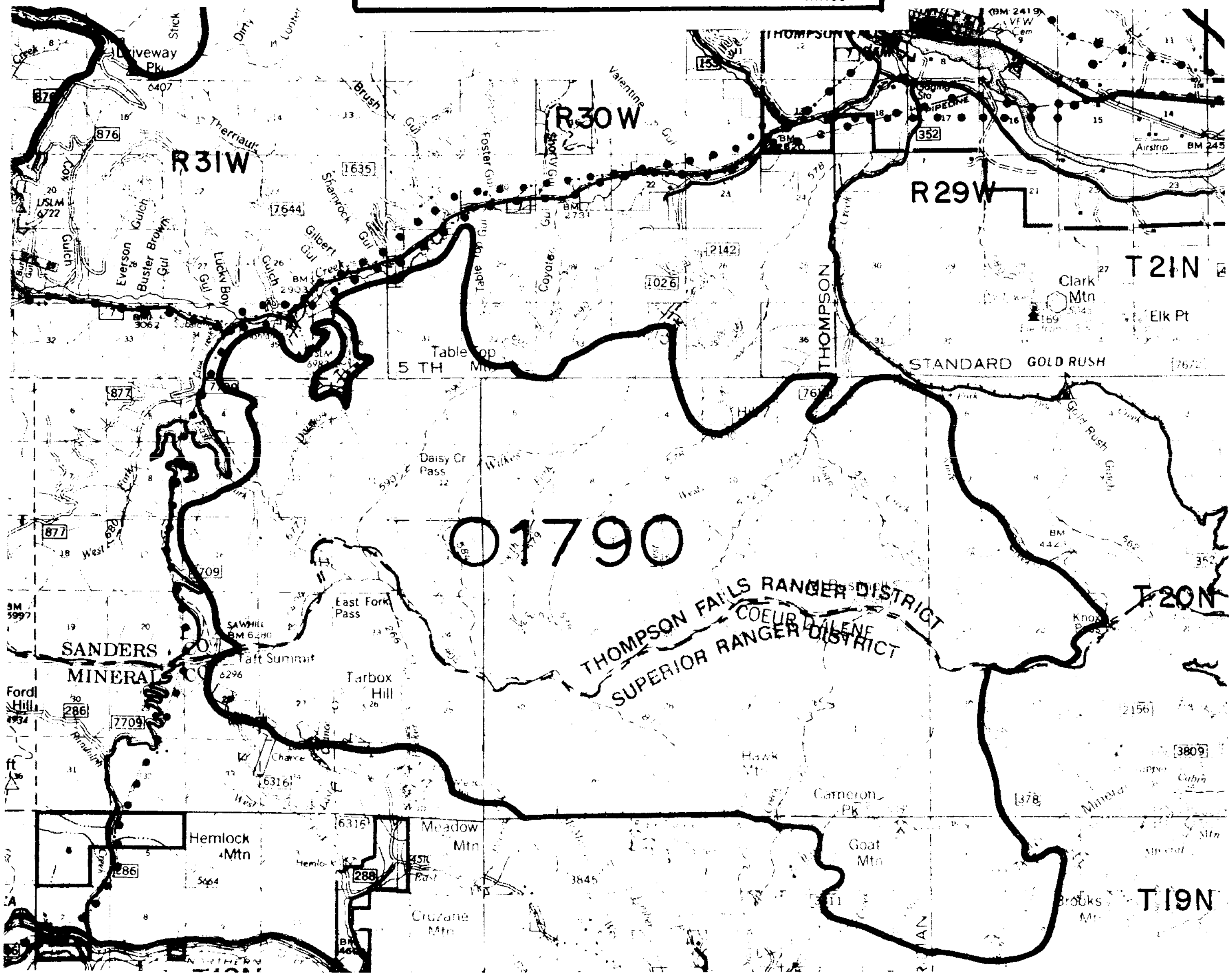
MOUNT BUSHNELL
O 1790

LOLO NATIONAL FOREST

Roadless Area Boundary

0 1 2 3 4
miles



01790
R31W
R30W
R29W
T21N
T20N
T19N
THOMPSON FALLS RANGER DISTRICT
COEUR D'ALENE
SUPERIOR RANGER DISTRICT
SANDERS
MINERAL
THOMPSON
STANDARD
GOLD RUSH
Clark Mtn
Elk Pt
Daisy Cr Pass
East Fork Pass
Taft Summit
Tarbox Hill
Hemlock Mtn
Meadow Mtn
Cameron Pk
Goat Mtn
Hawk Mtn
Table Top
Driveway Pk
Shamrock Gul
Gilbert Gul
Lucky Boy Gul
Everson Gulch
Buster Brown Gul
Coyote Gul
Foster Gul
Valentine Gul
Airstrip

MOUNT BUSHNELL #01790

Acreage:

Gross Acres: 43,070
Net Acres: 43,070

I. Description

A. Location and Access

The original RARE II inventory included 18,900 gross and net acres. An additional contiguous 25,430 gross and net acres that were previously analyzed in a completed unit plan are now included in this analysis. Roads constructed since the original inventory have reduced the area by 60 acres and existing timber sales by 950 acres. A Bonneville Power Administration (BPA) transmission line under construction removed an additional 250 acres.

The Mount Bushnell unit lies approximately 5 miles south and west of the town of Thompson Falls. The east-west trending Cabinet-Coeur d'Alene Divide forms part of the boundary between Sanders and Mineral Counties, and it is dominated by an unnamed peak east of Taft Summit. From the north, a paved highway along Prospect Creek provides vehicle access to the Mount Bushnell roadless boundary. Roads extending north from Interstate 90 terminate along the southern margin. A complex of logging roads access the eastern portion from Twelvemile Creek. The area contains parts of 12 Forest System trails, totalling 30 miles. Refer to Table C-4 for proximity information.

B. General Description

Most of the Mount Bushnell Roadless Area is heavily timbered; however, high open mountain parks, talus slopes, and brushy, south-facing slopes are scattered throughout the unit. The most common vegetative habitats include the Douglas-fir/shrub, clintonia, and dry beargrass groups which cover about 75 percent of the area. The area is representative of the 1910 burn with its abundance of lodgepole pine.

The Mount Bushnell Roadless Area provides habitat for a varity of game and nongame wildlife species commonly found in western Montana, including cougar, ruffed grouse, Franklin's grouse, bobcat, beaver, and other furbearers. Visitors can often view deer and elk herds on summer and winter ranges in the area. Boggy spring areas in the bottoms of Wilkes and Knox Creeks provide valuable summer range for elk.

There are numerous streams in the area and the only lake is a small marshy pond. Tributaries of Prospect Creek to the north, and the St. Regis River on the south drain the Mount Bushnell Roadless Area. These streams dissected the unit resulting in a branching pattern with several thousand feet of relief. Fractured and sheared rocks of the Burke and Wallace Formations (Belt Supergroup) underlie the unit. The unit contains the Osburn Fault zone which is structurally and mineralogically

similar to the productive lead-zinc-silver deposits of the Coeur d'Alene Mining District. Subtle open rock bluffs are visible within forested areas.

Currently the most popular activities in the area are big game hunting, upland grouse hunting, fishing, horseback riding, hiking, and trail biking. Snowmobiling occurs along existing roads and flatter ridges. Key vista points for visitors are located on Mount Bushnell, Table Top Mountain, Taft Summit, and Hill 7. The most popular travel routes are the Mount Bushnell Road and portions of 12 Forest System trails. A low standard, primitive road runs along the ridge from Knox Pass to the top of Mount Bushnell itself.

II. Analysis of Wilderness Suitability

A. Capability

1. Wilderness Attributes

a. Naturalness - Ecological processes and the natural landscape in parts of the area had been disrupted to a certain extent by past domestic grazing; however, no range improvements are visible and the area is recovered. Basically, vegetative communities in the unit are similiar to those found in surrounding areas outside the roadless boundary. Major fires which occurred in the area in the early 1900's are considered part of the natural process, resulting in the present lodgepole stands which are susceptible to infestation by the mountain pine beetle. About 29 percent of the area is in a subalpine fir/ beargrass habitat type. It makes up a major part of the higher elevation portions of the area between 5,000 and 6,000 feet. Lodgepole pine is common in this habitat type with understories limited to huckleberry, beargrass, and varying amounts of grouse whortleberry, pinegrass, elk sedge, and heartleaf arnica. Ten percent of the area is in Douglas-fir/ ninebark, 14 percent Douglas-fir/blue huckleberry, 14 percent grand fir/beargrass, and 13 percent subalpine fir/ menziesia. The remainder of the area is in subalpine fir/smooth woodrush, subalpine fir/beadlily, western red cedar/beadlily, grand fir/beadlily, Douglas-fir/bluebunch wheatgrass, and scree.

While most of the animal species native to the area are found in the Mount Bushnell Roadless Area, none are particularly dependent on wilderness for viability or survival. Animals on summer and winter ranges can be susceptible to human activity and the area contains some acres of both. Viewing animals such as elk in their native habitat may be associated with a wilderness experience in some visitors' minds.

Air and water quality are considered good in the area.

Human developments within the area such as a variety of mining explorations, two mining cabins, and five mining claim access roads totalling 4 miles detract from the naturalness and the natural landscape of the area, as does the low standard road to the top of

Mount Bushnell. A corral is located at each of the two permitted outfitter camps. There are two helispots and the foundation for the old Mount Bushnell Lookout in the area as well.

b. Inspirational Values - The size of the area offers visitors the opportunity to experience a sense of being alone which may contrast to their daily life. The physical properties of the area do not contrast appreciably with the surrounding geography and, consequently, may not be awe-inspiring visually except in a general sense.

c. Primitive and Unconfined Recreation - The size of the area contributes to a feeling of remoteness for the visitor particularly in the drainages where outside sounds cannot be heard. The feeling of solitude increases as users move to higher elevations and the top of peaks. Topographic and vegetative screening do mitigate intrusions. Outfitters have remarked that some of their clients have experienced a sense of remoteness in this area. The size of the area also provides for an unconfined recreation experience. User traffic is not heavy, particularly when hunting is not occurring.

The area does not offer a high degree of primitive challenge to the visitor seeking it because of the 30-plus miles of trail and the relatively gradual elevation change. Opportunities for mountain climbing and other more physically challenging recreation activities are available in the area.

Several small communities are located near the area which provides for local recreation use. While portions of the area offer distinctive landscapes for the viewer, the scenery in the area offers little contrast with the surrounding area.

d. Cultural and Historical Values - Some evidence of mining activities can be considered historical and representative of western Montana. One prehistoric site is known to exist in the area.

e. Educational and Scientific Values - Some opportunity exists to observe and study big-game animals in their natural habitat, but there are no known endangered species of animals or plants in the area. Nor is the area recognized as having unique vegetative communities to be used as benchmarks for study. There are no unusual or scarce ecosystem representatives. All are well represented in existing wilderness areas. Gene pools in the unit do not differ appreciably from the surrounding area.

f. Uniqueness - This study unit contains no inventoried unique values.

2. Manageability and Boundaries

The Mount Bushnell Roadless Area is a compact unit, but its boundaries are not well defined. Except for a segment of the northeast corner along Knox Creek, the boundary does not follow natural breaks in the terrain and will be difficult to locate on the ground. Some

adjustment in the boundary along the southwest margin would exclude some patented mining claims.

There are numerous access points along the perimeter which would provide for dispersion of users. This factor would be helpful in managing recreational activites while protecting the roadlesss characteristics. Closure of the road to Mount Bushnell would also increase protection of those characteristics. Other intrusions such as corrals could be obliterated to improve naturalness.

B. Other Resources Found in the Area

1. Potential

As stated previously, the area provides habitat for the variety of game and nongame wildlife species commonly found in Western Montana (see Appendix B-2, Proposed Lolo Forest Plan, RDEIS) including ruffed grouse, Franklin's grouse, bobcat, beaver, and other furbearers, and woodpeckers. There are approximately 4,233 acres of elk summer habitat and 2,773 acres of deer and elk winter range. The area also contains 1,347 riparian acres with 6.5 miles of significant fisheries stream .

Many prospects and mines are located within this area and numerous patented mining claims occur along and inside the southern boundary. There are 156 unpatented mining claims in the unit. The central part of the MT. Bushnell area has a moderate resource potential for copper-silver in stratabound deposits in the Revett Formation. Placer gold deposits are small and concentrated in the Quaternary sediments of narrow, glaciated valleys. There is also a moderate potential for base and precious metal vein deposits in the highly faulted and fractured rocks of this area. Eight oil and gas leases have been issued; these cover some 60 percent of the total roadless area. The proposed Lolo Forest Plan inventory shows 35,868 acres containing high/very high mineral potential land.

The Mount Bushnell Roadless Area contains 260 acres classed as nonstocked, 6,096 acres of seedlings and saplings, 6,380 acres of poles, 9,371 acres of immature sawtimber, and 19,279 acres of mature sawtimber. Of this 40,902 acres are classified as commercial timber land. The suitable lands presently support a standing timber inventory of 279.9 MMBF with a potential long-term sustained yield in the area of 9.02 MMBF annually.

The Mount Bushnell unit includes portions of five range allotments: Upper Prospect Creek, Wilkes Creek, Dry Creek, Savanac Creek, and Cook Creek. None have been active since 1972, and there are currently no plans to reactivate them. The area borders the Packer Creek Range Allotment. There are no known range improvements within the area.

About 60 percent of the unit provides opportunites for semiprimitive nonmotorized recreation. The other 40 percent of the area, being of more gentle topography, is suitable for semiprimitive motorized recreation. The popular activities include big-game hunting, upland

grouse hunting, fishing, horseback riding, hiking, and trail biking. Snowmobiling occurs along existing roads and flatter ridges.

2. Resource Summary

01790 - Mount Bushnell - Roadless Area

Category		
Gross acres	Acres	43070
Net Acres	Acres	43070
Recreation		
Primitive	RVD's	0
Semiprim. Nonmot.	RVD's	25842
Semiprim. Motor.	RVD's	86140
Roaded Natural	RVD's	0
Range		
Existing Obligated		
Suitable	Acres	0
Allotments	No.	0
AUMs	AUMs	0
Existing Vacant		
Suitable	Acres	2344
Allotments	No.	5
AUMs	AUMs	124
Proposed		
Suitable	Acres	0
AUMs	AUMs	0
Timber		
Tenative Suitable	Acres	40902
Standing Volume	MBF	279.9
Corridors		
Exist. & Pot.	No.	1
Wildlife - T&E		
Grizzly Bear		
Habitat Sit. 1	Acres	0
Habitat Sit. 2	Acres	0
Habitat Sit. 3	Acres	0
Bald Eagle Hab.	Acres	0
Gray Wolf Hab.	Acres	0
Peregrin Fal. Hab.	Acres	0
Wildlife - Big Game		
Summer Habitat	Acres	4223
Winter Habitat	Acres	2773
Significant Fisheries		
Stream Miles	Miles	6.5
Stream Habitat	Hab. Ac	6.3
Lakes	No.	0
Lake Habitat	Hab. Ac	0
Water Develop.		
Existing	No.	0
Hardrock Potential		
Very High	Acres	0
High	Acres	28626
Moderate	Acres	662
Low	Acres	13782
Mining Claims	No.	156
Oil & Gas Potential		
Very High	Acres	0
High	Acres	0
Moderate	Acres	43070
Low	Acres	0
Oil & Gas Leases	No.	8
Leased Area	Acres	25800

3. Management Considerations

Present lodgepole pine stands will become susceptible to infestation by the mountain pine beetle as the they mature.

4. Public Involvement

During the public reveiw period for the DEIS, there were few additional comments on the Mount Bushnell Area. Several comments

favored wilderness designation for all existing roadless areas. Other responders opposed further additions to the wilderness system.

III. Impacts

Designation: Wilderness
Management Emphasis: Wilderness

Mount Bushness is allocated to wilderness in Alternative g but this is the only alternative that the total area or any portion is allocated to wilderness.

Wilderness allocation can enhance the area's wilderness attributes since there are existing uses and facilities not usually associated with wilderness allocation. Any existing motorized activities could be eliminated.

The approximately 41,000 acres of land tentatively suitable for timber production would not be available. This would remove approximately 280 MMBF from the Forest timber base, including a significant area of lodgepole pine which may become infested by mountain pine beetle.

The area contains large acreages of both big game summer and winter habitat. Management of these habitats and cover/forage ratios would not change much over time except as influenced by wildfire control.

Social effects under wilderness allocation will be reflected in the fact that recreation use would continue to be dominated by hunting and a variety of other summer and winter activities.

The nonpriced effects are:

- Visual quality would be preserved.
- Wilderness area would increase.
- Diversity would tend toward old growth without wildfire but could be improved depending on the control policy.
- Water quality and fisheries would be maintained at their present natural levels.
- Local employment may decrease slightly due to the unavailability of timber.

Economic effects would be reflected in the area which represents nearly 8 percent of the average annual yield for the Forest. The loss in this timber would be difficult to recover in other areas due to the large amount needed.

Designation: Nonwilderness
Management Emphasis: Timber/Range

All alternatives except g allocate some of this area to timber management: Alternative a, 17 percent; Alternative b, 3 percent; Alternative c, 89 percent; Alternative d, 58 percent; Alternative e, 58 percent; and Alternative f, 58 percent.

Allocation to the timber prescription will forego the possibility of wilderness allocation by the end of the first decade. The infested lodgepole pine stands will continue to be accessed with roads and harvest will be scheduled up to the limit of constraints for these prescriptions.

The nonpriced effects are:

- Visual quality would be at its lowest level, Maximum Modification.
- Semiprimitive recreation potential would be foregone by the end of the first decade.
- Wilderness characteristics would be compromised in a short time.
- Diversity would tend toward younger age classes with minimum old growth.
- Water quality and fisheries effects would be mitigated.
- The greatest number of jobs, mainly in the wood products industry, would be provided.

Economic effects would be apparent with addition of this volume in the local timber industry. Social effects would be reflected in the recreationial use of the area.

Designation: Nonwilderness
Management Emphasis: Wildlife

The main emphasis in this prescription is big game summer and winter habitat with some oldgrowth component. Alternative a allocates 35 percent to these prescriptions; Alternative b, 5 percent; Alternative c, 6 percent; Alternatives d, e, and f allocate 22 percent.

Old-growth preservation in this area would be difficult in view of the possibility of a mountain pine beetle infestation. Whether or not the area is entered for salvage harvesting, the stands will deteriorate as a result of the beetle kill.

Development and vegetative manipulation may be required to achieve big game habitat and forage management objectives. Timber harvest would occur if enough timber is available and could be used to achieve habitat objectives. Other management activities may include prescribed burning.

Wildlife security and cover requirements include restrictions on human activities and developement. Although habitat management activities result in some reductions in wilderness attributes, they are usually short term and limited in scope. Opportunities for solitude and primitive recreation would remain high.

Designation: Nonwilderness
Management Emphasis: Visual

Alternative a allocates 44 percent to visual emphasis, Alternative b allocates 56 percent, and Alternatives c through f allocate from 1 to 7 percent. Visuals are retained in the roadless and wilderness management emphases. Visual quality resource will be managed according to the management area classification. The effects of this emphasis are basically as listed under the timber emphasis with visual objectives being maintained.

Designation: Nonwilderness
Management Emphasis: Riparian

All alternatives contain inclusions of riparian zones and recognize the need to manage these areas according to policy and guidelines. Alternative g is the wilderness alternative and would not impact the riparian areas. Effects for this empahsis are listed under the roadless emphasis.

Designation: Nonwilderness
Management Emphasis: Roadless

Alternatives a, b, d, e, and f allocate a trace acreage to this management emphasis. Alternatives c and g do not manage for roadless prescriptions.

The nonpriced effects are:

- Visual quality will be maintained at a very high level, retention.
- Semiprimitive and wilderness attributes can be retained for a long period.
- Age class distribution and diversity would be dominated by old growth; young age classes would be minimal.
- Water quality and fisheries would not be affected.
- Few wood products related jobs would be added to the industry.

The economic impacts would be reflected in the timber volume lost. This loss amounts to nearly 8 percent of the available average annual yield. Other resources would be retained.

Designation: Nonwilderness
Management Emphasis: Miscellaneous

Miscellaneous management emphases include non-forest land, administrative sites, historical or cultural sites, mineral extraction sites, transportation and utility corridors, campgrounds, picnic areas, ski areas, and areas with concentrated public use.

Alternatives a, c, d, e, and f allocate from 3 to 9 percent of the area to management of these sites.

ACRES OF AREA UNDER MANAGEMENT FOR EACH EMPHASIS BY ALTERNATIVE
(Refer to Appendix C Introduction for Management Areas under each emphasis.)

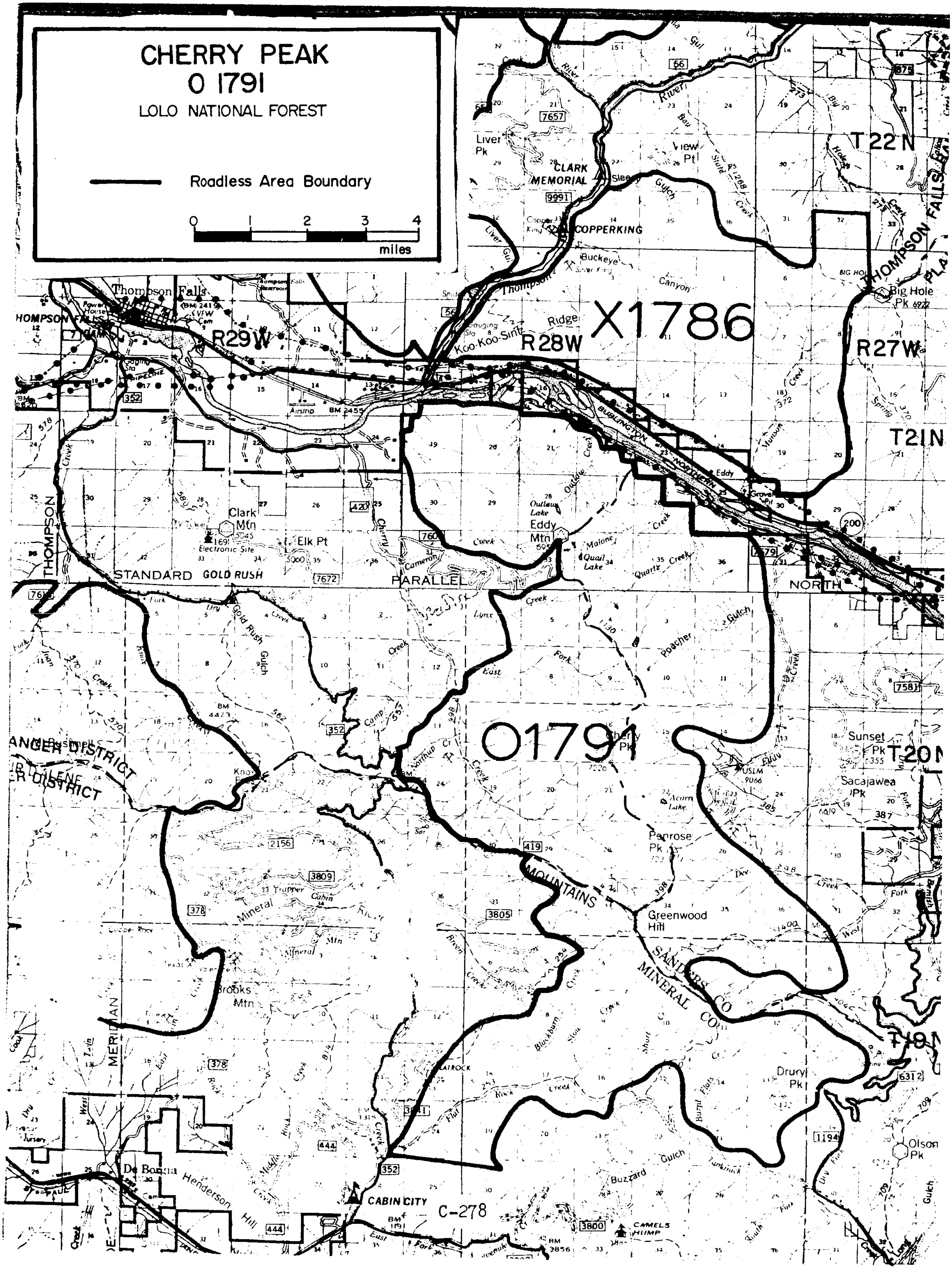
Management Emphasis	Alternatives a	b	c	d	e	f	g
NONWILDERNESS							
Timber/Range	7537	1120	38246	25166	25166	25166	-
Wild life							
Grizzly bear	-	-	-	-	-	-	-
Other	15062	2068	2541	9636	9636	9636	-
Visual	18951	24119	560	2841	2841	2841	-
Miscellaneous	1421	-	1723	3836	3836	3836	-
Riparian	*	*	*	1344	1344	1344	-
Roadless	99	15763	-	247	247	247	-

Management Emphasis	Alternatives a	b	c	d	e	f	g
WILDERNESS							
Wilderness	-	-	-	-	-	-	43070
Total	43070	43070	43070	43070	43070	43070	43070

* Small inclusions occur in other management emphasis items.

SUMMARY OF MANAGEMENT EMPHASIS (acres managed by decade)

Developed							
Decade 1	20000	20000	20000	20000	20000	20000	-
Decade 5	42971	27307	43070	42823	42823	42823	-
Roadless							
Decade 1	23070	23070	23070	23070	23070	23070	-
Decade 5	99	15763	-	247	247	247	-
Wilderness							
Decade 1	-	-	-	-	-	-	43070
Decade 5	-	-	-	-	-	-	43070


CHERRY PEAK
O 1791
LOLO NATIONAL FOREST
Roadless Area Boundary
0 1 2 3 4
miles
X1786
O1791
Thompson Falls
R29W
R28W
R27W
T22N
T21N
T20N
CLARK MEMORIAL
COPPERKING
Liver Pk
View Pt
Big Hole Pk
Clark Mtn
Elk Pt
Eddy Mtn
Outlaw Lake
Quail Lake
STANDARD
GOLD RUSH
PARALLEL
NORTH
THOMPSON
Gold Rush Gulch
Cherry Pk
Sunset Pk
Sacajawea Pk
Penrose Pk
Acorn Lake
MOUNTAINS
Greenwood Hill
SANDERS CO
MINERAL CO
Brooks Mtn
Drury Pk
Olson Pk
MERIDIAN
De Borgia
Henderson Hill
CABIN CITY
C-278
CAMELS HUMP
Buzzard Gulch

CHERRY PEAK #01791

Acreage:

Gross Acres: 39,800
Net Acres: 39,640

I. Description

A. Location and Access

Situated southeast of Thompson Falls, the Cherry Peak Roadless Area stretches almost 14 miles in a north-south direction. The width varies from 3 to 7 miles. Numerous logging and mining roads extending off of Interstate 90, the Twelvemile Creek Road, and the Southside Clark Fork Road provide vehicle access to the roadless boundary. Refer to Table C-4 for proximity information for this area.

The original RARE II area was 23,600 gross and net acres. An additional 25,520 gross and 25,360 net acres are adjacent but not included in the original inventory since they were part of a completed unit plan. Existing timber sales have removed 90 acres and 9,540 acres are in fiscal year 1983 sales. Fiscal year 1984 roading will take out an additional 2,430 acres and the BPA powerline will reduce the area by another 790 acres. As a result of recalculation, an additional 3,530 acres were added to the area.

An unusual feature of this unit is that it contains two major inter secting drainage divides: the Eddy Mountain-Greenwood Hill ridgeline runs north-south and connects with the east-west Cabinet-Coeur d'Alene divide which forms the Sanders and Mineral County line. These ridge lines form the core of the Cherry Peak unit. Alpine glaciation occurred on the northeast slope of the Eddy Mountain-Penrose Peak ridge resulting in several high lakes in cirque basins. Relief on the northern portion of the roadless unit is in excess of 4,500 feet.

The Burke and Prichard Age Formations containing argillites, quartzites, and silltites underlie this roadless study area. North northwest trending faults and folds predominate and a north-northwest oriented thrust fault bisects the unit. All of the rocks are part of the Precambrian Age Belt Supergroup.

Vegetative cover is varied. Heavily timbered north and east facing slopes are interspersed with brushy, open-timbered south and west slopes. The Cherry Peak-Eddy Mountain Divide is predominantly a subalpine fir and mountain hemlock habitat type with many grassy openings. The east side of this divide is mostly barren rock or talus slopes with a light density of grass and trees.

B. Significant Resource Values

This roadless area has high to very high potential for hard rock mineralization. Virtually all of it is also under lease for oil and

gas. It contains large areas suitable for semiprimitive, nonmotorized recreation.

II. Analysis of Wilderness Suitability

A. Capability

1. Wilderness Attributes

a. Naturalness - Ecological processes and parts of the natural landscape have been disrupted to a certain extent by past domestic grazing and mining activities. The vegetative communities in the unit are similar to those outside of the roadless boundary. Some 22 percent of the area contains the grand fir/beargrass habitat type. This is common on well-drained slopes between 4,700 and 5,300 feet in elevation. Major species include Douglas-fir, larch, and lodgepole pine. Understories are generally sparce with beargrass, huckleberry, and pinegrass being more common. Almost 19 percent of the unit is composed of the subalpine fir/beargrass habitat type which occupies the steep, dry slopes between 5,200 and 7,000 feet. About 16 percent of the area is subalpine fir/smooth woodrush, 14 percent is Douglas-fir/ninebark, and 8 percent is subalpine fir/menziesia. More than 9 percent of this unit is composed of scree and talus slopes.

While most of the animal species native to western Montana are found in the Cherry Peak study unit, none are dependent on a roadless environment for viability or survival. Animals on winter ranges can be susceptible to human activity and this area contains a small amount of winter range.

Air and water quality are considered very good in the area.

The unit contains some evidence of mining activities including prospect pits and adits. There is a lookout foundation, a lookout structure on Eddy Peak, three helispots, and some abandoned telephone wire on Penrose Peak. Two outfitter-guide camps are permitted in the area.

b. Inspirational Values - The size of the unit may offer some people the sense of being alone which may contrast with their daily lives. The physical properties of the area do not contrast appreciably with the adjacent lands.

c. Primitive and Unconfined Recreation - The area ranks moderate in opportunities for primitive recreation due to size and shape of the unit. Mountain peaks are as high as 7,300 feet in elevation. The core of the area is generally less than 3 miles from the perimeter on the longest axis.

d. Cultural and Historic Values - Historic values are related to past mining activity.

e. Educational and Scientific Values - Geologic features associated with glaciation occur in the northern part. No known threatened species of plants or animals exist here. The ecosystems in this area are well represented in existing wilderness areas.

f. Uniqueness - This area contains minor amounts of subalpine fir/devil's club habitat type which is uncommon in most of the Lolo Forest. This type is much more widespread in northwestern Montana and northern Idaho.

2. Manageability and Boundaries

The Cherry Peak Roadless Area is not compact; fingers of previous development extend into the area causing "cherry-stem" effects. Low standard roads in Greenwood Hill and Eddy Creek result from past mineral exploration. Since the external boundaries do not follow natural terrain breaks, they are difficult to locate on the ground. An existing electronic site at Clark Mountain near the northwest boundary detracts from the roadless values in the area. Timber harvest activities, roads, and other developments are visible from the peaks and major ridgelines.

The numerous access points on all sides of the unit will tend to disperse recreation users and minimize user impacts. However, the high potential for mineral exploration and development makes manageability uncertain.

Minor boundary changes will need to be made to exclude private land and existing man-made impacts.

B. Other Resources Found in the Area

1. Potential

The area provides habitat for a variety of game and nongame wildlife species commonly found in western Montana (see Appendix B-2, Proposed Lolo Forest Plan, RDEIS). There are approximately 428 acres of deer and elk winter range and 1,817 riparian acres.

Mining activity in the northern part of the unit has been significant. The Eddy Creek-Swamp Creek Mining District has recorded activity since the early 1900's. Presently, there are 265 unpatented mining claims recorded with BLM for this area. According to the U.S. Geological Survey, the northern part of the study area contains a favorable stratigraphic zone for stratabound copper-silver, much like that found in the Cabinet Mountains. Two small placer gold deposits with a moderate resource potential lie in the central part of the unit. To the south, the Pritchard Formation contains zones favorable for the occurence of stratabound lead/zinc/silver (Sullivan type) deposits. Ninety-five percent of the Cherry Peak Roadless Area is covered by 16 oil and gas lease applications. Approximately 80 percent of them have been issued. Some 30,494 acres of high-very high mineral potential land is contained in this study unit.

The Cherry Peak Roadless Area contains 691 acres classed as nonstocked, 1,017 acres of seedlings and saplings, 2,515 acres of poles, and 8,304 acres of immature sawtimber land. Of this, 27,199 acres are classified as commercial timber land. The suitable lands presently support a standing timber inventory of 222.3 MMBF with a long-term sustained yield in the area of 5.74 MMBF annually.

The area includes portions of two range allotments. The Tamarack Creek allotment is active. The current permit is for 32 cow/calf pairs for 133 AM's. Approximately 100 acres of suitable range exist within the roadless area. All of the Flat Rock Creek allotment (about 600 acres of suitable range) is included in the area. The allotment has been inactive since 1970. The last permit was issued for 25 cow/calf pairs for 96 AM's.

The current Recreation Opportunity map indicates approximately 80 percent of the area is semiprimitive nonmotorized; 10 percent semiprimitive motorized; and 10 percent roaded natural recreation settings. Existing activities include big-game hunting, stream and lake fishing, viewing, camping, hiking, trail biking, berrypicking, and ski touring.

2. Resource Summary

01791 - Cherry Peak-Roadless Area

Category		
Gross acres	Acres	39800
Net Acres	Acres	39640
Recreation		
Primitive	RVD's	0
Semiprim. Nonmot.	RVD's	31712
Semiprim. Motor.	RVD's	19820
Roaded Natural	RVD's	39640
Range		
Existing Obligated		
Suitable	Acres	100
Allotments	No.	1
AUMs	AUMs	19
Existing Vacant		
Suitable	Acres	600
Allotments	No.	1
AUMs	AUMs	75
Proposed		
Suitable	Acres	0
AUMs	AUMs	0
Timber		
Tenative Suitable	Acres	27199
Standing Volume	MMBF	222.3
Bald Eagle Hab.	Acres	3000
Gray Wolf Hab.	Acres	0
Peregrin Fal. Hab.	Acres	200
Wildlife - Big Game		
Summer Habitat	Acres	0
Winter Habitat	Acres	428
Significant Fisheries		
Stream Miles	Miles	7.0
Stream Habitat	Hab. Ac	6.8
Lakes	No.	0
Lake Habitat	Hab. Ac	0
Water Develop.		
Existing	No.	0
Hardrock Potential		
Very High	Acres	20198
High	Acres	4260
Moderate	Acres	7622
Low	Acres	7560
Mining Claims .	No.	264
Oil & Gas Potential		

Corridors		
Exist. & Pot.	No.	1
Wildlife - T&E		
Grizzly Bear		
Habitat Sit. 1	Acres	0
Habitat Sit. 2	Acres	0
Habitat Sit. 3	Acres	0

Very High	Acres	0
High	Acres	0
Moderate	Acres	39640
Low	Acres	0
Oil & Gas Leases	No.	16
Leased Area	Acres	37700

3. Management Considerations

Because of the component of lodgepole pine within the ecosystem, mountain pine beetle infestation could be a problem as the stands mature.

During the public reveiw period for the DEIS, there were few additional comments on the Cherry Peak Area. Several comments favored wilderness designation for all existing roadless areas. Other responders opposed further additions to the wilderness system.

III. Impacts

Designation: Wilderness
Management Emphasis: Wilderness

The Cherry Peak Roadless Area is allocated to wilderness in Alternatives f and g but these are the only alternatives that the total area or any portion is allocated to wilderness.

Wilderness allocation can enhance the area's wilderness attributes since there are existing uses and facilities not usually associated with wilderness allocation. Any existing motorized activities could be eliminated.

The approximately 27,000 acres of land tentatively suitable for timber production would not be available. This would also remove about 222 MMBF from the Forest timber base. A major species of tree in the area is lodgepole pine which has the possibility of being infested by mountain pine beetle and may eventually need to be salvaged.

Big game or elk management would not change much. The area does contain a significant amount of summer and winter habitat; however, it is not particularly high quality. Cover/forage relationships should not change much over time except as influenced by wildfire control.

Social effects under wilderness allocation include recreation use which would continue to be dominated by hunting and fishing.

The nonpriced effects are:

- Visual quality would be preserved.
- Wilderness area would increase.
- Diversity would tend toward old growth without wildfire but could be improved depending on the control policy.
- Water quality and fisheries would be maintained at their present natural levels.
- Local employment may decrease slightly due to the unavailability of timber.

Economic effects are reflected in that fact that the area contains about 4 percent of the average annual yield, the topography is such that harvesting timber in this area would be costly.

Designation: Nonwilderness
Management Emphasis: Timber/Range

All alternatives except f and g allocate some of this area to timber prescriptions. Alternatives a through e allocate from 10 to 49 percent to this management emphasis.

Allocation to the timber prescription will forego the possibility of wilderness allocation by the end of the first decade. The possibility of infested lodgepole pine stands will require that the area continue to be accessed with roads and harvest will be scheduled up to the limit of constraints for these prescriptions.

The obligated and vacant domestic livestock range areas may include management activities where investments are made for range management. Management activities, such as prescribed burning, watering tanks, and fencing would be evident.

The nonpriced effects are:

- Visual quality would be at its lowest level, maximum modification.
- Semiprimitive recreation potential would be foregone by the end of the first decade.
- Wilderness characteristics would be compromised in a short time.
- Diversity would tend toward younger age classes with minimum old growth.
- Water quality and fisheries effects would be mitigated.
- The greatest number of jobs, mainly in the wood products industry, would be provided.

The area is difficult and expensive to access. Salvaging the infested lodgepole pine would probably be the most significant economic factor.

Designation: Nonwilderness
Management Emphasis: Wildlife

Alternative a allocates 32 percent of the area to wildlife managment. Alternatives b through e allocate from 3 to 8 percent. The main emphasis is big-game winter range.

The area contains large amounts of both winter and summer big game habitat; however, the quality of these habitats is questionable.

Development and vegetative manipulation may be required to attempt to achieve the habitat and forage management objectives. Timber harvest could be used to achieve these objectives along with prescribed burning on certain sites. The effects do not differ appreciable from those listed under the timber emphasis, except wildlife objectives would be maintained.

Designation: Nonwilderness
Management Emphasis: Visual

Alternative a allocates 20 percent of the area to visual management. Alternatives b through e allocate from 2 to 10 percent for this emphasis. Alternatives f and g are wilderness alternatives. Visuals are retained in the roadless and wilderness management emphasis.

Visual quality resource will be managed according to the management area classification. Effects are as listed under the timber emphasis with visual objectives being maintained.

Designation: Nonwilderness
Management Emphasis: Riparian

All alternatives contain inclusions of riparian zones and recognize the need to manage these areas according to policy and guidelines. Alternatives f and g are the wilderness alternatives and would not impact the riparian areas. Effects do not differ appreciably from those listed under the roadless emphasis.

Designation: Nonwilderness
Management Emphasis: Roadless

Alternative a allocates 24 percent, Alternative b, 76 percent, and Alternative c, 43 percent to roadless management. Alternatives d and e allocate 5 percent each.

The nonpriced effects are:

- Visual quality will be maintained at a very high level, retention.
- Semiprimitive and wilderness attributes can be retained for a long period.
- Age class distribution and diversity would be dominated by old growth; young age classes would be minimal.
- Water quality and fisheries would not be affected.
- Few wood products related jobs would be added to the industry.

Economically, the area contains a large volume of timber; however, it is difficult and expensive to harvest.

Designation: Nonwilderness
Management Emphasis: Miscellaneous

Miscellaneous management emphases include non-forest land, administrative sites, historical or cultural sites, mineral extraction sites, transportation and

utility corridors, campgrounds, picnic areas, ski areas, and areas with concentrated public use.

Alternatives a, d, and e allocate nearly 6 percent of the area to these sites. Other alternatives do not manage for these miscellaneous areas.

ACRES OF AREA UNDER MANAGEMENT FOR EACH EMPHASIS BY ALTERNATIVE
(Refer to Appendix C Introduction for Management Areas under each emphasis.)

Management Emphasis	Alternatives a	b	c	d	e	f	g
NONWILDERNESS							
Timber/Range	7175	3885	19226	11063	11063	-	-
Wild life							
Grizzly bear	-	-	-	-	-	-	-
Other	12724	1031	2101	3165	3165	-	-
Visual	8047	4638	1268	654	654	-	-
Miscellaneous	2101	-	-	2432	2432	-	-
Riparian	*	*	*	2153	2153	-	-
Roadless	9593	30086	17045	20173	20173	-	-
WILDERNESS							
Wilderness	-	-	-	-	-	39640	39640
Total	39640	39640	39640	39640	39640	39640	39640

* Small inclusions occur in other management emphasis items.

SUMMARY OF MANAGEMENT EMPHASIS (acres managed by decade)

Developed							
decade 1	4160	4160	4160	4160	4160	-	-
decade 5	30047	9554	22595	19467	19467	-	-
Roadless							
decade 1	35480	35480	35480	35480	35480	-	-
decade 5	9593	30086	17045	20173	20173	-	-
Wilderness							
decade 1	-	-	-	-	-	39640	39640
decade 5	-	-	-	-	-	39640	39640

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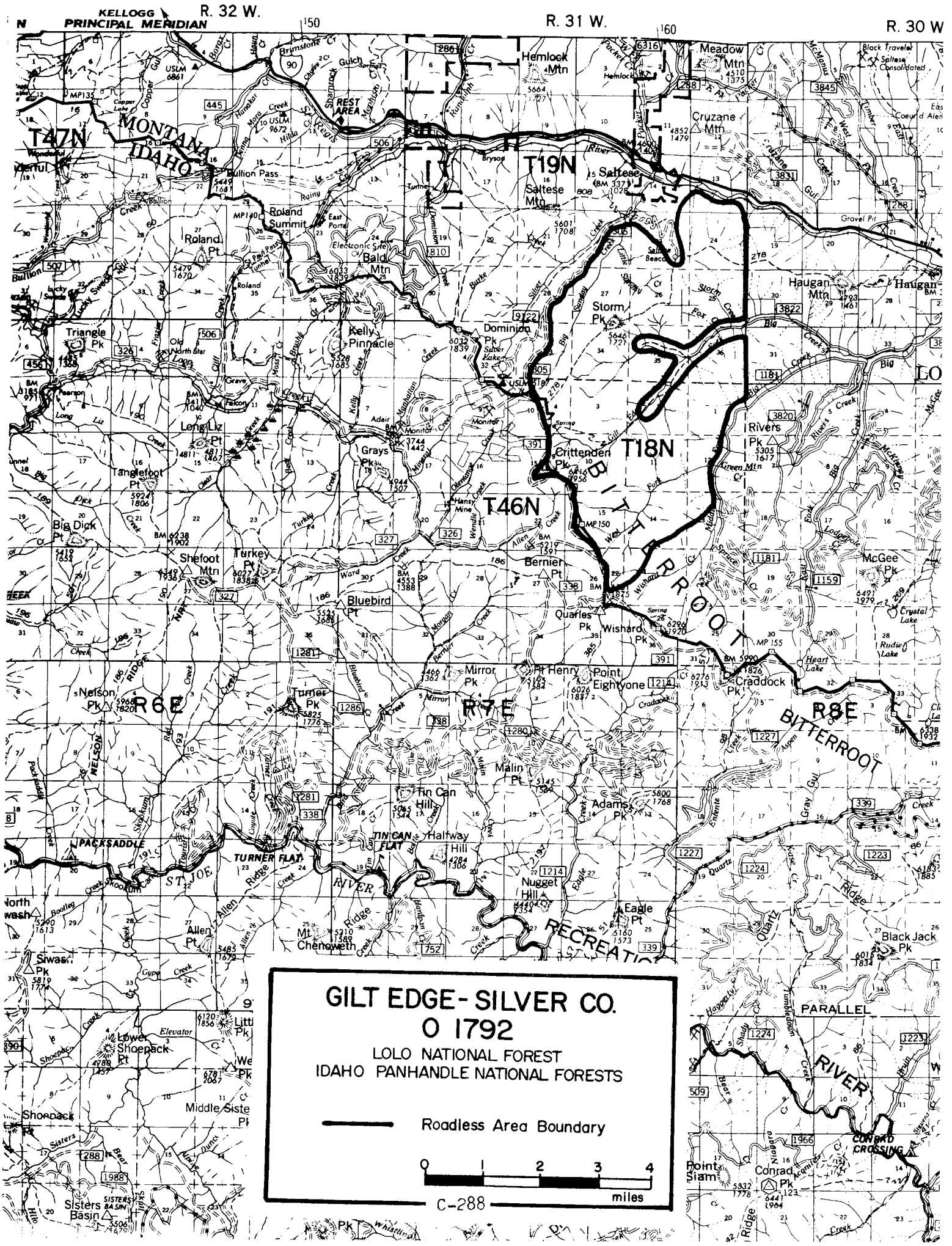
KELLOGG
PRINCIPAL MERIDIAN
R. 32 W.
R. 31 W.
R. 30 W
150
160
T47N
T19N
T18N
T46N
MONTANA
IDAHO
BITTERROOT
R6E
R7E
R8E
ST JOE
RIVER
RECREATION
PARALLEL
RIVER
PACKSADDLE
TURNER FLAT
TIN CAN FLAT
NELSON RIDGE
REST AREA
Hemlock Mtn
Meadow Mtn
Cruzane Mtn
Saltese Mtn
Saltese
Bullion Pass
Roland Pt
Roland Summit
Bald Mtn
Dominion Pk
Storm Pk
Haugan Mtn
Triangle Pk
Kelly Pinnacle
Long Liz Pt
Grays Pk
Crittenden Pk
Rivers Pk
Tanglefoot Pt
Big Dick Pt
Shefoot Mtn
Turkey Pt
Bernier Pt
McGee Pk
Bluebird Pt
Quarles Pk
Wishard Pk
Nelson Pk
Mirror Pk
Pt Henry
Point Eightyone
Craddock Pk
Turner Pk
Malin Pt
Tin Can Hill
Halfway Hill
Adams Pk
Nugget Hill
Eagle Pt
Mt Chenoweth
Allen Pt
Siwash Pk
Lower Shoepack Pt
Middle Siste Pt
Shoepack
Sisters
Sisters Basin
Black Jack Pk
Point Siam
Conrad Pk
CONRAD CROSSING
GILT EDGE - SILVER CO.
O 1792
LOLO NATIONAL FOREST
IDAHO PANHANDLE NATIONAL FORESTS
Roadless Area Boundary
0 1 2 3 4
miles
C-288

GILT EDGE-SILVER CREEK #01792

Acreage:

Gross Acres:		Net Acres:	
Lolo Forest	11,200	Lolo Forest	11,200
Idaho Panhandle Forests	300	Idaho Panhandle Forests	300
Total	11,500		11,500

I. Description

A. Location and Access

This roadless study area lies 6 miles west of DeBorgia and 20 miles west of St. Regis. It is an elongated unit extending between Interstate 90 and the Idaho border, a distance of 6 miles. It is about 4 miles wide. The State Line Road (No. 391) provides southern and western access points. Forest System roads along the West and Middle Forks of Big Creek extend into and form part of the eastern boundary. Access to the north comes from Interstate 90 and the Saltese Beacon Road. Portions of two system trails totaling 6 miles cross the area. Proximity information for this area can be found in Table C-4 of this section.

B. General Description

The lower slopes support a mixed stand of western larch, Douglas-fir, spruce and lodgepole pine. Some areas in the vicinity of the State Line are sparsely timbered. These are primarily rockland and/or talus slopes or high elevation meadows dominated by beargrass, bunchgrass, and forbs. Nearly all of the Gilt Edge-Silver Creek Roadless Area is classified as commercial timberland.

A series of streams tributary to Big Creek head along the Stateline Divide and flow to the northeast. Consequently, several ridgelines extend off of the divide and parallel the streams. On the western edge, tributaries of Silver Creek drain off to the north. Glacial cirques occur along the State Line Divide and several contain small lakes.

Rocks of the Precambrian Age Wallace Formation and Ravalli Group are exposed in this roadless unit. They are broken and sheared by the complex Silver Creek fault system which is oriented generally east to west. The Wishard Sill, a gabbroic intrusive, cuts through the Wallace and Ravalli strata and is in turn offset by the faults.

The Gilt Edge-Silver Creek Roadless Area provides habitat for a variety of game and nongame wildlife species common to western Montana including cougar and moose. The lakes provide no fisheries because they are generally too small or too shallow to sustain fish.

Currently, the most popular activity in the area is big-game hunting. The edges of the area are used by sightseers, hikers, berrypickers, and stream-fishing recreationists.

II. Analysis of Wilderness Suitability

A. Capability

1. Wilderness Attributes

a. Naturalness - Ecological processes and the natural landscape in parts of the area have been disrupted to a certain extent by past domestic grazing. Basically, vegetative communities in the unit are similar to those found in surrounding areas outside the roadless boundary. Major fires that occurred in the area in the 1920's are considered part of the natural process.

About 20 percent of the area is grand fir/beargrass and 20 percent is subalpine fir/beadlily. These occur in elevations of 3,200 to 5,500 feet. Major species are Douglas-fir, larch, lodgepole pine, subalpine fir, and white pine with understories of beargrass, huckleberry, pinegrass, beadlily, goldthread, bunchberry, and bedstraw. Forty-five percent of the area is evenly divided between grand fir/beadlily, western red cedar/beadlily, and subalpine fir/beargrass. The remaining habitat types are subalpine fir/smooth woodrush, subalpine fir/menziesia, Douglas-fir/snowberry, Douglas-fir/blue huckleberry, Douglas-fir/ninebark, Douglas-fir/dwarf huckleberry, scree, and mountain grasslands.

While most of the animal species native to the area are found in the Gilt Edge-Silver Creek Roadless Area, none are dependent on wilderness management for viability or survival.

Air and water quality are considered excellent in the area.

The area includes a helispot, mineral development in the form of dozer trenches, mines and tunnels, spoil piles, tree plantations from the 1920 burn, and two unimproved roads.

b. Inspirational Values - The physical properties of the area do not contrast appreciably with the surrounding geography and consequently may not be awe-inspiring except in the general sense.

c. Recreational Values - There is remarkable scenery, severe topography, and abundant vegetative screening which provide medium to high opportunities for solitude even though there are many permanent off-site intrusions and perimeter roads. The area itself is intact with no major impacts. Interstate 90 is adjacent to the northern boundary.

Opportunities for primitive recreation are considered moderate because of the short distance from the perimeter to the core of the

area; however, diverse opportunities do exist. Vegetation and steep side slopes reduce access to the area.

d. Cultural/Historical Values - The area contains three old cabins and log flumes in Storm Creek and Gilt Edge Creek from turn-of-the-century logging activities. No prehistoric sites have been identified within the area.

e. Educational/Scientific or Unique Values - Some evidence of mining and logging activities can be considered historical, representative of western Montana.

There are no known threatened or endangered species of animals or plants in the area. Nor is the area recognized as having unique vegetative communities to be used as benchmarks or unusual or scarce ecosystem representatives not existing in existing wilderness areas. Gene pools in the unit do not differ appreciably from the surrounding area.

2. Manageability and Boundaries

For the most part, the boundaries of this unit follow topographic and man-made features; they would not be difficult to locate or monument on the ground. A road along Gilt Edge Creek (one quarter mile is improved and the balance is considered a trail) extends several miles into the interior of this area requiring that the eastern border be drawn around it. There are no private lands which would have to be excluded. Nonconforming activities include timber sales proposed along Big Sunday, Gilt Edge, and Big Middle Creeks.

B. Other Resources Found in the Area

The area provides habitat for a wide variety of game and nongame wildlife species commonly found in western Montana (see Appendix B-2, proposed Lolo Forest Plan, RDEIS). The unit has about 510 riparian acres.

Four oil and gas leases have been issued which encompass 100 percent of the study area. The unit also contains 43 mining claims. A northwest to southeast trending aeromagnetic high (areas of dense rock often containing base metals) lie in this region, and a number of prospects and small mining ventures dot the countryside. The minerals being sought include copper, lead, zinc, and silver. Along the northern edge of this area, there is a moderate potential for the occurence of stratabound copper-silver deposits in the Revett Formation. The Lolo National Forest had identified 11,200 acres of high to very high mineral potential.

The Gilt Edge-Silver Creek Roadless Area contains 55 acres classed as nonstocked, 762 acres of seedlings and saplings, 1,208 acres of poles, 3,644 acres of immature sawtimber, and 4,598 acres of mature sawtimber. Of this, 9,386 acres are classified as commercial timber land. The suitable lands presently support as standing timber inventory of 79.8 MMBF with a long-term sustained yield in the area of 2.05 MMBF annually.

About 8,500 of the 20,700 acres of the Big Creek Range allotment are included in the area. The last permitted use was in 1983 for 29 cows for 75 AM's. About 267 acres within the area are considered suitable range.

On the current Recreation Opportunity System map, the area is shown as 100 percent roaded natural. Recreational use in the area is seasonal, generally limited to hunting seasons. No developed sites exist within or adjacent to the area.

2. Resource Summary

01792 - Gilt Edge-Silver Creek-Roadless Area

Category		
Gross acres		
Lolo Forest	Acres	11200
Idaho Panhandle For.	Acres	300
Total	Acres	11500
Net Acres		
Lolo Forest	Acres	11200
Idaho Panhandle For.	Acres	300
Total	Acres	11500
Recreation		
Primitive	RVD's	0
Semiprim. Nonmot.	RVD's	0
Semiprim. Motor.	RVD's	0
Roaded Natural		
Lolo Forest	RVD's	11200
Idaho Panhandle	RVD's	300
Total	RVD's	11500
Range		
Existing Obligated		
Suitable (Lolo only)	Acres	267
Allotments	No.	1
AUMs	AUMs	75
Existing Vacant		
Suitable	Acres	0
Allotments	No.	0
AUMs	AUMs	0
Proposed		
Suitable	Acres	0
AUMs	AUMs	0
Timber (Lolo only)		
Tenative Suitable	Acres	9386
Standing Volume	MBF	79.8
Bald Eagle Hab.	Acres	0
Gray Wolf Hab.	Acres	0
Peregrin Fal. Hab.	Acres	0
Wildlife - Big Game		
Summer Habitat	Acres	0
Winter Habitat	Acres	0
Significant Fisheries (Lolo only)		
Stream Miles	Miles	6.0
Stream Habitat	Hab. Ac	5.8
Lakes	No.	0
Lake Habitat	Hab. Ac	0
Water Develop.		
Existing	No.	0
Hardrock Potential		
Very High	Acres	0
High		
Lolo Forest	Acres	11200
Idaho Pan. For.	Acres	300
Total	Acres	11500
Moderate	Acres	0
Low	Acres	0
Mining Claims (Lolo only)	No.	43
Oil & Gas Potential		
Very High	Acres	0
High	Acres	0
Moderate	Acres	0
Low		
Lolo Forest	Acres	11200
Idaho Pan. For.	Acres	300

Corridors		
Exist. & Pot.	No.	0
Wildlife - T&E		
Grizzly Bear		
Habitat Sit. 1	Acres	0
Habitat Sit. 2	Acres	0
Habitat Sit. 3	Acres	0

Total	Acres	11500
Oil & Gas Leases	No.	4
Leased Area (Lolo only)	Acres	11200

3. Management Considerations

There is no private land within this area. There are no management considerations.

The management emphasis for the Gilt Edge Silver Creek Roadless Area is a combination of management prescriptions and alternatives from two National Forests, the Lolo, and Idaho Panhandle. Because resources, uses, and land conditions are somewhat different on each Forest, neither the alternatives nor the management emphasis are fully integrated. Because the Lolo Forest is the lead Forest for this roadless area, for purposees of this evaluation, the alternatives and management emphasis from the other Forest has been integrated into those of the Lolo Forest as close as possible on the basis of goals and objectives common to each Forests alternatives and management emphasis.

Further information on the specific alternatives and management emphasis for the Idaho Panhandle National Forest's areas can be found in this Forest's draft Environmental Impact Statement for the Forest Plan.

The proposed wilderness/nonwilderness designation for area 1792 is made and documented in the Lolo Enviromental Impact Statement. This proposed designation has priority over all other land designations and none of the Forests can undertake any management activity other than current direction until such time that a Record of Decision is issued in conjunction with this document.

During the public reveiw period for the DEIS, there were few additional comments on the Gilt Edge-Silver Creek Area. Several comments favored wilderness designation for all existing roadless areas. Other responders opposed further additions to the wilderness system.

III. Impacts

Designation: Wilderness
Management Emphasis: Wilderness

Gilt Edge-Silver Creek Roadless Area is allocated to wilderness in Alternative g but this is the only alternative that the total area or any portion is allocated to wilderness.

Wilderness allocation can enhance the area's wilderness attributes since there are some uses and facilities not usually associated with wilderness allocation. Any existing motorized activities could be eliminated.

The approximately 9,400 acres of land tentatively suitable for timber production would not be available. This would remove about 80 MMBF from the Forest timber base.

Big game or elk management would not change much since the area does not contain significant summer or winter habitat. Cover/forage relationships should not change much over time except as influenced by wildfire control.

Social effects under wilderness allocation would primarily affect recreation use which would continue to be dominated by hunting.

The nonpriced effects are:

- Visual quality would be preserved.
- Wilderness area would increase.
- Diversity would tend toward old growth without wildfire but would be improved depending on the control policy.
- Water quality and fisheries would be maintained at their natural levels.
- Local employment may decrease slightly due to the unavailability of timber.

Economic effects would be represented by a loss of timber of less than 1 percent of the land base suitable for timber, and other resource values would be retained. The loss in timber volume can be mitigated by practicing intensive forestry in other areas.

Designation: Nonwilderness
Management Emphasis: Timber/Range

All alternatives except g allocate some of this area to timber prescriptions. Alternatives a through f allocate from 28 to 66 percent to this emphasis.

Allocation to the timber prescription will forego the possibility of wilderness allocation on about two thirds of the area by the end of the first decade. The area would be accessed with roads and harvest would be scheduled up to the limit of constraints for these prescriptions.

The nonpriced effects are:

- Visual quality would be at its lowest level, Maximum Modification.
- Semiprimitive recreation potential would be foregone by the end of the first decade.
- Wilderness characteristics would be compromised in a short time.
- Water quality and fisheries effects would be mitigated.
- Diversity would tend toward younger age classes with minimum old growth.
- The greatest number of jobs, mainly in the wood products industry, would be provided.

Social effects would include addition of some motorized use in the area. Economically the area provides a small percentage of the timber available on the Forest.

Designation: Nonwilderness
Management Emphasis: Wildlife

The main emphasis in this prescription is old growth. Alternative a allocates 9 percent, Alternatives b through f allocate from a trace to 2 percent for this emphasis.

The area does not contain any identified summer range, winter range, or threatened or endangered species habitat. No habitat improvement would be planned. Effects would not be appreciably different from those listed under the timber emphasis but wildlife objectives would be maintained.

Designation: Nonwilderness
Management Emphasis: Visual

Alternatives a and b allocate 31 percent, d, e, and f allocate 9 percent. Visuals are retained in the roadless management emphasis. Visual quality resource will be managed according to the management area classification. Effects are as stated under the timber emphasis with visual objectives being maintained.

Designation: Nonwilderness
Management Emphasis: Riparian

All alternatives contain inclusions of riparian zones and recognize the need to manage these areas according to policy and guidelines. Alternative g is the wilderness alternative and would not impact the riparian areas. Effects are as stated under the roadless emphasis.

Designation: Nonwilderness
Management Emphasis: Roadless

Alternative a allocates a trace to roadless management. Alternatives d, e, and f allocate 10 percent. No other alternatives include roadless management.

The nonpriced effects are:

- Visual quality will be maintained at a very high level, retention.
- Semiprimitive and wilderness attributes can be retained for a long period.
- Age class distribution and diversity would be dominated by old growth, young age classes would be minimal.
- Water quality and fisheries would not be affected.
- Few wood products related jobs would be added to the industry.

The economic effects of this emphasis are reflected in the fact that the area represents less than 1 percent of the land base suitable for timber, and other resources would be retained.

Designation: Nonwilderness
Management Emphasis: Miscellaneous

Miscellaneous management emphases include non-forest land, administrative sites, historical or cultural sites, mineral extraction sites, transportation and

utility corridors, campgrounds, picnic areas, ski areas, and areas with concentrated public use.

Alternatives a and b manage nearly 34 percent of the area for these sites. Alternative c allocates 15 percent and alternatives d, e, and f allocate 9 percent.

ACRES OF AREA UNDER MANAGEMENT FOR EACH EMPHASIS BY ALTERNATIVE
(Refer to Appendix C Introduction for Management Areas under each emphasis.)

Management Emphasis	Alternatives a	b	c	d	e	f	g
NONWILDERNESS							
Timber/Range	3414	4052	9730	7368	7368	7368	-
Wild life							
Grizzly bear	-	-	-	-	-	-	-
Other	952	224	90	177	177	177	-
Visual	3527	3472	-	1007	1007	1007	-
Miscellaneous	3506	3752	1680	1014	1014	1014	-
Riparian	*	*	*	510	510	510	-
Roadless	101	-	-	1424	1424	1424	-
WILDERNESS							
Wilderness	-	-	-	-	-	-	11500
Total	11500	11500	11500	11500	11500	11500	11500

* Small inclusions occur in other management emphasis items.

SUMMARY OF MANAGEMENT EMPHASIS (acres managed by decade)

Developed							
decade 1	7893	7748	8320	8320	8320	8320	-
decade 5	11399	11500	11500	10076	10076	10076	-
Roadless							
decade 1	3607	3752	3180	3180	3180	3180	-
decade 5	101	-	-	1424	1424	1424	-
Wilderness							
decade 1	-	-	-	-	-	-	11500
decade 5	-	-	-	-	-	-	11500

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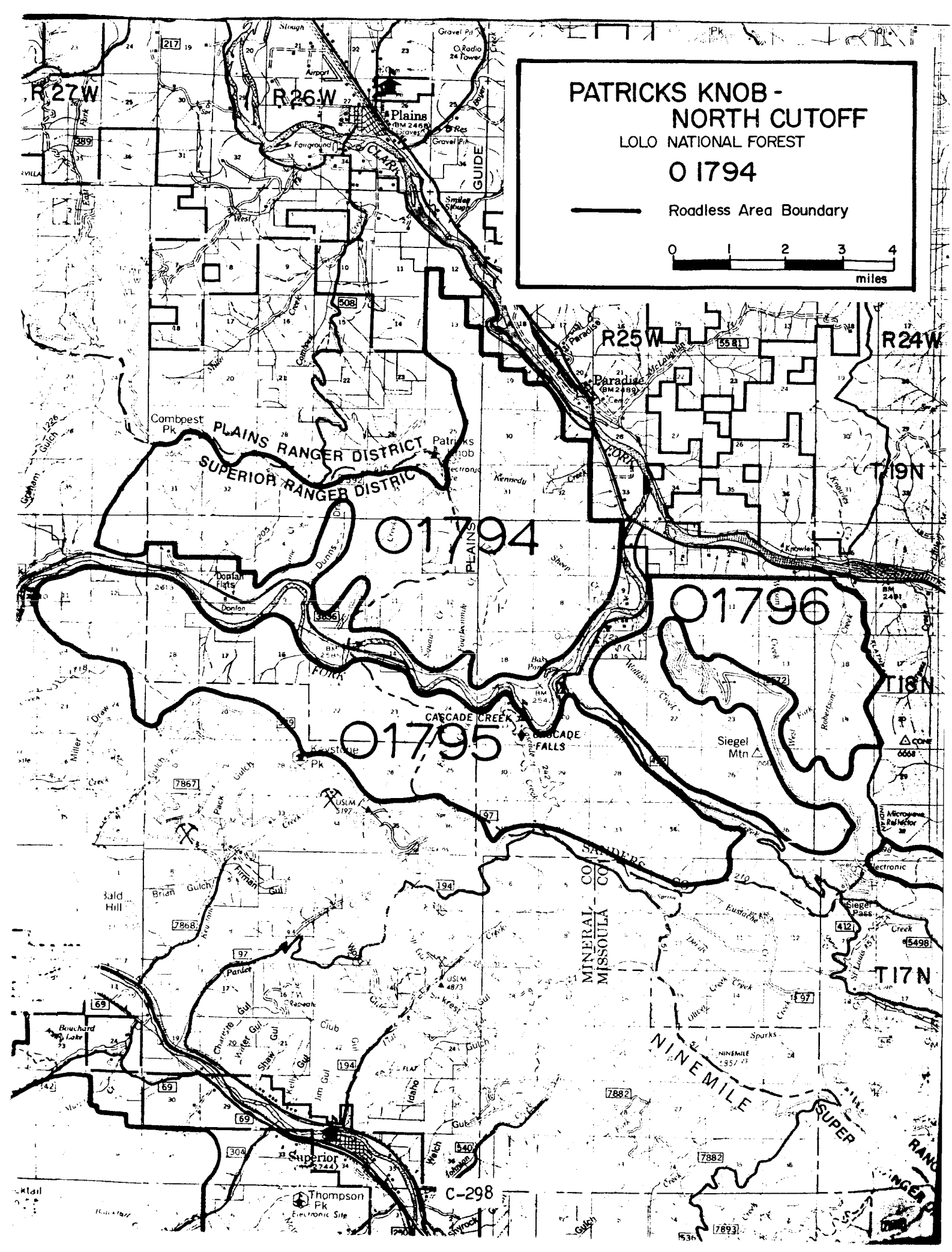
PATRICKS KNOB - NORTH CUTOFF
LOLO NATIONAL FOREST
0 1794
Roadless Area Boundary
0 1 2 3 4
miles
R27W
R26W
R25W
R24W
T19N
T18N
T17N
01794
01795
01796
PLAINS RANGER DISTRICT
SUPERIOR RANGER DISTRIC
Plains
Paradise
Superior
Combpest Pk
Patricks Knob
Dontan Flats
Keystone Pk
Siegel Mtn
Siegel Pass
Bald Hill
Thompson Pk
CASCADE CREEK
CASCADE FALLS
MINERAL CO
MISSOULA CO
NINEMILE
C-298

PATRICK'S KNOB-NORTH CUTOFF #01794

Acreage:

Gross Acres: 18,800
Net Acres: 17,200

I. Description

A. Location and Access

This roadless unit lies about 6 miles south of the town of Plains, and it is within a mile to the southwest of the town of Paradise. The general outline of the area is an arc, the outer boundary being the Clark Fork River which flows initially from west to east near Cascade Creek. It then turns north and later merges with the Flathead River. State Highway 135 and the Burlington Northern Railroad parallel the river along this stretch. The inner roadless boundary follows Lolo Forest Road No. 7592 along the Cabinet-Coeur d'Alene (CC) Divide to the Patrick's Knob lookout. Both the State highway and the Forest Service road provide the main access to the Patrick's Knob-North Cutoff Roadless Area. One intrusion into the unit is a road along Dunn's Draw which comes within one-quarter mile of the inner boundary. Refer to Table C-4 for proximity information.

The original RARE II inventory included 25,800 gross and 24,200 net acres. A proposed Fiscal Year 1984 timber sale will reduce the area by 7,000 acres.

B. General Description

The area west of Dunn's Draw contains heavy stands of timber, mostly Douglas-fir and western larch. Ponderosa pine stands occur on drier south and west slopes. The rocky slopes east of Dunn's Draw have scattered light to moderate stands of ponderosa pine and Douglas-fir with heavier stands of Douglas-fir and western larch on the moist sites at the higher elevations. About 75 percent of the Patrick's Knob-North Cutoff unit is classified as commercial timber land.

A series of streams run down from the CC Divide and flow into the Clark Fork. From Patrict's Knob to the river, the elevation difference is approximately 4,000 feet.

Most of this roadless area is underlain by argillites and quartzites of the Precambrian Age Prichard Formation. Ravalli Group rocks crop out in the western portion of this unit. Gabbroic dikes and sills, some 50 feet thick, cut across the Prichard strata. The main structural feature of this region is a west to northwest trending system of steeply dipping faults. Several thrust faults occur on the west end of the area. A large east-to-west transverse fault runs through the entire length of the roadless area offsetting the rock formations and displacing the other faults. There is a lot of interest by the public in this area for decorative stone which lies in the talus slopes along the hillsides.

The roadless area provides habitat for a variety of game and nongame wildlife species commonly found in western Montana. Visitors can often view big horn sheep from the highway as well as deer and elk herds in winter and summer ranges in the area. There are no fisheries in the immediate area; however, the Clark Fork River is used extensively for sport fishing. Portions of the area are wintering habitat for the bald eagle and contains potential nesting habitat.

The Clark Fork River has a high recreation use, and the face of this roadless area is visible from the river. Big game hunting is popular on this face. Also, bighorn sheep were planted in this area, and the herd has grown large enough to allow a few hunting permits to be drawn each year.

II. Analysis of Wilderness Suitability

A. Capability

1. Wilderness Attributes

a. Naturalness - Ecological processes and the natural landscape in parts of the area had been disrupted to a certain extent by past domestic grazing; however, no range improvements are visible and the area has recovered. Basically, vegetative communities in the unit are similar to those found in surrounding areas outside the roadless boundary.

About 32 percent of the area is in the Douglas-fir/ninebark habitat type at elevations of 4,800 to 5,800 feet. Douglas-fir normally dominates the sites with lesser amounts of ponderosa pine, larch, and lodgepole. Twenty-eight percent of the area is scree. The remaining area is occupied by various habitat types of the Douglas-fir, grand fir, western red cedar, western hemlock and subalpine fir series which are commonly found in this portion of the Lolo Forest.

There is bighorn sheep habitat as well as valuable deer and elk winter range and some elk summer habitat. Viewing animals such as these in their natural habitat could be closely associated with a wilderness experience in some visitor's minds. However, since the viewpoints are from the highway, it is likely the visitor would simply enjoy the easy, convenient opportunity to view the animals.

The air and water quality are considered good within the area.

Human intrusions include a helispot on Patrick's Knob Peak, two mining developments, two mining roads, a primitive road in the Kennedy Creek drainage, a lookout structure and electronic site with a high tower on Patrick's Knob, and 1 mile of dozer fireline.

b. Inspirational Value - The size of the area offers visitors a limited opportunity to experience a sense of being alone which may contrast with their daily lives. The physical properties of the

area do not differ appreciably with the surrounding geography and, consequently, may not be awe-inspiring except in the general sense.

c. Recreational Values - Opportunities for primitive recreation are moderate due to moderate diversity, the distance from the core to the perimeter, and topographic and vegetative screening. Challenges to visitors are few because of good road access; however, physical challenges are readily available in the form of steep topography.

The Burlington Northern Railroad and a State highway are located adjacent to the south and east boundaries. Few opportunities for solitude exist due to the permanent intrusions; however, in the higher areas and upper draws and ridges, moderate topographic and vegetative screening exists.

d. Cultural/Historical Values - One prehistoric site has been identified in the area. Also, there is a cultural/historical site on Fourteen Mile Creek consisting of a old bootlegger's cabin.

e. Educational/Scientific and Unique Values - This area contains minor amounts of the western hemlock/beadlily habitat type which is confined to the extreme northwestern part of the Forest. The area contains the proposed Squaw Creek Research Natural Area to provide an example of scree habitat type. The area is being considered but has not been selected yet. The remaining ecosystems in this area are well represented in existing wilderness areas. As mentioned before, the area provides the visitor with an opportunity to view deer, elk, and bighorn sheep in their natural habitats.

2. Manageability and Boundaries

The Patrick's Knob-North Cutoff unit is almost subdivided into two separate areas because of the road and associated intrusions up Dunn's Draw. Except for that portion along the CC Divide, most of the boundary does not follow easily recognizeable features. For the most part, the boundary would be difficult to locate on the ground.

Little of the unit is remote and free from external influences. Major transportation routes parallel the outside boundary, and a highly used Forest Service road follows the CC Divide. Some 1,600 acres of private and State land lies inside the boundary. If land exchanges cannot be made, the external boundary lines will have to be redrawn to exclude as much of this land as possible. Also, a timber sale covering a large portion of the area is scheduled for harvesting.

B. Other Resources Found in the Area

The area provides habitat for a variety of game and nongame wildlife speices commonly found in western Montana (see Appendix B-2, Proposed Lolo Forest Plan, RDEIS). It has approximately 10,597 acres of deer and elk winter range as well as 21 acres of elk summer habitat. Bighorn sheep were reintroduced to this area in 1979. There are about 202 riparian acres in the unit. The unit has no potential fisheries.

There are nine oil and gas leases issued on the subject land covering about 90 percent of the total acreage. The mining claim index lists 28 unpatented claims in this area. Although there has been prospecting for gold, silver, and copper, most of the claims staked are for decorative stone. Colorful iron staining makes some of the rock layers desirable for fireplaces, patios, and siding. The U.S. Geological Survey indicates that there is a moderate potential for the occurence of base and precious metal deposits. In the northwestern and central portions, rock strata crop out which, in the Cabinet Mountains, contain commercial quantities of copper and silver. The southwest corner has moderate potential for stratabound (Sullivan type) concentrations of lead/zinc/silver. There are no acres of high or very high mineral potential in this roadless unit.

The Patrick's Knob-North Cutoff Roadless Area contains 2,064 acres classed as nonstocked, 147 acres of seedlings and saplings, 476 acres of poles, 2,376 acres of immature sawtimber, and 10,642 acres of mature sawtimber. Of this, 12,127 acres are classified as commercial timber land. The suitable lands presently support a standing timber inventory of 98 MMBF with a long-term sustained yield in the area of 2.06 MMBF annually.

About 90 percent of the 15,000-acre Cutoff Range Allotment is included within the area. About 10 percent of the included area is primary range. The last permitted use was in 1969 for 50 cows on 50 AM's.

On the current Recreation Opportunity System map, 40 percent of the area is semiprimitive motorized and 60 percent is roaded natural. Extensive road development surrounding this roadless area provides easy access for dispersed recreational activities such as hiking, hunting, and viewing. Recreational use is light with the exception of fall hunting activities.

The area contains one prehistoric and one historic site.

C. Resource Summary

01794 - Patrick's Knob-North Cutoff- Roadless Area

Category					
Gross acres	Acres	18800	Bald Eagle Hab.	Acres	7000
Net Acres	Acres	17200	Gray Wolf Hab.	Acres	0
			Peregrin Fal. Hab.	Acres	100
Recreation					
Primitive	RVD's	0	Wildlife - Big Game		
Semiprim. Nonmot.	RVD's	34400	Summer Habitat	Acres	21
Semiprim. Motor.	RVD's	0	Winter Habitat	Acres	10597
Roaded Natural	RVD's	10320			
			Significant Fisheries		
Range			Stream Miles	Miles	0
Existing Obligated			Stream Habitat	Hab. Ac	0
Suitable	Acres	0	Lakes	No.	0
Allotments	No.	0	Lake Habitat	Hab. Ac	0
AUMs	AUMs	0			

Existing Vacant		
Suitable	Acres	1037
Allotments	No.	1
AUMs	AUMs	36
Proposed		
Suitable	Acres	0
AUMs	AUMs	0
Timber		
Tenative Suitable	Acres	12107
Standing Volume	MMBF	98.1
Corridors		
Exist. & Pot.	No.	0
Wildlife - T&E		
Grizzly Bear		
Habitat Sit. 1	Acres	0
Habitat Sit. 2	Acres	0
Habitat Sit. 3	Acres	0
Water Develop.		
Existing	No.	0
Hardrock Potential		
Very High	Acres	0
High	Acres	0
Moderate	Acres	17200
Low	Acres	0
Mining Claims .	No.	28
Oil & Gas Potential		
Very High	Acres	0
High	Acres	0
Moderate	Acres	17200
Low	Acres	0
Oil & Gas Leases	No.	9
Leased Area	Acres	15500

D. Management Considerations

The area contains 1,600 acres of private and Montana State land.

During the public reveiw period for the DEIS, there were few additional comments on the Patrick's Knob-North Cutoff Area. Several comments favored wilderness designation for all existing roadless areas. Other responders opposed further additions to the wilderness system.

III. Impacts

Designation: Wilderness
Management Emphasis: Wilderness

This roadless area is allocated to wilderness in Alternative g but this is the only alternative that the total area or any portion is allocated to wilderness.

Wilderness allocation can enhance the area's wilderness attributes since there are existing uses and facilities not usually associated with wilderness allocation. Any existing motorized activities could be eliminated.

Current vacant livestock grazing of 36 AUM's could continue on portions of allotments in the area but use of motorized equipment would probably change.

The approximately 12,000 acres of land tentatively suitable for timber production would not be available. This would remove about 98 MMBF from the Forest timber base.

Under wilderness allocation, recreation use would continue to be a variety of activities, both summer and winter.

The nonpriced effects are:

- Visual quality would be Preserved.
- Wilderness area would increase.
- Diversity would tend toward old growth without wildfire but could be improved depending on the control policy.
- Water quality and fisheries would be maintained at their present natural levels.
- Local employment may decrease slightly due to the unavailability of timber.

Economic impacts would be reflected in the timber volume lost. This loss of volume could be mitigated by practicing intensive forestry elsewhere.

Designation: Nonwilderness
Management Emphasis: Timber/Range

All alternatives except g allocate from 2 to 30 percent of the area to timber management. Allocation to the timber prescription will forego the possibility of wilderness allocation on about 42 percent of the area by the end of the first decade except for Alternative b which maintains 100 percent as roadless. The area will be accessed with roads and harvest will be scheduled up to the limit of constraints for these prescriptions.

The nonpriced effects are:

- Visual quality would be at its lowest level, Maximum Modification.
- Semiprimitive recreation potential would be foregone by the end of the first decade.
- Wilderness characteristics would be compromised in a short time.
- Diversity would tend toward younger age clases with minimum old growth.
- Water quality and fisheries effects would be mitigated.
- The greatest number of jobs, mainly in the woods products industry, would be provided.

Economic effects would be reflected in the timber volume harvested.

Designation: Nonwilderness
Management Emphasis: Wildlife

The main emphasis in this prescription is big-game winter range. Alternatives allocate from 23 to 67 percent to wildlife management.

Timber harvest would occur if enough timber is available and could be used to achieve habitat objectives. Other management activities may include prescribed burning. Effects would not differ appreciably from those listed under the timber emphasis except wildlife objectives would be maintained.

Designation: Nonwilderness
Management Emphasis: Visual

Alternatives allocate from 10 to 20 percent of the area to visual management, except the wilderness alternative.Visuals are retained in the roadless management emphasis. Visual quality resource will be managed according to the management area classification. Effects are essentially as listed under the timber management emphasis but visual objectives are maintained.

Designation: Nonwilderness
Management Emphasis: Riparian

All alternatives contain inclusions of riparian zones and recognize the need to manage these areas according to policy and guidelines. Alternative g is the wilderness alternative and would not impact the riparian areas.Other effects are as listed under the roadless management emphasis.

Designation: Nonwilderness
Management Emphasis: Roadless

Alternatives allocate from 3 to 50 percent of the area to roadless management.

The nonpriced effects are:

- Visual quality will be maintained at a very high level, Retention.
- Semiprimitive and wilderness attributes can be retained for a long period.
- Age class distribution and diversity would be dominated by old growth, young age classes would be minimal.
- Water quality and fisheries would not be affected.
- Few wood products-related jobs would be added to the industry.

Economic impacts would be reflected in the timber volume lost.This loss of volume would be mitigated by practicing intensive forestry elsewhere.

Designation: Nonwilderness
Management Emphasis: Miscellaneous

Miscellaneous management emphases include non-forest land, administrative sites, historical or cultural sites, mineral extraction sites, transportation and utility corridors, campgrounds, picnic areas, ski areas, and areas with concentrated public use.

ACRES OF AREA UNDER MANAGEMENT FOR EACH EMPHASIS BY ALTERNATIVE
(Refer to Appendix C Introduction for Management Areas under each emphasis.)

Management Emphasis	Alternatives a	b	c	d	e	f	g
NONWILDERNESS							
Timber/Range	1273	-	5176	362	362	362	-
Wild life							
Grizzly bear	-	-	-	-	-	-	-
Other	11490	-	5952	10117	10117	10117	-
Visual	2545	-	1944	2202	2202	2202	-
Miscellaneous	1290	-	310	3737	3737	3737	-
Riparian	*	*	*	193	193	193	-
Roadless	602	17200	3818	589	589	589	-
WILDERNESS							
Wilderness	-	-	-	-	-	-	17200
Total	17200	17200	17200	17200	17200	17200	17200

* Small inclusions occur in other management emphasis items.

SUMMARY OF MANAGEMENT EMPHASIS

Developed							
decade 1	7200	-	7200	7200	7200	7200	-
decade 5	16598	-	13382	16611	16611	16611	-
Roadless							
decade 1	10000	17200	10000	10000	10000	10000	-
decade 5	602	17200	3818	589	589	589	-
Wilderness							
decade 1	-	-	-	-	-	-	17200
decade 5	-	-	-	-	-	-	17200

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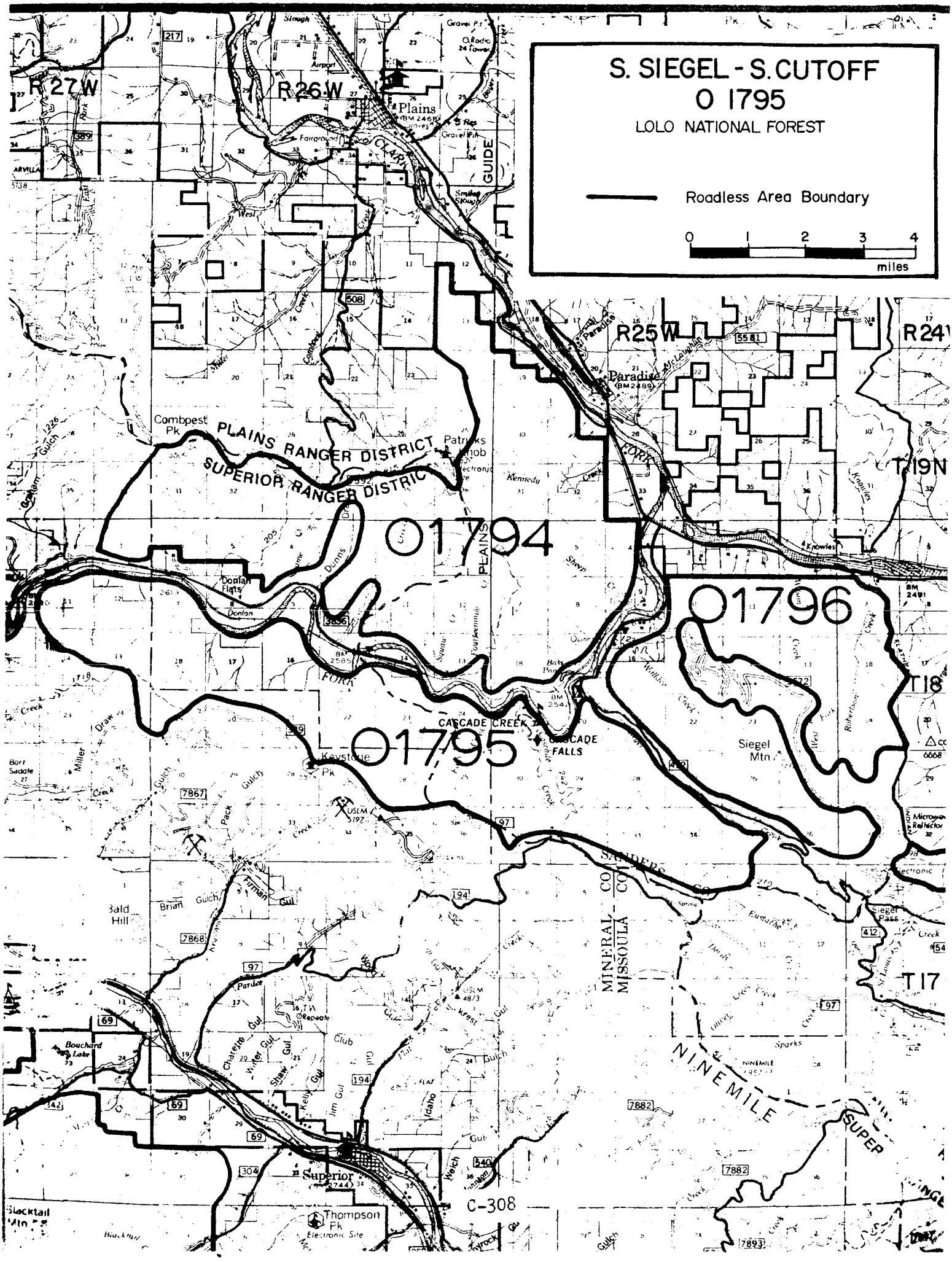
S. SIEGEL - S. CUTOFF
0 1795
LOLO NATIONAL FOREST
Roadless Area Boundary
0 1 2 3 4
miles
R27W
R26W
R25W
Plains
Paradise
Combpest Pk
PLAINS RANGER DISTRICT
SUPERIOR RANGER DISTRIC
0 1794
0 1796
0 1795
CASCADE CREEK
CASCADE FALLS
Keystone Pk
Siegel Mtn
Bald Hill
Superior
Thompson Pk
Electronic Site
MINERAL - MISSOULA
NINEMILE
T19N
T18
T17
C-308

SOUTH SIEGEL-SOUTH CUTOFF #01795

Acreage:

Gross acres: 15,600
Net acres: 14,800

I. Description

A. Location and Access

The South Siegel-South Cutoff Roadless Area lies along the south side of the cutoff portion of the Clark Fork River from Mill Creek to Siegel Creek. Paradise, the nearest town, is about 6 miles to the north. The southern boundary is the Ninemile-Keystone drainage divide. Forest Service Roads No. 97 and 389 run along this ridge. State Highway 135 provides access to the area from the north. The only established internal access is the Cascade Creek Trail which connects State Highway 135 with Forest Service Road No. 97. The Seigel Creek Road, No. 412, forms the eastern boundary. Refer to Table C-4 for proximity information.

The original RARE II inventory included 19,100 gross and 17,600 net acres. The proposed Bonneville powerline reduced the area by 3,500 gross and 2,800 net acres.

B. General Description

This roadless unit is some 13 miles long and averages about 2.5 miles in width. It is oriented generally east to west and lies south of the Clark Fork River on the north-facing slope of the Ninemile-Keystone Divide. A series of parallel creeks drain this face and flow north into the Clark Fork River. From the ridge to the river, the elevation difference is almost 3,500 feet. No lakes or large streams occur in this area.

Most of the area is covered with heavy stands of timber with some areas of rocky soils with light timber cover. About 30 percent of the area is in the Douglas-fir/ninebark habitat type which is dominated by Douglas-fir with lesser amounts of ponderosa pine, larch, and lodgepole pine. Twenty percent of the area is Douglas-fir/pinegrass. Ridgeline stands often have a park-like appearance. Understories are varied but dominated by pinegrass. Almost all of this roadless area is classified as commercial timber land.

The South Siegel-South Cutoff Roadless Area provides habitat for a variety of game and nongame wildlife species commonly found in western Montana. Visitors can often view deer and elk on the winter range in the area. The area is also potential bighorn sheep habitat and is identified by the State of Montana as a reintroduction site. A reintroduction of bighorn sheep in an area adjacent to this has been successful, and visitors can view herds of these sheep on the hillsides from the highway. The area contains wintering habitat for bald eagles with

potential nesting sites. It also contains summer and nesting habitat for osprey.

Strata of the Precambrian Age Belt Supergroup crop out within this roadless area. Rocks containing iron-stained argillites and quartzites are exposed. Diabase dikes and sills have intruded these rocks bringing some copper, silver, and gold mineralization.

There is one developed Forest Service campground, Cascade Falls Campground, at Cascade Creek on Highway 135, with a National Recreational Trail, No. 242, from there to Cascade Falls. The historic Pardee-Iron Mountain Wagon Road is also within the area. Current popular activities include high use of the campground and nature trail, fishing adjacent in the Clark Fork River, hiking, and big game and upland grouse hunting. Cascade Falls and Keystone Peak are popular viewpoints.

II. Analysis of Wilderness Suitability

A. Capability

1. Wilderness Attributes

a. Naturalness - Ecological processes and the natural landscape in parts of the area have been disrupted to a certain extent by past domestic grazing. Range improvements include one or two short drift fences. Basically, vegetative communities in the unit are similar to those found in surrounding areas outside the roadless boundary.

Nearly 70 percent of the area is in a Douglas-fir habitat series with understories of ninebark, rough fescue, blue huckleberry, twinflower, snowberry, and pinegrass. Eighteen percent is subalpine fir/beadlily, menziesia and beargrass. Eleven percent is grand fir/beargrass and beadlily. The area also contains small amounts of scree and western red cedar/beadlily.

While most of the animal species native to the area are found in the South Siegel-South Cutoff Roadless Area, none are particularly dependent on wilderness for survival. Animals on winter range can be susceptible to human activity, and the area contains some acres of winter range. Viewing animals such as elk or bighorn sheep in their native habitat may be closely associated with a wilderness experience in some visitors' minds; however, this is less likely due to the ease of access to view these animals.

Air and water quality is considered good in the area.

Human developments within the area include evidence of past logging activity, trail facilities (signs, park benches, protective fences at overlooks), the Pardee-Iron Wagon Mountain Road, an abandoned telephone line, one old mining cabin, and two range study plots with agronomy cages.

b. Inspirational Values - The physical properties of the area do not contrast appreciably with the surrounding geography and, consequently, may not be awe-inspiring visually except in the general sense. This is a high use area with numerous off-site intrusions both visible and audible.

c. Recreational Values - Primitive recreation opportunities are low. The terrain and small size of the area limit the need for primitive skills and offers only moderate challenges to the visitor.

Stumps occur on the more gentle slopes as the result of logging activities. The St. Regis Cutoff Highway and Burlington Northern Railroad diminish the solitude opportunity both from a noise and a visual standpoint. A few logged areas are visible from within the area.

d. Cultural/Historical Values - The area contains cultural resources including the historic mining road, a mining cabin, and some prehistoric sites.

e. Educational/Scientific Values - There are no known threatened or endangered species of animals or plants in the area. There is opportunity for the casual observance of wildlife in their natural habitat. Formal study is being conducted on range in the area using study plots with agronomy cages.

f. Uniqueness - The area is not recognized as having unique vegetative communities which could be used as benchmarks. Neither are there any scarce or unusual ecosystems present. Gene pools in the unit do not differ appreciably from the surrounding area. The ecosystems in this area are well represented in existing wilderness areas.

2. Manageability and Boundaries

The South Siegel-South Cutoff Roadless Area is long and narrow with most of the boundary following natural or easily recognizable physical features. It would be easily located on the ground.

Little of this area is free of external influences. A State Highway and the Burlington Northern Railroad form part of the northern boundary. Most of the unit is impacted by the sights and sounds associated with these transportation routes. Another nonconforming structure, the Bonneville powerline, is currently under construction along the western end of the area.

Access points are limited to the northeast corner along the Keystone Divide and near the Cascade Campground.

The existing boundary will need to be adjusted to omit 800 acres of State and private land along the northwestern margin. Elimination of these lands would, however, leave a narrow neck about one-quarter mile wide in one portion of the unit.

B. Other Resources Found in the Area

1. Potential

The area provides habitat for a variety of game and nongame wildlife species commonly found in western Montana (see Appendix B-2, Proposed Lolo Forest Plan, RDEIS). There is no major fishery in the unit. The area contains 3,400 acres of deer and elk winter range and 92 riparian acres.

Sixty-five unpatented mining claims have been recorded in this area, many for the iron-stained decorative building stone. The northern border has a moderate potential for containing Sullivan type lead/zinc/silver in the Pritchard Formation. Precious and base metal potential is present along the myriad of faults and intrusive dikes and sills. The southern portion of the area exhibits a moderate potential for Revett Formation copper-silver mineralization. There are five issued oil and gas leases inside the South Siegel-South Cutoff unit which cover about 60 percent of the total acreage. This roadless area also contains 676 acres of mineral potential deemed to be high or very high.

This area contains 412 acres classed as nonstocked, 85 acres of immature sawtimber, and 10,488 acres of mature sawtimber. Of this, 13,762 acres are classified as commercial timber land. The suitable lands presently support a standing timber inventory of 111.5 MMBF with a long-term sustained yield in the area of 2.39 MMBF annually.

The area contains two range allotments: Keystone is an active allotment of 21 head for 94 animal months; The Siegel Creek allotment has been inactive since 1968. Range improvements consist of one or two short drift fences.

Although fishing opportunities exist adjacent to the area in the Clark Fork River, fishable streams or lakes do not occur within the area. Recreational activities include hiking, big game hunting, and upland grouse hunting. The Cascade Falls and Keystone Peak are popular viewpoints. About 30 percent of this unit is classified as semiprimitive motorized with the balance of the area being roaded natural.

2. Resource Summary

01795 - South Seigel-South Cutoff - Roadless Area

Category					
Gross acres	Acres	15600	Bald Eagle Hab.	Acres	6000
Net Acres	Acres	14800	Gray Wolf Hab.	Acres	0
			Peregrin Fal. Hab.	Acres	0
Recreation					
Primitive	RVD's	0	Wildlife - Big Game		
Semiprim. Nonmot.	RVD's	22200	Summer Habitat	Acres	0
Semiprim. Motor.	RVD's	103600	Winter Habitat	Acres	3400
Roaded Natural	RVD's	0			

Range		
Existing Obligated		
Suitable	Acres	1275
Allotments	No.	1
AUMs	AUMs	100
Existing Vacant		
Suitable	Acres	400
Allotments	No.	1
AUMs	AUMs	15
Proposed		
Suitable	Acres	0
AUMs	AUMs	0
Timber		
Tenative Suitable	Acres	13762
Standing Volume	MMBF	111.5
Corridors		
Exist. & Pot.	No.	1
Wildlife - T&E		
Grizzly Bear		
Habitat Sit. 1	Acres	0
Habitat Sit. 2	Acres	0
Habitat Sit. 3	Acres	0

Significant Fisheries		
Stream Miles	Miles	0
Stream Habitat	Hab. Ac	0
Lakes	No.	0
Lake Habitat	Hab. Ac	0
Water Develop.		
Existing	No.	0
Hardrock Potential		
Very High	Acres	613
High	Acres	0
Moderate	Acres	12421
Low	Acres	1766
Mining Claims .	No.	65
Oil & Gas Potential		
Very High	Acres	0
High	Acres	0
Moderate	Acres	14800
Low	Acres	0
Oil & Gas Leases	No.	5
Leased Area	Acres	8900

3. Management Considerations

The area contains 800 acres of State and private land.

4. Public Involvement

During the public review period for the DEIS, there were few additional comments on the South Siegal-South Cutoff Area. Several comments favored wilderness designation for all existing roadless areas. Other responders opposed further additions to the wilderness system.

III. Impacts

Designation: Wilderness
Management Emphasis: Wilderness

This roadless area is allocated to wilderness in Alternative g but this is the only alternative that the total area or any portion is allocatd to wilderness.

Wilderness allocation can enhance the areas's wilderness attributes since there are existing uses and facilities not usually associated with wilderness allocation. Any existing motorized activities could be eliminated.

Current and vacant livestock grazing of 115 AUM's could continue on portions of allotments in the area but use of motorized equipment would probably change.

The approximately 14,000 acres of land tentatively suitable for timber production would not be available. This would remove about 112 MMBF from the Forest timber base.

Social effects under wilderness allocation include recreation use which would continue to be a variety of activities, both summer and winter.

The nonpriced effects are:

- Visual quality would be Preserved.
- Wilderness area would increase.
- Diversity would tend toward old growth without wildfire but could be improved depending on the control policy.
- Water quality and fisheries would be maintained at their present natural levels.
- Local employment may decrease slightly due to the unavailability of timber.

Economic impacts would be reflected in the timber volume lost. This loss of volume could be mitigated by practicing intensive forestry elsewhere. Other resource values would be retained.

Designation: Nonwilderness
Management Emphasis: Timber/Range

All alternatives except g allocate from 4 to 30 percent of the area to timber management.

Allocation to the timber prescription will forego the possibility of wilderness allocation on about 50 percent of the area by the end of the first decade. The area will be accessed with roads and harvest will be scheduled up to the limit of constraints for these prescriptions. This will have social effects since recreation use would be affected. Use probably would not change but opportunities for semiprimitive use would be foregone.

The nonpriced effects are:

- Visual quality would be at its lowest level, Maximum Modification.
- Semiprimitive recreation potential would be foregone by the end of the first deacde.
- Wilderness characteristics would be compromised in a short time.
- Diversity would tend toward younger age classes with minimum old growth.
- Water quality and fisheries effects would be mitigated.
- The greatest number of jobs, mainly in the wood products industry, would be provided.

Economic impacts are reflected in that the size of the area is a small percentage of the timber volume available on the Forest.

Designation: Nonwilderness
Management Emphasis: Wildlife

The main emphasis in this prescription is big-game winter range. Alternative a allocates 11 percent, Alternative c allocates 1 percent, and d through f allocate 44 percent of the area to wildlife management.

Timber harvest would occur if enough timber is available and could be used to achieve habitat objectives. Other management activities may include prescribed burning. Effects do not differ appreciably from those listed under the timber management emphasis except that all wildlife objectives would be maintained.

Designation: Nonwilderness
Management Emphasis: Visual

Alternative a allocates 59 percent of the area to visual management. All other alternatives allocate from 2 to 18 percent, except g, the wilderness alternative.

Visuals are retained in the roadless management emphasis. Visual quality resource will be managed according to the management area classification. The impacts for this emphasis do not differ from the timber emphasis but visual objectives would be maintained.

Designation: Nonwilderness
Management Emphasis: Riparian

All alternatives contain inclusions of riparian zones and recognize the need to manage these areas according to policy and guidelines. Alternative g is the wilderness alternative and would not impact the riparian areas.

Designation: Nonwilderness
Management Emphasis: Roadless

Alternative b allocates 94 percent of the area to roadless management and Alternative c allocates 5 percent. None of the other alternatives manage roadless areas.

The nonpriced effects are:

- Visual quality will be maintained at a very high level, Retention.
- Semiprimitive and wilderness attributes can be retained for a long period.
- Age class distribution and diversity would be dominated by old growth, young age classes would be minimal.
- Water quality and fisheries would not be affected.
- Few wood product related jobs would be added to the industry.

The economic impacts would be reflected in the timber volume lost. This loss of volume could be mitigated by practicing intensive forestry elsewhere. Other resources would be retained.

Designation: Nonwilderness
Management Emphasis: Miscellaneous

Miscellaneous management emphases include non-forest land, administrative sites, historical or cultural sites, mineral extraction sites, transportation and utility corridors, campgrounds, picnic areas, ski areas, and areas with concentrated public use.

Alternatives c through f manage from 24 to 33 percent of the area for these sites.

ACRES OF AREA UNDER MANAGEMENT FOR EACH EMPHASIS BY ALTERNATIVE
(Refer to Appendix C Introduction for Management Areas under each emphasis.)

Management Emphasis	Alternatives a	b	c	d	e	f	g
NONWILDERNESS							
Timber/Range	4470	651	6393	2200	2200	2200	-
Wild life							
Grizzly bear	-	-	-	-	-	-	-
Other	1583	-	148	6543	6543	6543	-
Visual	8747	311	2679	2221	2221	2221	-
Miscellaneous	-	-	4810	3494	3494	3494	-
Riparian	*	*	*	342	342	342	-
Roadless	-	13838	770	-	-	-	-
WILDERNESS							
Wilderness	-	-	-	-	-	-	14800
Total	14800	14800	14800	14800	14800	14800	14800

* Small inclusions occur in other management emphasis items.

SUMMARY OF MANAGEMENT EMPHASIS (acres managed by decade)

Developed							
decade 1	7360	962	7360	7360	7360	7360	-
decade 5	14800	962	14030	14800	14800	14800	-
Roadless							
decade 1	7440	13838	7440	7440	7440	7440	-
decade 5	-	13838	770	-	-	-	-
Wilderness							
decade 1	-	-	-	-	-	-	14800
decade 5	-	-	-	-	-	-	14800

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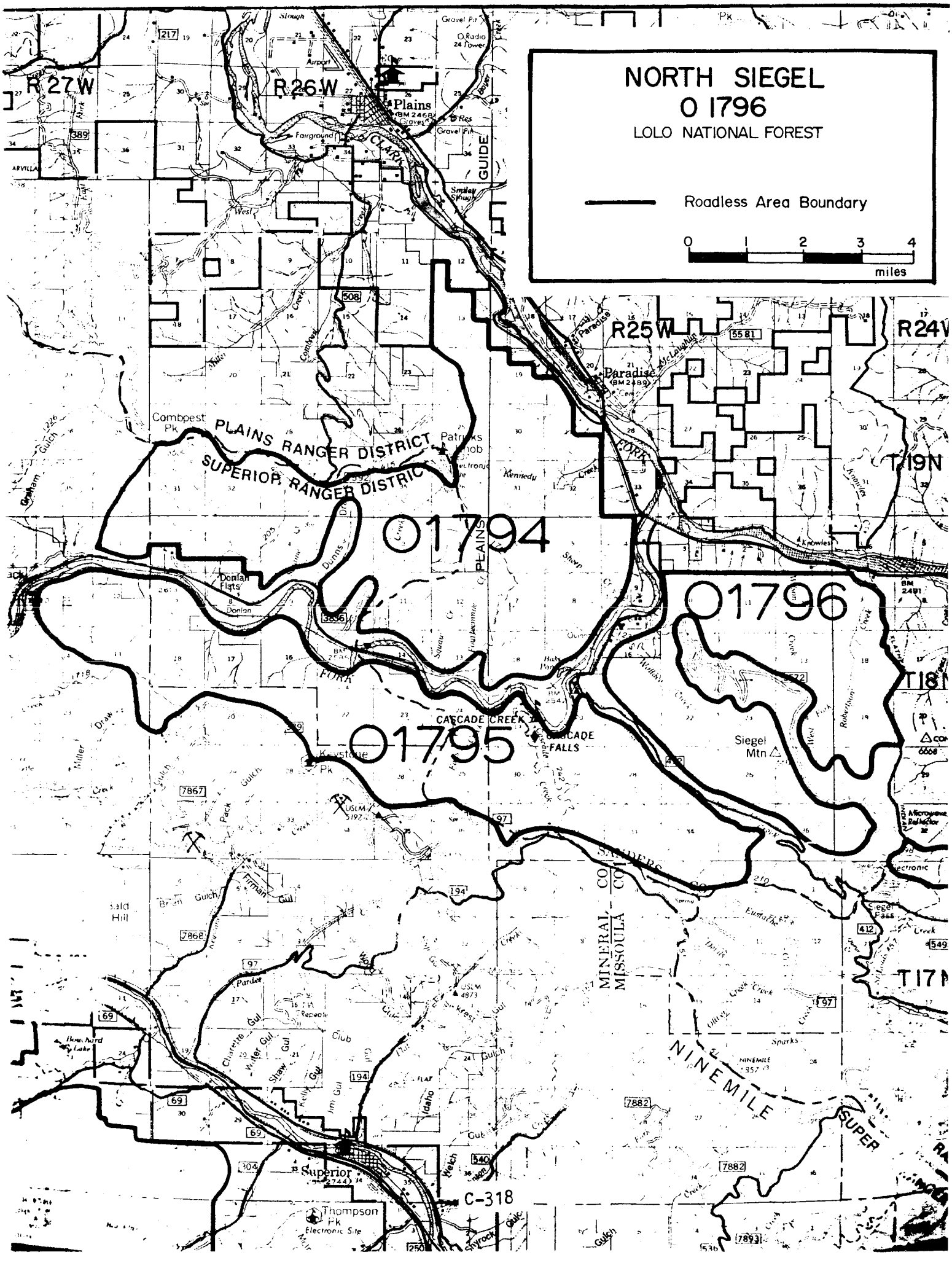
NORTH SIEGEL
0 1796
LOLO NATIONAL FOREST
Roadless Area Boundary
0 1 2 3 4
miles
R 27 W
R 26 W
R25W
R24W
T19N
T18N
T17N
Plains
Paradise
Superior
PLAINS RANGER DISTRICT
SUPERIOR RANGER DISTRICT
01794
01795
01796
CASCADE CREEK
CASCADE FALLS
Siegel Mtn
Donlan Flats
Keystone Pk
Thompson Pk
Electronic Site
MINERAL
MISSOULA
NINEMILE
C-318

NORTH SIEGEL #01796

Acreage:

Gross Acres: 10,200
Net Acres: 10,000

I. Description

A. Location and Access

The North Siegel Roadless Area is located about 4 miles southeast of the town of Paradise. The southern boundary is defined by the Siegel Creek Road, the Clark Fork River forms the western edge, and the northern boundary borders along private land. Forming the eastern edge is the Flathead Indian Reservation. State Highway 135 provides access along the west side, and entry on the south side comes from the Siegel Creek Road. Forest Service Road No. 5572 extends diagonally NW-SE well into the roadless area and almost divides the North Siegel unit into two parts. Interior access is obtained from this road. Refer to Table C-4 for proximity information.

There are portions of three system trails totaling 8 miles within this area. Roads include the Robertson Creek and Wallace Creek jeep trails and the Wilson Creek skid road.

B. General Description

Siegel Peak, the most noteable feature in the area, is part of a northwest-southeast trending ridge line. Streams tributary to the Clark Fork and Flathead Rivers flow from this ridge line. These streams have cut steep, narrow valleys with numerous rock ledges and scattererd timber stands.

The Precambrian Age Prichard Formation is exposed throughout the North Siegel Roadless unit. A number of gabbroic dikes and sills can also be found intruding into the Prichard argillites. Northwest-southeast trending faults generally parallel the strike of the bedrock and cause some sections of the Prichard Formation to be repeated in outcrop.

The midslopes above the river faces are covered with heavy stands of timber with mostly Douglas-fir and western larch on north and west slopes and ponderosa pine on south slopes. The higher elevation ridgetops are predominantly lodgepole pine. About half of the North Siegel Roadless unit has been designated suitable for timber.

II. Analysis of Wilderness Suitability

A. Capability

1. Wilderness Attributes

a. Naturalness - To a small extent, the natural ecological processes have been disrupted by domestic grazing; however, no range improvements occur inside the study area.

The vegetative communities in the North Siegel Roadless Area are similar to those found outside its boundaries. The most extensive community is the Douglas-fir/ninebark habitat type which covers 26 percent of the land. Douglas-fir dominates the site with smaller quantities of ponderosa pine, larch, and lodgepole pine. Understories consist of dense, brushy layers of ninebark or ocean spray. Drier slopes are more open with bunchgrasses and balsam root. Timber sites of this group are moderately productive and grow at elevations between 4,800 and 5,800 feet. At 18 percent, the subalpine fir/beargrass vegetative community comprises the next most common habitat group. It makes up most of the higher elevation types between 5,200 and 7,000 feet on steep, dry exposures. Lodgepole pine is abundant with varying amounts of subalpine and Douglas-fir. Understories are limited primarily to beargrass and huckleberry although elk sedge, heartleaf arnica, pinegrass, and grouse whortleberry are also found here. Timber production varies from high to low depending on site conditions. At 14 percent and 15 percent, respectively, the Douglas-fir/pinegrass and the Douglas-fir/blue huckleberry habitat groups constitute significant amounts of the area. Scree slopes comprise 14 percent of the area.

None of the animals found in the North Siegel Roadless Area are dependent on roadless/wilderness management for survival. Animals on winter ranges can be easily disturbed by human activity. This unit contains significant amounts of winter range. Viewing animals such as elk and deer in their native habitat may be associated with a wilderness experience in the minds of some people.

Water and air quality are considered to be good.

Intrusions in the area include a helispot on Siegel Mountain and the Gingery Water Ditch which is under special use permit.

b. Inspirational Values - The size of the area, and its topography which does not contrast with the surrounding terrain, does not provide particular inspirational values.

c. Primitive and Unconfined Recreation - Opportunities for solitude are generally low due to the short distance from the perimeter to the core; however, because of the highly dissected topography, some of the upper reaches of the canyons are secluded. The Burlington Northern Railroad and State highways are located to the north and west of the unit and are a constant source of outside

visual and aural impacts. Primitive recreation opportunities are moderate due to the moderate vegetative and topographic screening. The area contains challenging cliffs for climbers.

d. Cultural and Historic Values - There are no inventoried cultural or historical sites in the area.

e. Educational and Scientific Values - The are no known threatened or endangered species in this area. Gene pools in the study unit do not differ appreciably from the surrounding lands and ecosystems in this area are well represented in existing wilderness areas. In historic times, bighorn sheep once lived in Wallace Creek.

f. Uniqueness - There are no unique or scarce wildlife forms, ecosystems, or physical features in this area.

2. Manageability and Boundaries

Because the boundary is drawn to exclude Forest Service Road No. 5572, the North Siegel Roadless Area is not at all compact. This road effectively divides the unit into two linear parcels. With the exception of the Flathead Indian Reservation boundary, the line does not follow identifiable surface features. Almost all of this unit is influenced by the impacts resulting from the railroad and highways. Recreational use would be concentrated in the limited, screened areas causing on-site degredation of the roadless resource. A minor boundary adjustment would be needed to exclude the private and State land around Quinn's Hot Springs resort.

B. Other Resources Found in the Area

1. Potential

The area provides habitat for a wide variety of game and nongame wildlife species commonly found in western Montana (see Appendix B-2, Proposed Lolo Forest Plan, RDEIS). There are approximately 3,248 deer and elk winter range acres in the area as well as potential bighorn sheep habitat. The area also contains 150 riparian acres.

Parts of three issued oil and gas leases cover 25 percent of the area, and 17 mining claims have been located within the roadless boundary. Most of the claims are for iron-stained decorative stone. Siegel Creek has had some placer mining for gold in the past. The southwest part of the area has a moderate potential for lead/zinc/silver (Sullivan type deposits) in laminated argillites and siltites of the Prichard Formation. This same area contains a moderate potential for the occurence of vein deposits of base and precious metals. An inventory for mineral resources showed 841 acres of high-very high mineral potential in the area.

The North Siegel Roadless Area contains 827 acres classed as non-stocked, 129 acres of seedlings and saplings, 336 acres of poles, 1,945 acres of immature sawtimber, and 6,038 acres of mature sawtimber. Of this, 8,232 acres are classified as commercial

timberland. The suitable lands presently support a standing timber inventory of 61.23MMBF with a long-term sustained yield in the area of 1.46 MMBF annually.

About 640 acres of the old Robertson Creek range allotment are included within this area.

The current Recreation Opportunity map shows this area as 100 percent roaded natural. Recreational use has been light except for hunting activities in the fall. Opportunities for other dispersed recreation activities are limited by the steep rocky terrain over much of the area. There is one developed campground on private land adjacent to the area on Highway 135.

2. Resource Summary

01796 - North Siegel - Roadless Area

Category		
Gross acres	Acres	10200
Net Acres	Acres	10000
Recreation		
Primitive	RVD's	0
Semiprim. Nonmot.	RVD's	0
Semiprim. Motor.	RVD's	0
Roaded Natural	RVD's	100000
Range		
Existing Obligated		
Suitable	Acres	0
Allotments	No.	0
AUMs	AUMs	0
Existing Vacant		
Suitable	Acres	100
Allotments	No.	1
AUMs	AUMs	5
Proposed		
Suitable	Acres	0
AUMs	AUMs	0
Timber		
Tenative Suitable	Acres	8232
Standing Volume	MMBF	61.2
Corridors		
Exist. & Pot.	No.	0
Wildlife - T&E		
Grizzly Bear		
Habitat Sit. 1	Acres	0
Habitat Sit. 2	Acres	0
Habitat Sit. 3	Acres	0
Bald Eagle Hab.	Acres	2400
Gray Wolf Hab.	Acres	0
Peregrin Fal. Hab.	Acres	0
Wildlife - Big Game		
Summer Habitat	Acres	0
Winter Habitat	Acres	3248
Significant Fisheries		
Stream Miles	Miles	0
Stream Habitat	Hab. Ac	0
Lakes	No.	0
Lake Habitat	Hab. Ac	0
Water Develop.		
Existing	No.	0
Hardrock Potential		
Very High	Acres	672
High	Acres	0
Moderate	Acres	9328
Low	Acres	0
Mining Claims .	No.	17
Oil & Gas Potential		
Very High	Acres	0
High	Acres	0
Moderate	Acres	10000
Low	Acres	0
Oil & Gas Leases	No.	3
Leased Area	Acres	2500

3. Management Considerations

As the stands of lodgepole pine mature, they will become susceptible to infestation by the mountain pine beetle. Also, the private lands will need to be deleted in order to effect consistent land management over the entire unit.

4. Public Involvement

During the public reveiw period for the DEIS, there were few additional comments on the North Siegal Area. Several comments favored wilderness designation for all existing roadless areas. Other responders opposed further additions to the wilderness system.

III. Impacts

Designation: Wilderness
Management Emphasis: Wilderness

North Seigel Roadless Area is allocated to wilderness in Alternative g but this is the only alternative that the total area or any portion is allocated to wilderness.

There are existing uses and facilities not usually associated with wilderness allocation; therefore, wilderness allocation can enhance the area's wilderness attributes. Any existing motorized activities could be eliminated.

The approximately 8,200 acres of land tentatively suitable for timber production would not be available. This would remove about 61 MMBF of timber from the Forest base.

Big-game winter range management would not change much. Cover/forage relationships should not change much over time except as influenced by wildfire control.

Under wilderness allocation, recreation use would continue to be dominated by hunting. Social impacts would be minimal due to no change in recreation use.

The nonpriced effects are:

- Visual quality would be Preserved.
- Wilderness area would increase.
- Diversity would tend toward old growth without wildfire but could be improved depending on the control policy..
- Water quality and fisheries would be maintained at their present natural levels.
- Local employment may decrease slightly due to the unavailability of timber.

Economic effects would be reflected in the timber volume loss which is less than 1 percent of the land base suitable for timber, and other resource values would be retained. The loss in timber volume can be mitigated by practicing intensive forestry elsewhere.

Designation: Nonwilderness
Management Emphasis: Timber/Range

All alternatives except g allocate some of this area to timber prescriptions. Alternative a allocates 5 percent; Alternative b, 17 percent; Alternative c, 37 percent; Alternatives d, e, and f, 20 percent.

Allocation to the timber prescription will forego the possibility of wilderness allocation on 24 percent of the area by the end of the first decade. The area will be accessed with roads and harvest will be scheduled up to the limit of constraints for these prescriptions.

The nonpriced effects are:

- Visual quality would be at its lowest level, Maximum Modification.
- Semiprimitive recreation potential would be foregone by the end of the first decade.
- Wilderness charactaeristics would be compromised in a short time.
- Diversity would tend toward younger age classes with minimum old growth.
- Water quality and fisheries effects would be mitigated.
- The greatest number of jobs, mainly in the wood products industry, would be provided.

Social effects include the loss of semiprimitive recreation potential in the area. Economic effects are reflected in the relative small size of the area and the percentage of the available timber base on the Forest.

Designation: Nonwilderness
Management Emphasis: Wildlife

The area contains bald eagle habitat and big game winter range. There is some old-growth consideration. Alternative a allocates 41 percent to wildlife management; Alternative b, 3 percent; Alternative c, 19 percent; Alternatives d, e, and f, 36 percent.

Wildlife security and cover requirements include restrictions on human activities and developement. Although habitat management (timber harvest, prescribed burning) activities result in some reductions in wilderness attributes, they are usually short term and limited in scope. Opportunities for solitude and primitive recreation would remain high. Other effects do not differ appreciably from those listed in timber management emphasis except that wildlife objectives would be maintained.

Designation: Nonwilderness
Management Emphasis: Visual

Alternative a allocates 23 percent to visual management. All other alternatives allocate from 5 to 21 percent to this emphasis. Visuals are retained in the roadless management emphasis. Visual quality resource will be managed according to the management area classification. Impacts are as listed under timber managment but visual objectives would be maintained.

Designation: Nonwilderness
Management Emphasis: Riparian

All alternatives contain inclusions of riparian zones and recognize the need to manage these areas according to policy and guidelines. Alternative g is the wilderness alternative and would not impact the riparian areas.

Designation: Nonwilderness
Management Emphasis: Roadless

Alternative a allocates 31 percent to roadless management, Alternative b, 75 percent, and Alternative c, 22 percent. The balance of the alternatives do not manage for roadless emphasis.

The nonpriced effects are:

- Visual quality will be maintained at a very high level, Retention.
- Semiprimitive and wilderness attributes can be retained for a long period.
- Age class distribution and diversity would be dominated by old growth, young age classes would be minimal.
- Water quality and fisheries would not be affected.
- Few wood products jobs would be added to the industry.

Economic impacts would be reflected in the timber volume lost. This loss of volume would be mitigated by practicing intensive forestry elsewhere and other resource values would be retained.

Designation: Nonwilderness
Management Emphasis: Miscellaneous

Miscellaneous management emphases include non-forest land, administrative sites, historical or cultural sites, mineral extraction sites, transportation and utility corridors, campgrounds, picnic areas, ski areas, and areas with concentrated public use.

Alternative a allocates only a trace acreage for these sites. Alternatives d, e, and f allocate 38 percent to manage these miscellaneous sites.

ACRES OF AREA UNDER MANAGEMENT FOR EACH EMPHASIS BY ALTERNATIVE
(Refer to Appendix C Introduction for Management Areas under each emphasis.)

Management Emphasis	Alternatives a	b	c	d	e	f	g
NONWILDERNESS							
Timber/Range	480	1700	3720	2046	2046	2046	-
Wild life							
Grizzly bear	-	-	-	-	-	-	-
Other	4139	320	1920	3605	3605	3605	-
Visual	2280	510	2120	412	412	412	-
Miscellaneous	1	-	-	3787	3787	3787	-
Riparian	*	*	*	150	150	150	-
Roadless	3100	7470	2240	-	-	-	-
WILDERNESS							
Wilderness	-	-	-	-	-	-	10000
Total	10000	10000	10000	10000	10000	10000	10000

* Small inclusions occur in other management emphasis items.

SUMMARY OF MANAGEMENT EMPHASIS (acres managed by decade)

Developed							
decade 1	2400	2400	2400	2400	2400	2400	-
decade 5	6900	2530	7760	10000	10000	10000	-
Roadless							
decade 1	7600	7600	7600	7600	7600	7600	-
decade 5	3100	7470	2240	-	-	-	-
Wilderness							
decade 1	-	-	-	-	-	-	10000
decade 5	-	-	-	-	-	-	10000

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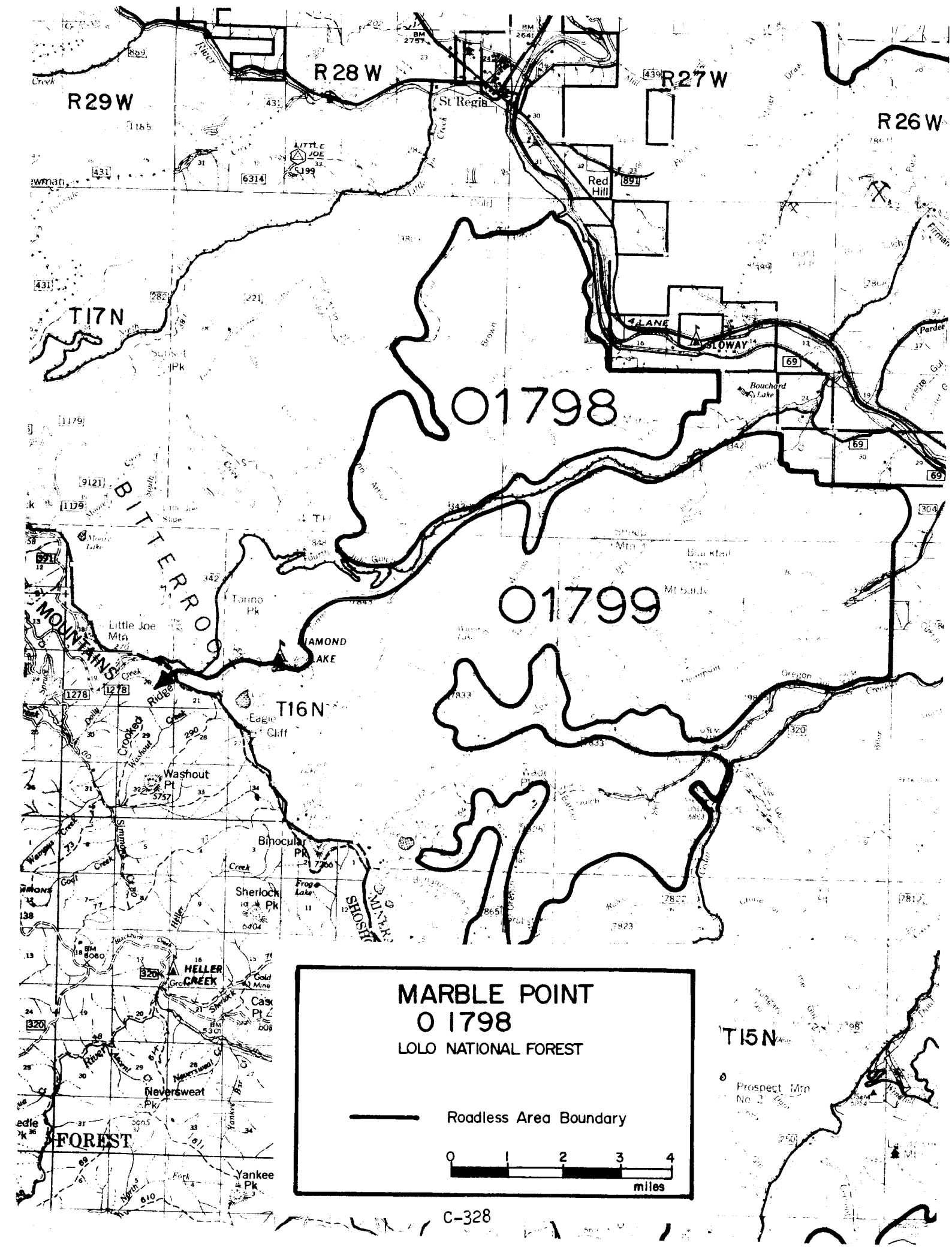
R29W
R28W
R27W
R26W
T17N
T16N
T15N
01798
01799
BITTERROOT
MOUNTAINS
St Regis
Red Hill
LANE
SLOWAY
Bouchard Lake
DIAMOND LAKE
Little Joe Mtn
Torino Pk
Eagle Cliff
Washout Pt
Binocular Pk
Sherlock Pk
Frog Lake
HELLER CREEK
Neversweat Pk
Yankee Pk
Prospect Mtn No 2
FOREST
MARBLE POINT
0 1798
LOLO NATIONAL FOREST
Roadless Area Boundary
0 1 2 3 4
miles

MARBLE POINT #01798

Acreage:

Gross Acres: 13,210
Net Acres: 13,170

I. Description

A. Location and Access

The Marble Point Roadless Area is situated three miles south of the town of St. Regis and 6 miles west of Superior. The entire study unit is surrounded by roads. A road along the ridge separates Little Joe and Cold Creeks from part of the western boundary. Logging roads extend from it into the area; consequently, the border has been drawn around them. The Dry Creek Road (No. 342) defines the southern edge. The northern boundary ends against the private land boundary. Included within this unit are four system trails aggregating 15 miles. Refer to Table C-4 for proximity information.

B. General Description

The backbone of the Marble Point area is a northeast-southwest trending ridge line. From it, streams have developed and flow to the northwest, northeast, and southeast. The ridges are fairly steep with numerous rock outcrops. Relief in the area approaches 3,800 feet.

The Precambrian Wallace Formation crops out over all but the extreme eastern portion of the Marble Point unit. In that area, the Ravalli Group is exposed. A series of parallel northwest-southeast trending faults cut diagonally across the land.

Over half of the area has burned since the early 1900's. A portion of the burned area is still in grass or shrub with mixed conifer stands on the regenerated areas. Almost all of this area is classified as commercial timber land and considered suitable for timber management.

Nearly all the land contains inventoried high to very high hardrock mineral potential.

II. Analysis of Wilderness Suitability

A. Capability

1. Wilderness Attributes

a. Naturalness - Ecological processes in parts of the area have been disrupted to a certain extent by past domestic grazing and major fires which swept through in the early 1900's. The fires while considered part of the natural process resulted in the present

lodgepole pine stands. At 36 percent, the Douglas fir/ninebark habitat type constitutes the most abundant vegetative community in the study area. Stands of Douglas-fir and lesser amounts of lodgepole, ponderosa pine, and larch grow on cool, moist north and east slopes at elevations between 4,800 and 5,800 feet. Understories normally consist of dense, shrubby layers of ninebark and ocean spray. Drier slopes are more open and contain bunchgrasses and balsam root. Sites are moderately productive for timber.

Subalpine fir/beargrass is the next most common habitat group. This type grows on steep, dry exposures between 5,200 and 7,000 feet. Lodgepole pine is common with varying amounts of subalpine fir and Douglas-fir. Beargrass and huckleberry comprises the bulk of the understory. There are lesser amounts of grouse whortleberry, pinegrass, elk sedge, and heartleaf arnica.

Timber productivity varies from low to high depending on site conditions. The Douglas-fir/blue huckleberry vegetative community occupy well-drained slopes between 4,300 and 6,800 feet. Douglas-fir, lodgepole pine, and larch are the major tree types. Huckleberry, elk sedge, and pinegrass comprise the understory. This covers 11 percent of the study unit. Another 7 percent of the land is in the form of scree slopes. Other habitat groups of note include Douglas-fir/pinegrass and western red cedar/beadlily.

While most of the animal species native to the region can be found in the Marble Point Roadless Area, none are dependent on roadless/wilderness management for survival. About one-third of the area is deer and elk winter range. Some people associate viewing of animals in their native habitat with a wilderness experience.

Air and water quality are considered to be good.

Human intrusion includes an open pit mine operation near the northern edge of the unit, logging and jammer roads, and evidence of burning for wildlife habitat improvements.

b. Inspirational Values - The size of area offers visitors the opportunity to experience a sense of being alone, a feeling which may contrast with their daily lives. The physical features in this unit do not contrast appreciably with the surrounding geography and, as a result, may not be visually awe-inspiring except in a general sense.

c. Primitive and Unconfined Recreation - There is moderate opportunity for solitude because of the intermediate amount of topographic and vegetative screening. Some permanent off-site intrusions also impact the opportunity for solitude. The distance from the perimeter to the core and the few challenges for the visitor give a moderate opportunity for primitive recreations.

d. Cultural and Historical Values - Several historical examples of early mining and logging exist in the area. No prehistoric sites have been found.

e. Educational, Scientific, and Unique Values - There is some opportunity to observe big game in their natural habitat. There are no threatened or endangered species in the study unit although possible peregrine falcon habitat occurs in the northeastern edge. Although there are no known threatened or endangered plants within the area, calamagrostis tweedyi (Scribn.) has been located near the roadless area. This plant has been identified as a category 1 or 2 species by the U.S. Fish and Wildlife Service in the Federal Register dated November 28, 1983, and as such may be added to the list of threatened and endangered species. It is found on Douglas-fir/ninebark, grand fir/beadlily-beargrass phase and in the subalpine fir zone. It occupies moist open sites in forest environments and in burned-over clearcuts.

2. Manageability and Boundaries

External influences which impact the Marble Point area include the Ann Arbor and Cold Bear timber sales, a newly constructed road near the Dry Creek Divide, and traffic moving along the Dry Creek Road, the railroad, and Interstate 90. Most of the boundaries are delineated by established roads. Other portions of the border are difficult to locate and monument on the ground. There is a 40-acre parcel of private land within the area near Marble Point.

B. Other Resources Found in the Area

1. Potential

The area provides habitat for a variety of game and nongame wildlife species commonly found in western Montana (see Appendix B-2, Proposed Lolo Forest Plan, RDEIS). There are approximately 4,414 acres of deer and elk winter range in the area; Marble Point also contains about 282 riparian acres.

There are two oil and gas lease offers in the unit. They cover about 45 percent of the total area. Fifteen mining claims are clustered in the south-central portion of the roadless area. The interest is for placer gold, copper, and fluorite. The north-central part has a moderate potential for base and precious metal deposits in the faults and fracture zones. There are 9,042 acres of inventoried high-very high mineral potential in the area.

The Marble Point Roadless Area contains 199 acres classed as non-stocked, 275 acres of seedlings and saplings, 850 acres of poles, 2,181 acres of immature sawtimber, and 8,441 acres of mature sawtimber. Of this, 10,891 acres are classified as commercial timberland. The suitable lands presently support a standing timber inventory of 84.6 MMBF with a long-term sustained yield in the area of 1.97 MMBF annually.

Portions of two range allotments, Cold Creek and Bouchard Creek, are included within the unit. About 210 acres of the Bouchard allotment are included in this area. The last permitted use was for four cows on National Forest land for 15 AM's in 1982. About 17 percent, or 320 acres of the total 1,900 acres of the Cold Creek allotment, is included within the Marble Point boundaries. About 160 of the 320 acres are primarily range. The last permitted use was in 1981 for 30 animals for 105 AM's.

Current Recreation Opportunity maps show the area as 100 percent roaded natural. Recreation use is primarily hunting. This area contains at least four recorded historic sites such as early mining activities, a historic sawmill, and a hunting cabin. Other historic sites are suspected in the area, but to date have not been located.

2. Resource Summary

01798 - Marble Point - Roadless Area

Category		
Gross acres	Acres	13210
Net Acres	Acres	13210
Recreation		
Primitive	RVD's	0
Semiprim. Nonmot.	RVD's	0
Semiprim. Motor.	RVD's	0
Roaded Natural	RVD's	132100
Range		
Existing Obligated		
Suitable	Acres	370
Allotments	No.	2
AUMs	AUMs	20
Existing Vacant		
Suitable	Acres	0
Allotments	No.	0
AUMs	AUMs	0
Proposed		
Suitable	Acres	0
AUMs	AUMs	0
Timber		
Tenative Suitable	Acres	10892
Standing Volume	MMBF	84.6
Corridors		
Exist. & Pot.	No.	0
Wildlife - T&E		
Grizzly Bear		
Habitat Sit. 1	Acres	0
Habitat Sit. 2	Acres	0
Habitat Sit. 3	Acres	0
Bald Eagle Hab.	Acres	0
Gray Wolf Hab.	Acres	0
Peregrin Fal. Hab.	Acres	0
Wildlife - Big Game		
Summer Habitat	Acres	0
Winter Habitat	Acres	4414
Significant Fisheries		
Stream Miles	Miles	1.0
Stream Habitat	Hab. Ac	1.0
Lakes	No.	0
Lake Habitat	Hab. Ac	0
Water Develop.		
Existing	No.	0
Hardrock Potential		
Very High	Acres	0
High	Acres	6384
Moderate	Acres	61
Low	Acres	6765
Mining Claims .	No.	15
Oil & Gas Potential		
Very High	Acres	0
High	Acres	0
Moderate	Acres	0
Low	Acres	13210
Oil & Gas Leases	No.	2
Leased Area	Acres	5900

3. Management Considerations

As the present lodgepole pine stands mature, they will become susceptable to infestation by the mountain pine beetle.

4. Public Involvement

During the public reveiw period for the DEIS, there were few additional comments on the Marble Point Area. Several comments favored wilderness designation for all existing roadless areas. Other responders opposed further additions to the wilderness system.

III. Impacts

Designation: Wilderness
Management Emphasis: Wilderness

Marble Point is allocated to wilderness in Alternative g, but this is the only alternative that the total area or any portion is allocated to wilderness.

Wilderness allocation can enhance the area's wilderness attributes since there are existing uses and facilities not usually associated with wilderness allocation. Any existing motorized activities could be eliminated.

The approximately 11,000 acres of land tentatively suitable for timber production will not be available. This would remove about 85 MMBF including a significant area of lodgepole pine which may become infested by mountain pine beetle. This would be an economic impact; however, the loss in volume could be mitigated by practicing intensive forestry elsewhere.

Big-game or elk management would not change much. The area contains about 4,500 acres of big game winter range. Cover/forage ratios should not change much over time except as influenced by wildfire control.

Current livestock grazing of 20 AUM's could continue in the area but the use of motorized equipment would change.

Social impacts would be reflected in the fact that under wilderness allocation recreation use would continue to be dominated by hunting and hiking.

The nonpriced effects are:

- Visual quality would be Preserved.
- Wilderness area would increase.
- Diversity would tend toward old growth without wildfire but could be improved depending on the control policy.
- Water quality and fisheries would be maintained at their present natural levels.
- Local employment may decrease slightly due to the unavailability of timber.

Designation: Nonwilderness
Management Emphasis: Timber/Range

All alternatives except g allocate some of this area to timber prescriptions. Alternatives a through f allocate from 16 to 42 percent of the area to timber management.

Allocation to the timber prescription will forego the possibility of wilderness allocation on 26 to 40 percent of the area by the end of the first decade. The lodgepole pine stands, if infested, will be accessed with roads and harvest will be scheduled to the limit of constraints for these prescriptions.

The nonpriced effects are:

- Visual quality would be at its lowest level, maximum modification.
- Semiprimitive recreation potential would be foregone by the end of the first decade.
- Wilderness characteristics would be compromised in a short time.
- Diversity would tent toward younger age classes with minimum old growth.
- Water quality and fisheries affects would be mitigated.
- The greatest number of jobs, mainly in the wood products industry, would be provided.

Salvaging the infested lodgepole pine is probably the most significant economic factor.

Designation: Nonwilderness
Management Emphasis: Wildlife

The main emphasis in this area is big game winter habitat. Alternative a allocates 13 percent of the area to wildlife management; Alternatives b and c, a trace; Alternatives d, e, and f, 38 percent. Alternative g is the wilderness alternative.

Development and vegetative manipulation may be required to achieve the habitat and forage management objectives. Timber harvest would occur if enough timber is available and could be used to achieve habitat objectives. Other management activities may include prescribed burning.

Wildlife security and cover requirements include restrictions on human activities and development. Although habitat management activities result in some reductions in wilderness attributes, they are usually short term and limited in scope. Opportunities for solitude and primitive recreation would remain high. Other impacts are as listed under timber management except the wildlife objectives would be maintained.

Designation: Nonwilderness
Management Emphasis: Visual

Alternative a allocates 55 percent of the area to this emphasis. Alternatives b and c allocate from 7 to 10 percent, Alternatives d, e, and f allocate 3 percent.

Visuals are retained in the roadless management emphasis. Visual quality resource will be managed according to the management area classification. Impacts are as listed under timber management but visual objectives are maintained.

Designation: Nonwilderness
Management Emphasis: Riparian

All alternatives contain inclusions of riparian zones and recognize the need to manage these areas according to policy and guidelines. Alternative g is the wilderness alternative and would not impact the riparian areas.

Designation: Nonwilderness
Management Emphasis: Roadless

Alternative a allocates 2 percent; Alternative b, 69 percent; Alternative c, 8 percent; Alternative d, e, and f allocate a trace to this management emphasis.

The nonpriced effects are:

- Visual quality will be maintained at a very high level, retention.
- Semiprimitive and wilderness attributes can be retained for a long period.
- Age class distribution and diversity would be dominated by old growth; young age classes would be minimal.
- Water quality and fisheries would not be affected.
- Few wood products related jobs would be added to the industry.

Economic impacts would be reflected in the timber volume lost. This loss of volume would be mitigated by practicing intensive forestry elsewhere and other resources would be retained.

Designation: Nonwilderness
Management Emphasis: Miscellaneous

Miscellaneous management emphases include non-forest land, administrative sites, historical or cultural sites, mineral extraction sites, transportation and utility corridors, campgrounds, picnic areas, ski areas, and areas with concentrated public use.

Alternatives a and b allocate about 5 percent, Alternative c allocates 41 percent, Alternatives d, e, and f allocate 16 percent of the area to management of these sites.

ACRES OF AREA UNDER MANAGEMENT FOR EACH EMPHASIS BY ALTERNATIVE
(Refer to Appendix C Introduction for Management Areas under each emphasis.)

Management Emphasis	Alternatives a	b	c	d	e	f	g
NONWILDERNESS							
Timber/Range	3038	2074	5561	5380	5380	5380	-
Wild life							
Grizzly bear	-	-	-	-	-	-	-
Other	1704	159	159	4992	4992	4992	-
Visual	7292	1268	951	441	441	441	-
Miscellaneous	793	647	5429	2090	2090	2090	-
Riparian	*	*	*	295	295	295	-
Roadless	383	9062	1110	12	12	12	-
Management Emphasis	Alternatives a	b	c	d	e	f	g
WILDERNESS							
Wilderness	-	-	-	-	-	-	13210
Total	13210	13210	13210	13210	13210	13210	13210

* Small inclusions occur in other management emphasis items

SUMMARY OF MANAGEMENT EMPHASIS (acres managed by decade)

Developed							
decade 1	5280	3461	5280	5280	5280	5280	-
decade 5	12827	4148	12100	13198	13198	13198	-
Roadless							
decade 1	7930	9749	7930	7930	7930	7930	-
decade 5	383	9062	1110	12	12	12	-
Wilderness							
decade 1	-	-	-	-	-	-	13210
decade 5	-	-	-	-	-	-	13210

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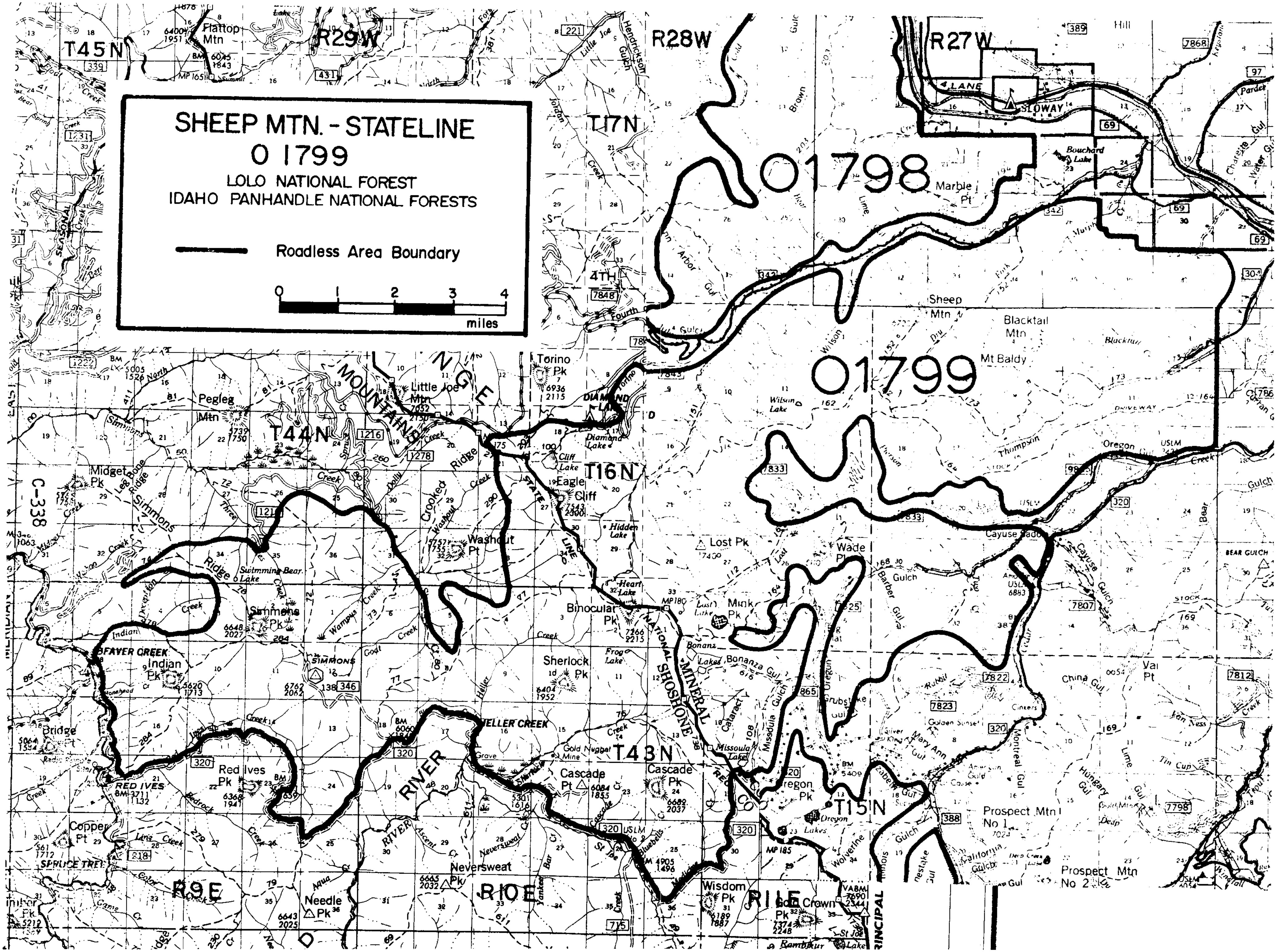

SHEEP MTN. - STATELINE
0 1799
LOLO NATIONAL FOREST
IDAHO PANHANDLE NATIONAL FORESTS
Roadless Area Boundary
0 1 2 3 4
miles
01798
01799
T45N
R29W
R28W
R27W
T17N
T44N
T16N
T43N
T15N
R9E
R10E
R11E
Flattop Mtn
Pegleg Mtn
Midget Pk
Little Joe Mtn
Torino Pk
Sheep Mtn
Blacktail Mtn
Mt Baldy
Marble Pt
Eagle Cliff
Lost Pk
Binocular Pk
Simmons Pk
Washout Pt
Mink Pk
Wade Pk
Indian Pk
Sherlock Pk
Red Ives Pk
Cascade Pt
Cascade Pk
Oregon Pk
Copper Pt
Needle Pk
Neversweat Pk
Wisdom Pk
Crown Pk
Val Pt
Prospect Mtn No 1
Prospect Mtn No 2
SLOWAY
RED IVES
SIMMONS
SPRUCE TREE
Bouchard Lake
Diamond Lake
Cliff Lake
Hidden Lake
Heart Lake
Missoula Lake
Oregon Lakes
Cayuse Sadd
MOUNTAINS
RIVER
STATE LINE
NATIONAL SHOSHONE
MINERAL
C-338

SHEEP MOUNTAIN-STATE LINE #01799

Acreage:

Lolo Forest		Idaho Panhandle Forests	
Gross Acres:	40,700	Gross Acres:	26,979
Net Acres:	40,500	Net Acres:	26,979

I. Description

A. Location and Access

The Sheep Mountain-State Line Roadless Area lies along the Montana- Idaho State Line south and east of the Dry Creek Road. It is located 12 miles southwest of St. Regis, Montana; 5 miles west of Superior, Montana, and 30 miles east of Avery, Idaho. Refer to Table C-4 for proximity information.

The access to the area is by either the Dry Creek Road or the Cedar Creek Road system. There are 10 trails in the area totaling about 40 miles. Included within the unit are 4 miles of improved road and three short unimproved roads. The State line area is accessed by the State Line National Recreation Trail.

B. General Description

About 4,400 acres on the Idaho Panhandle Forest have been deleted since RARE II because of road construction for a timber sale.

The geography of the area is characterized by high alpine terrain with vegetation of the grassy-bald or subalpine habitat groups. Elevations range from approximately 3,500 feet near Dry Creek to 7,543 feet at the top of Eagle Cliff.

Prominant peaks or landmarks include Binocular Peak (elevation 7,266 feet), Sheep Mountain (elevation 6,723 feet), Mount Baldy (elevation 7,543 feet), Black Tail Mountain (elevation 6,167 feet), and Eagle Cliff. Some of these landmarks are seen from the Clark Fork Valley which contains Interstate 90.

Geology of the area is characterized by northwest- to southeast- trending faults extending the length of the area and bringing the various formations into contact with one another. These formations include limestones, calcareous argillites, and quartzites of the Precambrian Age Wallace Formation which crop out in the western two-thirds of the area. Missoula Group rocks cover the balance of the area.

Vegetation varies from the lower elevation habitat types (Douglas-fir climax) to the subalpine types intermixed with high elevation grassy balds. Between the extremes, the forested types are present containing

lodgepole pine, Douglas-fir, and western larch. The understory vegetation is typified by the ninebark type in the northwest corner to the clintonia group on the north and and east aspects of higher elevations. The upper ridges and peaks contain scree mixed with subalpine vegetation. Also included is menziesia and dry beargrass. The area has been burned over several times creating a mosiac of successional stages.

Several key attractions are located within or immediately adjacent to the area. Missoula Lake, an attractive recreational area, lies at the northeastern edge adjacent to the State line. Diamond Lake lies just outside to the west an provides access into the roadless area. Cliff Lake, a cirque lake, is a popular spot which lies southwest of Diamond Lake near the southwest edge of the Lolo National Forest portion of the area. The upper elevations near the State line are very scenic with several cirque basins which contain Lost Lake and Bonanza Lake.

One corner of this area lies on the St. Joe Wild and Scenic River which receives moderate to heavy roaded recreation use. Red Ives Ranger Station is also located on the corner of this area and the possibility of encountering recreationists in the vicinity is very high.

The current use of the area includes scattered mineral exploration, hiking, fishing, hunting, and viewing. There is one outfitter and guide permit for this unit. Area hunters pack in for extended stays. Missoula, Cliff, and Bonanza Lakes have varying amounts of fishing use. The State Line National Recreation Trail is used for hiking and viewing.

II. Analysis of Wilderness Suitability

A. Capability

1. Wilderness Attributes

a. Naturalness - The natural integrity of the area is only marred by an outhouse near Missoula Lake and old cabins previously used by miners or trappers which are in severe states of disrepair. There is also the remnant of an old lookout on Sheep Mountain consisting of some rearranged rocks and some number 9 wire and the Cordilleran mine with an access road. There are several mine spoil areas along Oregon Gulch, one of the historic mining districts of Montana. Mineral exploration excavations are spotted throughout the area with a heavier concentration in the vicinity of Oregon Gulch and Mink Peak. Sheep grazing was a significant use until 1964 when it was discontinued. The edges of the area have several inclusions of timber harvest mostly in Lost Creek. Also included near the lower edge is a fence on private holdings and a game enclosure. There are three dwellings on the private land jutting up Thompson Creek.

The remains of a Forest Service fire lookout are located at Simmons Ridge. The lookout burned in 1984. An outhouse and storage shed, associated with the lookout, remain.

The area appears quite natural, especially the upper reaches which contain only limited mineral exploration activities. The exceptions are on the portions of the land adjacent to presently accessed areas in Dry Creek and along Oregon Gulch. The upper elevations provide a natural and rugged appearance expected in a wilderness. The lower segment along Dry Creek is typical of much of western Montana forests.

b. Insprirational Values - The appearance of the area varies significantly depending on the viewer orientation. The extremes of the elevations with the peaks, cirque basins, and lakes provide scenic landmarks for viewing within the area and from outside.

c. Recreational Values - Due to this unit's proximity to Interstate 90 and the towns of St.Regis and Superior, opportunities for solitude and serenity are limited. However, from within the area, there are places where a visitor can experience the feeling of being alone due to topographic or vegetative screening. It is not particularly easy to reach or traverse the entire area in a relatively short time. Much of the unit is relatively remote and challenging to cross providing for a rigorous adventure to test an individual's woodland survival skills. The recreational opportunity best fits a description of semiprimitive.

This area contains one of the few remaining stretches of gentle, sloping riparian land which is still timbered and free of man-induced disturbance.

d. Cultural/Historical Values - The special features of the area are described above.

e. Educational/Scientific or Unique Values - Opportunities exist to observe and study big game animals in their natural habitat, but there are no known endangered species of animals or plants in the area. The unit contains significant amounts of area common to snow slides and respresents a community with a great deal of diversity in composition and structure. These areas have been designated alder glades, and the sites are commonly wet and at higher elevations. The ecosystems in this area are represented in existing wilderness areas.

2. Manageability and Boundaries

The size of the area is moderate. Several fingers or appendages of land along the boundary encompass different parts of the area. The major and most significant part is that portion adjacent to the State line which joins an area on the St. Joe National Forest of northern Idaho. This area of the State line has good capability of providing some wilderness opportunities. The area as a whole provides a long management boundary. Removal of several parts would increase the desirability of the area for wilderness management. A few significant boundary adjustments would enhance the management opportunities for wilderness and for adjacent lands. Two significant areas of concern are the lower Dry Creek area and the Oregon Gulch area.

B. Other Resources Found in the Area

1. Potential

Recreation in the area includes hunting, fishing, viewing, camping, and hiking. Big-game hunting constitutes the major visitor use. Often, parties have their own packstock. There is also an outfitter who provides 10-day hunts or overnight trips into the center of the area. The edges of the unit are hunted by day-use hunters. It is a popular area for elk hunting and for mule deer, especially in lower Dry Creek in the later part of the season.

Fishing is popular in the readily accessible lakes such as Cliff Lake and Missoula Lake. Diamond Lake located at the very edge of the Roadless Area can be reached by a road which provides quick access to Cliff Lake. Missoula Lake, although in the roadless area, is only 1/4 mile from the Upper Cedar Creek Road. It is a popular spot in the summer, and the area is well used during the fall for camping during the two hunting seasons: Idaho in early fall and Montana later.

Hiking is popular along the State line into Bonanza Lakes and along the divide. The major divide along the Idaho-Montana border contains the State Line National Recreation Trail. Trails to several lakes join the National Trail along the Divide allowing relatively easy access for parts of the area.

Wildlife use is fairly high throughout portions of the area. The high elevations provide summer range for elk and mule deer, while the lower elevations of Dry Creek provide critical winter habitat for the three big game species found in the area. Mountain goats are visitors to the area from a herd located in Trout Creek to the east. There may be a portion of that population which uses this area more frequently. Perhaps a moose or two will wander in and use portions of the area from time to time, but evidence is scarce as to much use of the unit by this species.

The area has a resident population of small mammals, and the many bird species habitate the area yearlong or during the migration periods. There are no krown threatened or endangered species within the area. Unconfirmed grizzly bear sitings along the Montana-Idaho line are reported sporadically throughout a larger area of which this roadless area is a small part.

The Sheep Mountain-State line area is important for water storage in the form of snow accumulation in the high country for later release into the Clark Fork River. There are few local uses of water from the drainages encompassed within the area. This unit receives abundant moisture, especially near the Divide, and, therefore, is important as a watershed. The several lakes located within this area are important for water-related recreation and serve to collect and disperse water to both tributaries of Dry Creek and Cedar Creek. This area collects water for Thompson Creek and contributes to Oregon Creek and on to Cedar Creek.

Livestock use is limited to the amount associated with outfitting and local horse use for pack trips into and through the area. The State line area used to contribute a significant amount of forage to the sheep operations of the past.

The Sheep Mountain-State Line Area contains 2,596 acres classed as non-stocked, 1,613 acres of seedlings and saplings, 3,601 acres of poles, 12,471 acres of immature sawtimber, and 32,052 acres of mature sawtimber. Of this, 41,759 acres are classified as commercial timber land. The suitable lands presently support a standing timber inventory of 323.5 MMBF with a long-term sustained yield in the area of 8.18 MMBF annually.

There are 97 unpatented mining claims in the unit and it is 100 percent under application for oil and gas leases. This area and the surrounding land to the south and east has produced placer gold and the potential still exists. The southern end of the study area has a moderate potential for silver deposits in veins and fissures and molybdenum and tungsten in porphyry intrusions. About 40 lode and placer claims along Sherlock Creek are presently in litigation. New placer locations are prohibited but those existing before November 10, 1978, are subject to valid existing rights.

Oregon Gulch once had a large mining community with several thousand people working the mines. Later, in the 1930's, a dredging company reworked the diggings and employed 30 to 50 workers for several years. The reasons for the abandonment of this operation are unclear. Other mines include one on Wilson Gulch in Dry Creek and one on Lost Creek at the edge of the unit. There are numerous diggings throughout portions of the area with heaviest concentrations in Oregon Gulch up to Mink Peak.

A site along Oregon Gulch at Big Flat is a potential historic site resulting from the past mining activities. There are several old buildings still standing from an old mining camp used during the last dredging operation. Although this area is not quite within the Sheep Mountain-State Line Roadless Area, it is located within a finger of land surrounded by the boundary. There are other scattered remnants of mining activity in the roadless area.

There are no special uses in the area other than the outfitter/guide permit previously discussed.

2. Resource Summary

01799 - Sheep Mountain-State Line - Roadless Area

Category	IPNF	LOLO
Gross Acres	26979	40700
Net Acres	26979	40500
Recreation		
Primitive RVD's	-0-	-0-
Semiprim. Nonmot.RVD's	855	32400
Semiprim. Motor.RVD's	405	-0-
Roaded Natural	-0-	81000
Category	IPNF	LOLO
Range		
Existing Obligated		
Suitable	-0-	-0-
Allotments	-0-	-0-
AUMs	-0-	-0-
Existing Vacant		
Suitable acres	-0-	410
Allotments No.	-0-	1
AUMs	-0-	18
Proposed		
Suitable acres	-0-	-0-
AUMs	-0-	-0-
Timber		
Tenative Suitable acre	14438	27321
Standing Volume MMBF	112.0	211.5
Corridors		
Exist. & Pot. No.	-0-	-0-
Wildlife - T&E		
Grizzly Bear		
Habitat Sit. 1 acres	-0-	-0-
Habitat Sit. 2 acres	-0-	-0-
Habitat Sit. 3 acres	-0-	-0-

	IPNF	LOLO
Bald Eagle Hab.	-0-	400
Gray Wolf Hab.	-0-	-0-
Peregrin Fal. Hab.	-0-	-0-
Wildlife - Big Game		
Summer Habitat	400	123
Winter Habitat	-0-	1884
	IPNF	LOLO
Significant Fisheries		
Stream Miles	15	9.0
Stream Habitat	40	8.7
Lakes	-0-	7
Lake Habitat acres	-0-	137
Water Develop.		
Existing	-0-	-0-
Hardrock Potential		
Very High acres	-0-	-0-
High acres	-0-	21614
Moderate acres	26979	17781
Low acres	-0-	1105
Mining Claims .	51	46
Oil & Gas Potential		
Very High acres	-0-	-0-
High acres	-0-	-0-
Moderate acres	-0-	-0-
Low acres	26979	40500
Oil & Gas Leases No.	-0-	4
Leased Area acres	-0-	16200

3. Management Considerations

There are non-Federal lands located within the area along Oregon Creek. These are widely scattered parcels located on the edge of the area and total less than 200 acres. They could be avoided in any management designation for the area.

The winter range in Dry Creek has required and will continue to need prescribed fire to improve the quality of range. Much of the area was overused during periods of high big-game populations. The shrubs are old and decadent and areas have responded well to burning. The

results of the big-game exclosure show a wide difference in vigor when compared to the outside vegetation.

Insects and disease are not much of a problem because much of the forest is relatively young and vigorous. The next 20 to 30 years will have more damage due to insects because the susceptability will increase with age and maturity of the forest.

The management emphasis for the Sheep Mountain State Line Roadless Area is a combination of management prescriptions and alternatives from two National Forests, the Lolo, and Idaho Panhandle. Because resources, uses, and land conditions are somewhat different on each Forest, neither the alternatives nor the management emphasis are fully integrated. Because the Lolo Forest is the lead Forest for this roadless area, for purposes of this evaluation, the alternatives and management emphasis from the other Forest has been integrated into those of the Lolo Forest as close as possible on the basis of goals and objectives common to each Forests alternatives and management emphasis.

Further information on the specific alternatives and management emphasis for the Idaho Panhandle National Forest's areas can be found in this Forest's Draft Environmental Impact Statement for the Forest Plan.

The proposed wilderness/nonwilderness designation for area 1799 is made and documented in the Lolo Envirommental Impact Statement. This proposed designation has priority over all other land designations and none of the two Forests can undertake any management activity other than current direction until such time that a Record of Decision is issued in conjunction with this document.

During the public reveiw period for the DEIS, there were few additional comments on the Sheep Mountain-State Line Roadless Area. Several comments favored wilderness designation for this roadless area. Other responders opposed further additions to the wilderness system.

III. Impacts

Designation: Wilderness
Management Emphasis: Wilderness

Alternative f allocates 91 percent of the area and Alternative g allocates the entire area to wilderness management.

Wilderness allocation can enhance the area's wilderness attributes since there are existing uses and facilities not usually associated with wilderness allocation. Any existing motorized activities could be eliminated.

The approximately 41,760 acres of land tentatively suitable for timber production would not be available. This would remove about 323.5 MMBF of timber from the Forest land base.

Big-game or elk management would not change much. The area contains some summer habitat and nearly 2,000 acres of winter habitat. Cover/forage relationships should not change much over time except as influenced by wildfire control.

Under wilderness allocation recreation use would continue to be dominated by a variety of outdoor activities.

The nonpriced effects are:

- Visual quality would be Preserved.
- Wilderness area would increase.
- Diversity would tend toward old growth without wildfire but could be improved depending on the control policy.
- Water quality and fisheries would be maintained at their present natural levels. Spawning habitat for St. Joe River preserved.
- Quality elk habitat preserved dependent on future fire policies.
- Local employment may decrease slightly due to the unavailability of timber.

The area represents nearly 3 percent of the available timber on the Lolo Forest and 1 percent of the Idaho Panhandle Forest. Economic impacts would be reflected in the timber volume lost. This volume loss could be mitigated through intensive forestry elsewhere on the Lolo Forest but could not be made up on the Idaho Panhandle Forest.

Designation: Nonwilderness
Management Emphasis: Timber/Range

For the Lolo National Forest, all alternatives except g allocate some of this area to timber prescriptions. Alternatives a through f allocate from a trace to 32 percent to timber management.

For the Idaho Panhandle National Forest, 11,000 acres timber, 14,000 acres minimum level, 1,300 acres St. Joe wild and scenic river.

Allocation to the timber prescription will forego the possibility of wilderness allocation on 0 to 15 percent of the area by the end of the first decade. The area will be accessed with roads and harvest will be scheduled up to the limit of constraints for these prescriptions.

The nonpriced effects are:

- Visual quality would be at its lowest level, Maximum Modification.
- Semiprimitive recreation potential would be foregone by the end of the first decade.
- Wilderness characteristics would be compromised in a short time.
- Diversity would tend toward younger age classes with minimum old growth.
- Water quality and fisheries affects would be mitigated.
- The greatest number of jobs, mainly in the wood products industry, would be provided.

Social effects would be reflected in the recreationists' loss of the roadless characteristic.

Designation: Nonwilderness
Management Emphasis: Wildlife

The main emphasis in this prescription is big game winter habitat and summer habitat. Alternatives a through f allocate from a trace to 6 percent of the area to wildlife management. Alternative g is the wilderness alternative.

The area contains about 400 acres of bald eagle habitat. This would be identified along the faces of the Clark Fork drainage. Management activities will be compatible with the habitat needs of the bald eagle.

Wildlife security and cover requirements include restrictions on human activities and development. Although habitat management activities result in some reductions in wilderness attributes, they are ususally short term and limited in scope. Opportunities for solitude and primitive recreation would remain high.

In areas with commercial timber stands, timber may be a byproduct of achieving or maintaining habitat objectives. Timber harvest would occur if enough timber is available and could be used to achieve habitat objectives. Other management activities may include prescribed burning for wildlife. Effects are basically as listed under the timber management emphasis with wildlife objectives maintained.

Designation: Nonwilderness
Management Emphasis: Visual

Alternative a provides 56 percent of the area to be managed for visuals. Alternatives b through f allocate from a trace to 5 percent.

Visuals are retained in the roadless management emphasis. Visual quality resource will be managed according to the management area classification. Effects would not differ from those listed under the timber emphasis with visual objectives being maintained.

Designation: Nonwilderness
Management Emphasis: Riparian

All alternatives contain inclusions of riparian zones and recognize the need to manage these areas according to policy and guidelines. Alternative g is the wilderness alternative and would not impact the riparian areas. Effects do not differ from those listed in the roadless management emphasis.

Designation: Nonwilderness
Management Emphasis: Roadless

For the Lolo National Forest, Alternative b provides 94 percent of the area for roadess management. Alternative c provides 55 percent, Alternatives d, e, and f provide 2 to 5 percent, and the other alternatives do not manage for this emphasis.

For the Idaho Panhandle Forest, approximately 13,000 acres are provided for roadless recreation, 7,000 acres minimum level management, 1,300 acres St. Joe

wild and scenic river management, 4,000 acres timber management. The emphasis is overall a low intensity prescription where over 50 percent remains unroaded.

The nonpriced effects are:

- Visual quality will be maintained at a very high level, Retention.
- Semiprimitive and wilderness attributes can be retained for a long period.
- Age class distribution and diversity would be dominated by old growth; young age classes would be minimal.
- Water quality and fisheries would not be affected.
- Few wood products related jobs would be added to the industry.

Economically, the area represents less than one percent of the land base suitable for timber, and other resources would be retained.

Designation: Nonwilderness
Management Emphasis: Miscellaneous

Miscellaneous management emphases include non-forest land, administrative sites, historical or cultural sites, mineral extraction sites, transportation and utility corridors, campgrounds, picnic areas, ski areas, and areas with concentrated public use.

Alternative a allocates 18 percent of the area to management of these sites, Alternatives b through f allocate from a trace to 8 percent, Alternative g does not manage for this emphasis.

ACRES OF AREA UNDER MANAGEMENT FOR EACH EMPHASIS BY ALTERNATIVE
LOLO NATIONAL FOREST (ONLY)
(Refer to Appendix C Introduction for Management Areas under each emphasis.)

Management Emphasis	Alternatives a	b	c	d	e	f	g
Timber/Range	8100	162	12834	10509	10509	1860	-
Wild life							
Grizzly bear	-	-	-	-	-	-	-
Other	2472	1215	1422	2549	2549	417	-
Visual	22720	162	770	2202	2202	119	-
Miscellaneous	7208	770	3200	2826	2826	348	-
Riparian	*	*	*	1526	1526	*	-
Roadless	-	38191	22274	20888	20888	636	-
Wilderness	-	-	-	-	-	37120	40500
Total	40500	40500	40500	40500	40500	40500	40500

* Small inclusions occur in other management emphasis items.

SUMMARY OF MANAGEMENT EMPHASIS (acres managed by decade)

Roaded							
decade 1	7200	1539	7200	7200	7200	2396	-
decade 5	40500	2309	18226	19612	19612	2744	-
Roadless							
decade 1	33300	38961	33300	33300	33300	984	-
decade 5	-	38191	22274	20888	20888	636	-
Wilderness							
decade 1	-	-	-	-	-	37120	40500
decade 5	-	-	-	-	-	37120	40500

ACRES OF AREA UNDER MANAGEMENT FOR EACH EMPHASIS BY ALTERNATIVE
IDAHO PNF (Only)

Management Emphasis	Alternatives 1/ (Thousand Acres)											
	1	2	3	4	5	6	7	8	9	10	11	12
Wilderness	0	0	25.7	0	0	25.7	0	0	25.7	25.7	0	0
Nonwilderness												
No TbrHrvst	12.8	0.4	0	0.4	0.1	0	15.8	4.5	0	0	13.6	13.2
Tmbr/Wlife	6.3	10.4	0	11.0	6.5	0	4.2	8.4	0	0	2.5	3.3
Wlife/VQO	2.2	0	0	0	0	0	0	0	0	0	0	0
Spcl Areas	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Min Lvl	4.4	14.9	0	14.3	19.1	0	5.7	12.8	0	0	8.7	9.2
Total	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0

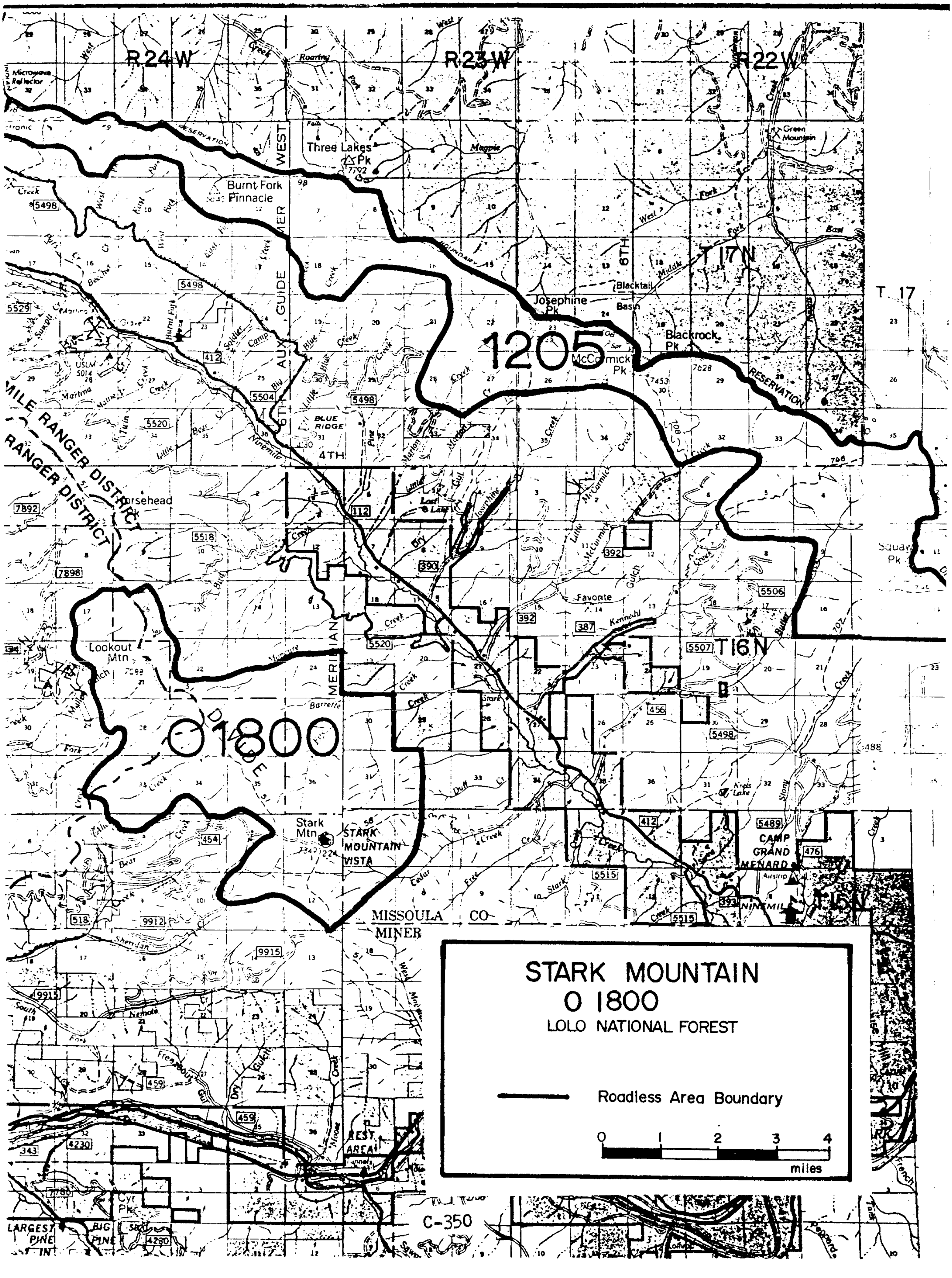
Summary of Management Emphasis:

Developed												
Decade 1	1.2	0.7	0	3.5	0	0	0	0.3	0	0	10.0	10.0
Decade 5	15.2	14.3	0	15.4	6.6	0	6.0	11.1	0	0	13.0	13.0
Roadless 2/												
Decade 1	25.8	26.3	0	23.5	27.0	0	27.0	26.7	0	0	8.0	8.0
Decade 5	11.8	12.7	0	11.6	20.4	0	21.0	15.9	0	0	14.0	14.0
Wilderness	0	0	27.0	0	0	25.7	0	0	25.7	25.7	0	0

1/ Alternative correlation between Lolo and IPNF

Lolo alternative	a	b	c	d	e	f	g
IPNF alternative	8	9	2	11	10	3	3

2/ Roadless is defined as 5,000 acres or greater in size or any acreage if contiguous to existing wilderness.


STARK MOUNTAIN
O 1800
LOLO NATIONAL FOREST
Roadless Area Boundary
0 1 2 3 4
miles
1205
O1800
R24W
R23W
R22W
T17N
T16N
T15N
Three Lakes Pk
Burnt Fork Pinnacle
Josephine Pk
Blacktail Basin
Blackrock Pk
McCormick Pk
Green Mountain
Lookout Mtn
Horsehead
Stark Mtn
STARK MOUNTAIN VISTA
CAMP GRAND MENARD
MISSOULA CO
MINER
REST AREA
Cyr Pk
Squaw Pk
Favorite
BLUE RIDGE
RESERVATION
BOUNDARY
RANGER DISTRICT

STARK MOUNTAIN #01800

Acreage:

Gross Acres: 14,140
Net Acres: 14,140

I. DESCRIPTION

A. Location and Access

The Stark Mountain Roadless Area is located 27 miles west of Missoula, 13 miles east of Superior, and 5 miles north of Alberton. A number of roads access this unit with most of them originating from the west. On the west and south sides, mining and logging roads extending off of Interstate 90 run up Eddy, Deep, Sheridan, Bear, Nemote, and West Mountain Creeks and terminate at the roadless boundary. From the east, roads access up Moncure, Duff, Cedar, and Free Creeks and end at the border. A road in Bird Creek approaches within a mile of the north end. Forest Road No. 454 extends inside the area and provides access to the Stark Mountain Lookout. Refer to Table C-4 for proximity information.

The original RARE II inventory contained 10,400 gross and net acres. In addition 11,980 acres are contiguous that were not included as they were part of a completed unit plan. Road construction has reduced the area by 4,470 acres and the BPA powerline by 3,710 acres. A recalculation of the acreage reduced the total area by 60 acres.

B. General Description

The Stark Mountain area is located on the divide between Ninemile Creek and the Clark Fork River in the headwaters of Sheridan, Nemote, Fire, and Barrette Creeks. The Ninemile side is characterized by long narrow valleys with sharp ridges. Rock outcrops occur along the lower, southerly slopes and in small cirque basins along the divide. The Clark Fork side is generally rolling to steep with rocky ridges and shallow soils.

There are no lakes or large streams within the area.

Ponderosa pine and Douglas-fir grow on drier slopes at lower elevations. Subalpine fir and spruce are found at high elevations with whitebark pine and, occassionally, mountain hemlock on the highest ridges. Western red cedar is found in many creek bottoms. Almost all of this roadless area is classified as commercial timber land and is suitable for timber management.

About 25 percent of the area was burned in the 1910 fire, and lodgepole pine stands occupy these sites. Present fire occurrence is light and most recent fires have been small. Fuel buildup is heavy in small areas of the overmature lodgepole pine.

Rocks of the Precambrian Age Missoula Group crop out within the Stark Mountain Roadless Area. Two parallel northwest to southeast trending faults, possible extensions of the mineralized Osburn Fault System, transect this land.

The Stark Mountain Roadless Area provides habitat for a variety of game and nongame wildlife species commonly found in western Montana. Visitors can often view deer and elk herds on summer and winter ranges in the area.

Current activities in the area include hiking, four-wheel driving, big game and grouse hunting, horseback riding, trail biking, snowmobiling, and showshoeing with a small amount of ski touring. Stark Mountain Lookout is a popular vista point with local residents.

II. Analysis of Wilderness Suitability

A. Capability

1. Wilderness Attributes

a. Naturalness - Ecological processes and the natural landscape in parts of the area have been disrupted to a certain extent by past domestic grazing; however, no range improvements are visible. Basically, vegetative communities in the unit are similar to those found in surrounding areas outside the roadless boundary. Major fires that occurred in the area in the early 1900's are considered part of the natural process resulting in their present lodgepole stands which are susceptible to infestation by the mountain pine beetle.

About 32 percent of the area is in the subalpine fir/beargrass habitat type. It makes up a major part of the higher elevations, 5,200 to 7,000 feet. Twenty-one percent of the area is in Douglas-fir/blue huckleberry on well-drained slopes 4,300 to 6,800 feet elevation. The remainder of the area has a variety of habitat types from the Douglas-fir, grand fir, western red cedar, and subalpine fir series that are common to the Lolo Forest.

While most of the animal species native to the area are found in the Stark Mountain Roadless Area, none are particularly dependent on roadless management for survival. Animals on summer and winter ranges can be susceptible to human activity, and the area contains some acres of winter range. Viewing animals such as elk in their native habitat may be closely associated with a wilderness experience in some visitors' minds.

Air and water quality is considered good in the area; however, under certain wind conditions, odors from the pulp plant are noticeable in the area.

Several human developments exist within the area which decrease the naturalness indluding a lookout tower, lookout toilet facility, 1 mile of system road, 3 miles of four-wheel drive vehicle routes,

and two range study plots. A minor adjustment would remove these features from the area.

b Inspirational Values - The physical properties of the area do not contrast appreciably with the surrounding geography and, consequently, may not be particularly awe-inspiring except in the general sense.

c. Recreational Values - Opportunities to view a natural-appearing area or opportunities for solitude are not abundant in the unit. Much of the area was logged in the 1920's and stumps are apparent in several locations. The size, shape, and topographical position of the area makes it difficult to escape from the sights and sounds of off-site human intrusions. Examples include Interstate-90, Ninemile Road No. 393, ranches and subdivisions, Missoula Valley, and low-flying aircraft arriving and taking off from the Missoula County Airport.

The size and terrain of the unit does not require use of primitive skills. The core area is generally less than 2 miles from the boundary. Existing roads and trails make access easy to the boundaries and into the area.

d. Cultural/Historical Values - There have been no historic or prehistoric sites identified within the area; however, there have been unconfirmed stories of an old indian burial mound in the area.

e. Educational/Scientific and Unique Values - Some opportunity exists to observe and study big game animals in their natural habitat, but there are no known endangered species of animals or plants in the area. Nor is the area recognized as having unique vegetative communities to be used as benchmarks or unusual or scarce ecosystem representatives. Gene pools in the unit do not differ appreciably from the surrounding area. The ecosystems in this area are well represented in existing wilderness areas.

2. Manageability and Boundaries

The core of the area is generally less than 2 miles from the boundary. Existing roads and trails provide easy access to the boundaries and into the area.

There is no private land within the roadless area, and no existing contractual agreements or statutory rights other than those mentioned under minerals are present.

B. Other Resources Found in the Area

1. Potential

The area provides habitat for a wide variety of game and nongame wildlife species commonly found in western Montana (see Appendix B-2, Proposed Lolo Forest Plan, RDEIS) There is not a major fisheries in the area. The area has about 1,027 acres of deer and elk winter range

and 641 acres of summer elk habitat. There are also 160 riparian acres in the unit.

Fourteen unpatented mining claims have been staked in the western portion of the area; most are adjacent to the Eddy Creek Mine and are for silver, lead, copper, and gold. Recently, the U.S. Geological Survey has determined that the central portion of this unit has a high potential for stratabound copper-silver and a moderate potential for base and precious metals in veins along the northeastern boundary. They also conclude that the southern drainages have high potential for containing gold placers. Six oil and gas leases cover about 90 percent of the roadless area. According to the Lolo Forest Plan data base, there are no acres of high and very high mineral potential lands within this boundary.

The Stark Mountain Roadless Area contains 368 acres classed as nonstocked, 361 acres of seedlings and saplings, 733 acres of poles, 3,051 acres of immature sawtimber, and 9,021 acres of mature sawtimber. Of this, 11,825 acres are classified as commercial timber land. The suitable lands presently support a standing timber inventory of 88.6 MMBF with a long-term sustained yield in the area of 2.5 MMBF annually.

Approximately 475 acres of suitable range in the Stark Mountain grazing allotment and 25 acres of suitable range in the Fire Creek grazing allotment are located in the roadless area. No range improvements are known to exist within the roadless area.

Fifty percent of the area provides setting for semiprimitive motorized recreational use and 50 percent is roaded natural. The most popular uses are big game hunting, upland grouse hunting, hiking, horseback riding, trail biking, snowmobiling, and a limited amount of ski touring and showshoeing. Stark Mountain Lookout is a popular vista point for local residents.

2. Resource Summary

01800 - Stark Mtn. - Roadless Area

Category					
Gross acres	Acres	14140	Bald Eagle Hab.	Acres	0
Net Acres	Acres	14140	Gray Wolf Hab.	Acres	0
			Peregrin Fal. Hab.	Acres	0
Recreation					
Primitive	RVD's	0	Wildlife - Big Game		
Semiprim. Nonmot.	RVD's	35350	Summer Habitat	Acres	641
Semiprim. Motor.	RVD's	70700	Winter Habitat	Acres	1027
Roaded Natural	RVD's	0			
			Significant Fisheries		
Range			Stream Miles	Miles	0
Existing Obligated			Stream Habitat	Hab. Ac	0
Suitable	Acres	500	Lakes	No.	0
Allotments	No.	2	Lake Habitat	Hab. Ac	0
AUMs	AUMs	49			

Existing Vacant		
Suitable	Acres	0
Allotments	No.	0
AUMs	AUMs	0
Proposed		
Suitable	Acres	0
AUMs	AUMs	0
Timber		
Tenative Suitable	Acres	11825
Standing Volume	MMBF	88.6
Corridors		
Exist. & Pot.	No.	0
Wildlife - T&E		
Grizzly Bear		
Habitat Sit. 1	Acres	0
Habitat Sit. 2	Acres	0
Habitat Sit. 3	Acres	0

Water Develop.		
Existing	No.	1
Hardrock Potential		
Very High	Acres	0
High	Acres	0
Moderate	Acres	13997
Low	Acres	143
Mining Claims .	No.	14
Oil & Gas Potential		
Very High	Acres	0
High	Acres	0
Moderate	Acres	14140
Low	Acres	0
Oil & Gas Leases	No.	6
Leased Area	Acres	12700

3. Management Considerations

Present lodgepole pine stands will become susceptible to infestation by the mountain pine beetle as they mature.

4. Public Involvement

During the public reveiw period for the DEIS, there were few additional comments on the Stark Mountain Area. Several comments favored wilderness designation for all existing roadless areas. Other responders opposed further additions to the wilderness system.

III. Impacts

Designation: Wilderness
Management Emphasis: Wilderness

Stark Mountain is allocated to wilderness in Alternative g but this is the only alternative that the total or any portion of the area is allocatd to wilderness.

Wilderness allocation can enhance the area's wilderness attributes since there are existing uses and facilities not ususally associated with wilderness allocation. Any existing motorized activities could be eliminated. These are considered social impacts.

The approximately 12,000 acres of land tentatively suitable for timber production would not be available. This would remove about 89 MMBF, 25 percent of which is lodgepole pine which may become infested by mountain pine beetle.

Big-game or elk management includes acres of both summer habitat and winter habitat. Cover/forage ratios should not change much over time except as influenced by wildfire control.

Current livestock grazing of 49 AUM's could continue on portions of the area but use of motorized equipment would change.

Under wilderness allocation, recreation use would continue with a variety of summer and winter activities.

The nonpriced effects are:

- Visual quality would be Preserved.
- Wilderness area would increase.
- Diversity would tend toward old growth without wildfire but could be improved depending on the control policy.
- Water quality and fisheries would be maintained at their present natural levels.
- Local employment may decrease slightly due to the unavailabiltiy of timber.

Economic effects would be reflected in the timber volume loss which is less than one percent of the land base suitable for timber, and other resource values would be retained. The loss in timber volume can be mitigated by practicing intensive forestry elsewhere.

Designation: Nonwilderness
Management Emphasis: Timber/Range

All alternatives except g allocate some of this area to timber management. Alternatives a through f allocate from 14 to 79 percent of the area to this prescription.

Allocation to the timber prescription will forego the possibility of wilderness allocation on 46 percent of the area by the end of the first decade. The possible infestation of lodgepole pine stands will require the area be accessed with roads and harvest will be scheduled up to the limit of constraints for these prescriptions.

The nonpriced effects are:

- Visual quality will be at its lowest level, Maximum Modification.
- Semiprimitive recreation potential would be foregone by the end of the first decade.
- Wilderness characteristics would be compromised in a short time.
- Diversity would tend toward younger age classes with minimum old growth.
- Water quality and fisheries effects would be mitigated.
- The greatest number of jobs, mainly in the wood products industry, would be provided.

Social effects are reflected in the loss of semiprimitive recreation use. Salvaging the infested lodgepole pine is probably the most significant economic factor.

Designation: Nonwilderness
Management Emphasis: Wildlife

The main emphasis in this prescription is both big game summer range and winter range. Alternative a allocates 13 percent; Alternatives b and c allocate about 4 percent, Alternatives d, e, and f allocate 15 percent to wildlife management.

Development and vegetative manipulation may be required to achieve the habitat and forage management objectives. Timber harvest would occur if enough timber is available and could be used to achieve habitat objectives. Other management activities may include prescribed burning.

Wildlife security and cover requirements include restrictions on human activities and development. Although habitat management activities result in some reductions in wilderness attributes, they are usually short term and limited in scope. Opportunities for solitude and primitive recreation would remain high. Other impacts are listed under timber management; however, wildlife objectives would be maintained.

Designation: Nonwilderness
Management Emphasis: Visual

Alternatives a and b allocate from 23 to 29 percent to visual management; Alternatives d, e, and f allocate 9 percent each; and none of the other alternatives utilize this emphasis.

Visual quality is retained in the roadless emphasis. Visual quality resource will be managed according to the management area classification. Impacts are listed under timber management except visual objectives will be maintained.

Designation: Nonwilderness
Management Emphasis: Riparian

All alternatives contain inclusions of riparian zones and recognize the need to manage these areas according to policy and guidelines. Alternative g is the wilderness alternative and would not impact the riparian areas.

Designation; Nonwilderness
Management Emphasis: Roadless

Alternatives a and b allocate from 36 to 46 percent to roadless management; alternatives d through f allocate from 12 to 16 percent to roadless management.

The nonpriced effects are:

- Visual quality will be maintained at a very high level, Retention.
- Semiprimitive and wilderness attributes can be retained for a long period.
- Age class distribution and diversity would be dominated by old growth; young age classes would be minimal.
- Water quality and fisheries would not be affected.
- Few wood products related jobs would be added to the industry.

Economic impacts would be reflected in the timber volume lost. This loss of timber volume could be mitigated by practicing intensive forestry elsewhere. Other resources would be retained.

Designation: Nonwilderness
Management Emphasis: Miscellaneous

Miscellaneous management emphases include non-forest land, administrative sites, historical or cultural sites, mineral extraction sites, transportation and utility corridors, campgrounds, picnic areas, ski areas, and areas with concentrated public use.

All alternatives except g allocate from 2 to 6 percent to manage these sites. Alternative g is the wilderness alternative.

ACRES OF AREA UNDER MANAGEMENT FOR EACH EMPHASIS BY ALTERNATIVE
(Refer to Appendix C Introduction for Management Areas under each emphasis.)

Management Emphasis	Alternatives a	b	c	d	e	f	g
NONWILDERNESS							
Timber/Range	1980	4171	11114	8082	8082	8082	-
Wild life							
Grizzly bear	-	-	-	-	-	-	-
Other	1908	636	467	2105	2105	2105	-
Visual	3252	3931	-	1240	1240	1240	-
Miscellaneous	551	283	806	316	316	316	-
Riparian	*	*	*	161	161	161	-
Roadless	6449	5119	1753	2236	2236	2236	-
WILDERNESS							
Wilderness	-	-	-	-	-	-	14140
Total	14140	14140	14140	14140	14140	14140	14140

* Small inclusions occur in other management emphasis items

SUMMARY OF MANAGEMENT EMPHASIS (acres managed by decade)

Developed							
decade 1	6560	6560	6560	6560	6560	6560	-
decade 5	7691	9021	12387	11904	11904	11904	-
Roadless							
decade 1	7580	7580	7580	7580	7580	7580	-
decade 5	6449	5119	1753	2236	2236	2236	-
Wilderness							
decade 1	-	-	-	-	-	-	14140
decade 5	-	-	-	-	-	-	14140

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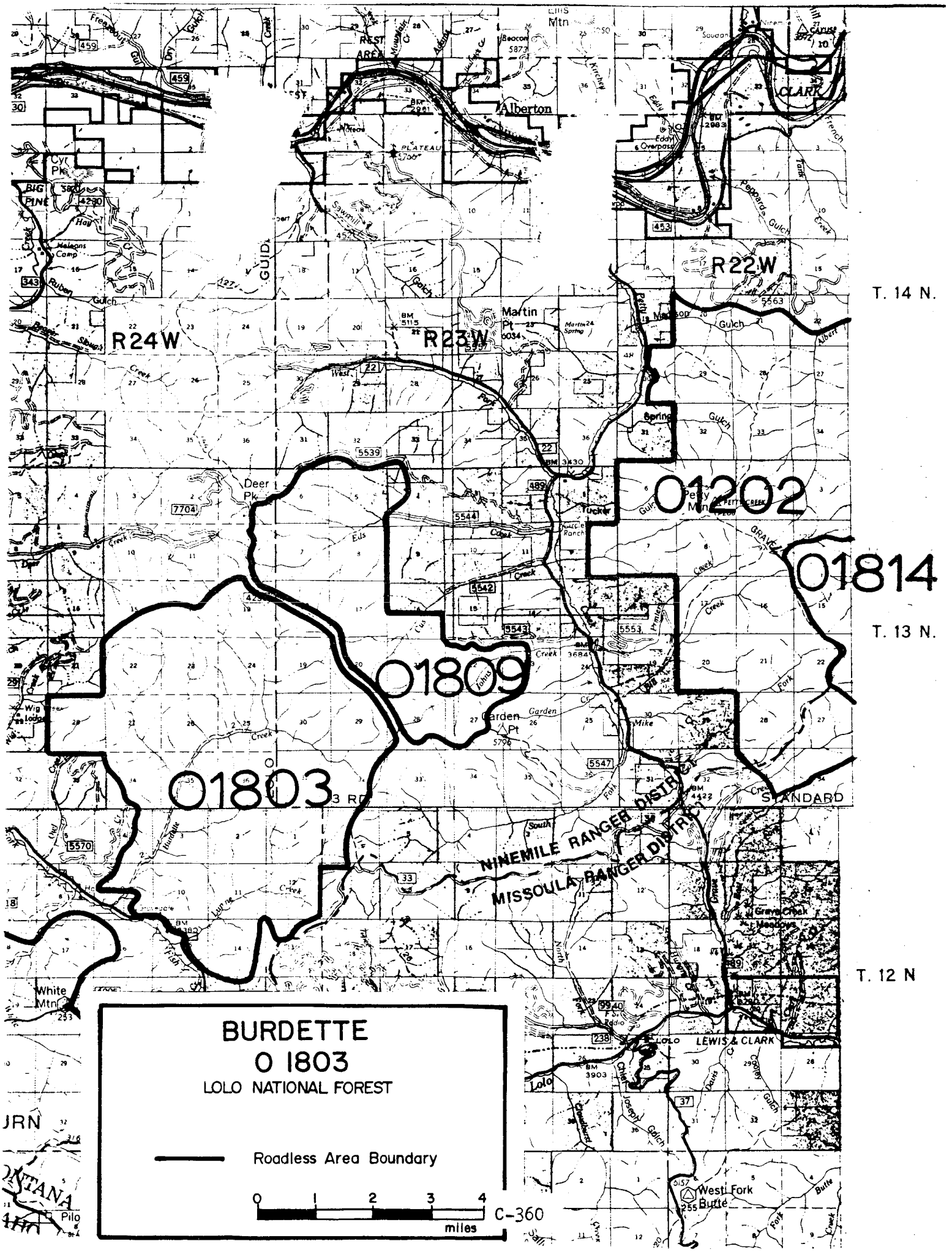
R24W
R23W
R22W
T. 14 N.
T. 13 N.
T. 12 N
01202
01814
01809
01803
NINEMILE RANGER DISTRICT
MISSOULA RANGER DISTRICT
Alberton
Martin Pt
Deer Pk
Garden Pt
STANDARD
LEWIS & CLARK
West Fork Butte
White Mtn
BURDETTE
0 1803
LOLO NATIONAL FOREST
Roadless Area Boundary
0 1 2 3 4
miles
C-360

BURDETTE #01803

Acreage:

Gross Acres: 16,380
Net Acres: 16,360

I. Description

A. Location and Access

This roadless unit is situated 11 miles south of the town of Alberton and 25 miles west of Missoula. Access to this study area is readily available. Most access roads originate off of the Fish Creek Road which forms part of the southwest border. Logging roads extending from Fish Creek terminate at the edge of the Burdette unit. These roads are found in Deer, Wig, Owl, and Hyde Creeks. Forest System Road No. 4230 runs south of Deer Peak and forms the northeast boundary. On the southeast, Forest Road No. 33 acts as the border. There is one 4-mile long system trail within this area. Refer to Table C-4 for proximity information.

B. General Description

Most of the area has burned one or two times in the recent past which has resulted in large areas of nonforested or brush stands. The remaining forested area is mixed conifer with south slopes being dry and rocky and north slopes being heavily timbered.

Ridge lines separate drainage divides from the north and eastern margins of the Burdette Roadless Area. Burdette Creek, the major stream, flows along the eastern edge, initially in a west-northwest direction. After several miles, it arcs to the southwest and drains into Fish Creek. Burdette Creek with its tributaries draining down from the sharp ridges constitutes the major physiographic feature in the unit. Relief is approximately 2,800 feet.

This roadless area is underlain by rocks from the Ravalli Group, Wallace Formation, and the Missoula Group. All of these are part of the Precambrian Belt Supergroup and contain gray, green, and red argillites, siltites, and quartzites. The primary structural features are northwest-southeast oriented faults.

The Burdette Roadless Area provides habitat for a variety of game and nongame wildlife commonly found in western Montana. Most of the area is classified as big-game winter range and visitors can view deer and elk herds in the area.

Currently, the most popular activities in the area are big game hunting, horseback riding, hiking, and fishing; however, these activities occur predominately during big game hunting season.

II. Analysis of Wilderness Suitability

A. Capability

1. Wilderness Attributes

a. Naturalness - Fires which have occured in the area are considered part of the natural process, resulting in the lack of timbered stands. Fifty percent of the area is in the Douglas-fir/ninebark habitat type. These are cool, moist north and east slopes from 4,800 to 5,800 feet elevation. Douglas-fir dominates with understories of dense, shrubby ninebark or ocean spray. Drier slopes contain bunchgrass and balsam root.

Vegetative manipulation in the form of terracing for site preparation is visible in a part of the area. The unit is characterized by sharp ridges and steep draws with large areas of brush stands.

The unit contains critical winter range for 200+ elk and deer. Periodic, planned burning is necessary to maintain the quality and quantity of winter forage. The roadless character contributes greatly to the high quality of winter range.

Air and water quality in the area is considered good.

The southern portion of the unit contains several unpatented mining claims.

b. Inspirational Values - The size of the area offers visitors the opportunity to experience a sense of being alone which may contrast to their daily lives. The physical properties of the area do not contrast appreciably with the surrounding geography and, consequently, may not be awe-inspiring visually except in the general sense.

c. Recreational Values - Opportunities for primitive recreation are moderate due to a few low standard trails located in the area. There is not much topographic variety. The area was rated moderate for solitude due to moderate screening and some permanent off-site intrusions.

The area is used extensively by hunters and outfitters during big-game hunting season. Although there is harvest activity outside the area, the Burdette Roadless Area is large enough to provide security for big game making a quality hunting experience.

d. Cultural/Historical Values - No historic or prehistoric sites have been identified within the area.

e. Educational/Scientific/Unique Values - Some opportunity exists to observe and study big-game animals in their natural habitat, but there are no known endangered species of animals or plants in the area. Nor is the area recognized as having unique vegetative

communities to be used as benchmarks or unusual or scarce ecosystem representatives. Gene pools in the unit do not differ appreciably from the surrounding area. The ecosystems in this area are well represented in existing wilderness area.

2. Manageability and Boundaries

The Burdette Roadless Area is a compact unit approximatly 6 miles long and 5 miles wide. The north, east, and part of the western perimeters are drainage divides and would be easy to locate and monument. The rest of the border follows property lines which are not well marked. Some private land is included inside the present boundaries; however, it would not be difficult to delete it. A portion of the west side outside of the Burdette Creek basin is impacted by the sights and sounds of adjacent logging activities.

B. Other Resources Found in the Area

1. Potential

The area provides habitat for a wide variety of game and nongame wildlife species commonly found in western Montana (see Appendix B-2, Proposed Lolo Forest Plan, RDEIS). There are approximately 14,930 acres of deer and elk winter range and about 16 riparian acres. Burdette Creek is considered to have a good fisheries resource. There are 6 significant fishery stream miles.

The Burdette Study area contains no oil and gas lease applications; however, 280 unpatented mining claims lie within its boundaries. Mineral commodities occurring in the area include placer deposits of gold, copper-silver-lead in fissure veins, barite, and uranium. The Lolo National Forest inventoried 1,648 acres of high or very high mineral potential in the area.

The Burdette Roadless Area contains 291 acres classed as nonstocked, 1,717 acres of seedlings and saplings, 1,126 acres of poles, 4,521 acres of immature sawtimber, and 8,155 acres of mature sawtimber. Of this, 15,500 acres are classified as commercial timberland. The suitable lands presently support a standing timber inventory of 97.9 MMBF annually with a long-term sustained yield in the area of 2.23 MMBF annually.

There are no range allotments in the area.

Hunting, fishing, and snowmobiling are the principle recreation activities in the Burdette area. The Recreational Opportunity System map for the area shows this unit as 100 percent semiprimitive nonmotrized.

2. Resource Summary

01803 - Burdette - Roadless Area

Category		
Gross acres	Acres	16380
Net Acres	Acres	16360
Recreation		
Primitive	RVD's	0
Semiprim. Nonmot.	RVD's	16360
Semiprim. Motor.	RVD's	0
Roaded Natural	RVD's	0
Range		
Existing Obligated		
Suitable	Acres	0
Allotments	No.	0
AUMs	AUMs	0
Existing Vacant		
Suitable	Acres	0
Allotments	No.	0
AUMs	AUMs	0
Proposed		
Suitable	Acres	0
AUMs	AUMs	0
Timber		
Tenative Suitable	Acres	15500
Standing Volume	MMBF	97.9
Corridors		
Exist. & Pot.	No.	0
Wildlife - T&E		
Grizzly Bear		
Habitat Sit. 1	Acres	0
Habitat Sit. 2	Acres	0
Habitat Sit. 3	Acres	0
Bald Eagle Hab.	Acres	0
Gray Wolf Hab.	Acres	0
Peregrin Fal. Hab.	Acres	0
Wildlife - Big Game		
Summer Habitat	Acres	0
Winter Habitat	Acres	14930
Significant Fisheries		
Stream Miles	Miles	6.1
Stream Habitat	Hab. Ac	5.9
Lakes	No.	0
Lake Habitat	Hab. Ac	0
Water Develop.		
Existing	No.	0
Hardrock Potential		
Very High	Acres	0
High	Acres	1516
Moderate	Acres	0
Low	Acres	14844
Mining Claims .	No.	280
Oil & Gas Potential		
Very High	Acres	0
High	Acres	0
Moderate	Acres	0
Low	Acres	16360
Oil & Gas Leases	No.	0
Leased Area	Acres	0

3. Management Considerations

The area has an inclusion of approximately 20 acres of private land.

4. Public Involvement

During the public reveiw period for the DEIS, there were few additional comments on the Burdette Roadless Area. Several comments favored wilderness designation for all existing roadless areas. Other responders opposed further additions to the wilderness system.

III. Impacts

Designation: Wilderness
Management Emphasis: Wilderness

Burdette Roadless Area is allocated to wilderness in Alternative g but this is the only alternative that the total area or any portion is allocated to wilderness.

Wilderness allocation would not particularly enhance the area's wilderness attributes since there are few human intrusions on the area. Any existing motorized activities could be eliminated. This would be a social impact.

The approximately 15,500 acres of land tentatively suitable for timber production would not be available. This would remove about 98 MMBF from the Forest timber base.

The area is almost entirely big-game winter range habitat. Cover/forage relationships will change some over the years as the burned-over brush stands become populated with trees. Large portions of the area are burned by prescription to maintain the quality and quantity of forage and wilderness allocation would preclude this management practice.

Under wilderness allocation, recreation use would continue to be dominated by hunting.

Nonpriced effects are:

- Visual quality would be Preserved.
- Wilderness area would increase.
- Diversity would tend toward old growth without wildfire but could be improved depending on the control policy.
- Water quality and fisheries would be maintained at their present natural levels.
- Local employment may decrease slightly due to the unavailability of timber.

Big-game winter range would begin to be lost due to the inability to prescribe burn the area to maintain it. This would be a significant loss, the area supports approximately 200 elk and is the main source of winter range for the Fish Creek drainage.

Economic effects are reflected in the fact that the area has a low volume/acre ratio. The loss in timber volume can be mitigated by practicing intensive forestry elsewhere.

Designation: Nonwilderness
Management Emphasis: Timber/Range

Alternatives a, b, d, e, and f allocate from 3 to 6 percent to timber management. Alternative c allocates 37 percent.

Allocation to the timber prescription will forego the possibility of wilderness allocation on 3 percent of the area by the end of the first decade. The area

will continue to be accessed with roads and harvest will be scheduled up to the limit of constraints for this prescription.

The nonpriced effects are:

- Visual quality would be at its lowest level, Maximum Modification.
- Semiprimitive recreation potential would be foregone by the end of the first deacde.
- Wilderness characteristics would be compromised in a short time.
- Diversity would tend toward younger age classes with minimum old growth.
- Water quality and fisheries effects would be mitigated.
- The greatest number of jobs, mainly in the wood products industry, would be provided.

Economic effects are reflected in the volume of timber available and the maintenance of the critical winter range.

Designation: Nonwilderness
Management Emphasis: Wildlife

The main emphasis in this prescription is big game winter range. Alternatives a, c, d, e, and f allocate from 63 to 93 percent of the area to wildlife management. Alternative b allocates 6 percent to this emphasis.

Timber harvest would occur if enough timber is available and could be used to achieve habitat objectives. Other management activities would include prescribed burning.

Wildlife security and cover requirements include restrictions on human activities and development. Although habitat management activities result in some reductions in wilderness attributes, they are ususally short term and limited in scope. Opportunities for solitude and primitive recreation would remain high. Effects would not differ appreciably from those listed under timber management except wildlife objectives would be maintained.

Designation: Nonwilderness
Management Emphasis: Visual

Alternative a allocates 24 percent to visual management. Alternatives b, d, e, and f allocate from a trace to 6 percent and Alternative c and g do not manage for visuals.

Visuals are retained in the roadless management emphasis. Visual quality resource will be managed according to the management area classification. Refer to timber management for effects, except visual objectives will be maintained.

Designation: Nonwilderness
Management Emphasis: Riparian

All alternatives contain inclusions of riparian zones and recognize the need to manage these areas according to policy and guidelines. Alternative g is the wilderness alternative and would not impact the riparian areas.

Designation: Nonwilderness
Management Emphasis: Roadless

Alternative b is the only alternative which manages for roadless areas and it allocates 85 percent of the area to this emphasis.

The nonpriced effects are:

- Visual quality will be maintained at a very high level, Retention.
- Semiprimitive and wilderness attributes can be retained for a long period.
- Age class distribution and diversity would be dominated by old growth; young age classes would be minimal.
- Water quality and fisheries would not be affected.
- Few wood products related jobs would be added to the industry.

The economic effects would be reflected in the timber volume lost. This loss of volume could be mitigated by practicing intensive forestry elsewhere, other resources would be retained.

Designation: Nonwilderness
Management Emphasis: Miscellaneous

Miscellaneous management emphases include non-forest land, administrative sites, historical or cultural sites, mineral extraction sites, transportation and utility corridors, campgrounds, picnic areas, ski areas, and areas with concentrated public use.

None of the alternatives manage for this emphasis.

ACRES OF AREA UNDER MANAGEMENT FOR EACH EMPHASIS BY ALTERNATIVE
(Refer to Appendix C Introduction for Management Areas under each emphasis.)

Management Emphasis	Alternatives a	b	c	d	e	f	g
NONWILDERNESS							
Timber/Range	409	491	6070	1053	1053	1053	-
Wild life							
Grizzly bear	-	-	-	-	-	-	-
Other	12025	982	10290	15195	15195	15195	-
Visual	3926	982	-	96	96	96	-
Miscellaneous	-	-	-	-	-	-	-
Riparian	*	*	*	16	16	16	-
Roadless	-	13905	-	-	-	-	-
WILDERNESS							
Wilderness	-	-	-	-	-	-	16360
Total	16360	16360	16360	16360	16360	16360	16360

* Small inclusions occur in other management emphasis items

SUMMARY OF MANAGEMENT EMPHASIS (acres managed by decade)

Management Emphasis	Alternatives a	b	c	d	e	f	g
Developed							
decade 1	480	480	480	480	480	480	-
decade 5	16360	2455	16360	16360	16360	16360	-
Roadless							
decade 1	15880	15880	15880	15880	15880	15880	-
decade 5	-	13905	-	-	-	-	-
Wilderness							
decade 1	-	-	-	-	-	-	16360
decade 5	-	-	-	-	-	-	16360

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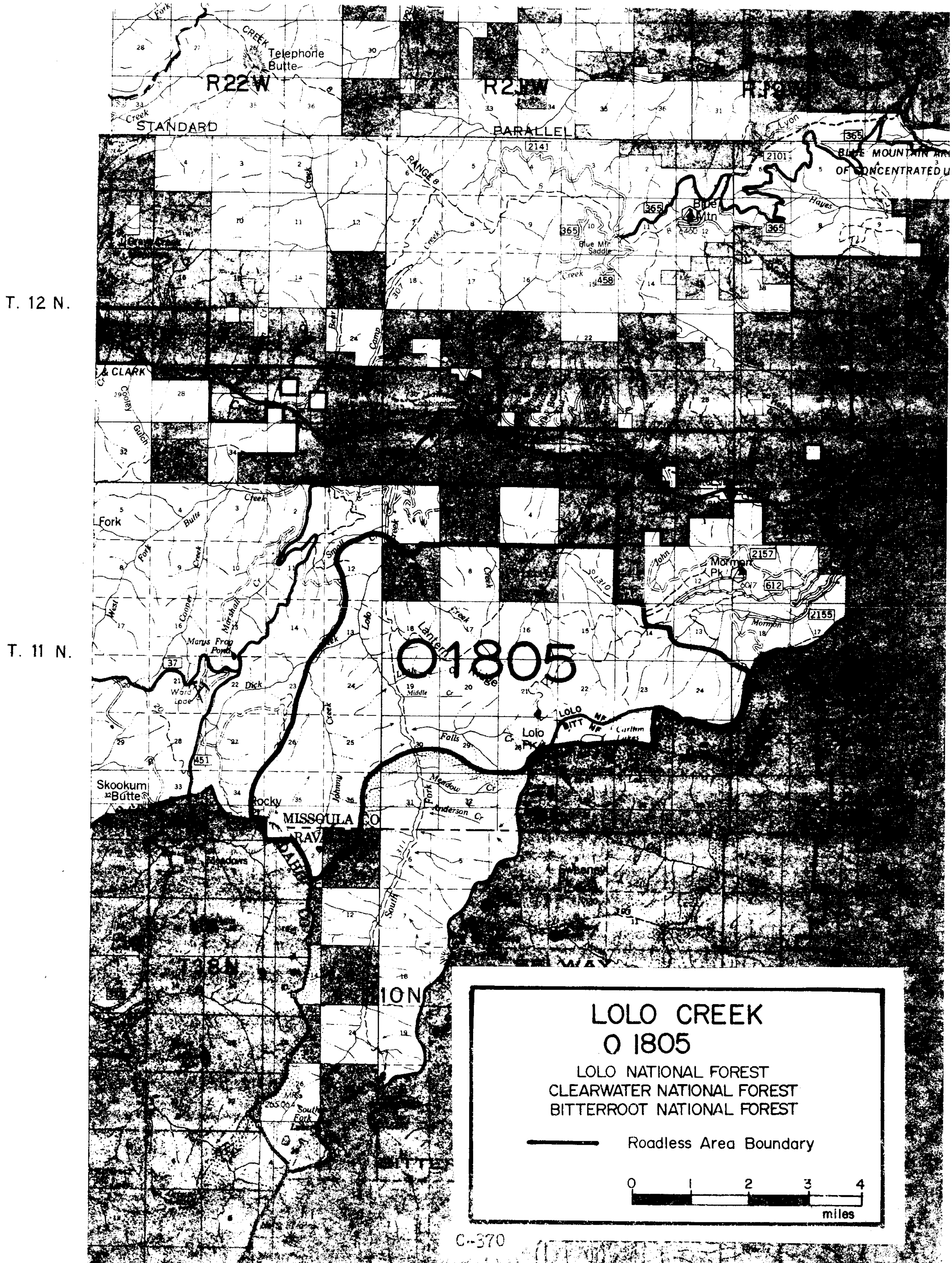

T. 12 N.
T. 11 N.
R22W
STANDARD
PARALLEL
Telephone Butte
Blue Mtn
Blue Mtn Saddle
BLUE MOUNTAIN
OF CONCENTRATED U
Mormon Pk
Lolo Pk
Skookum Butte
Marys Frog Pond
Ward Lode
Rocky
MISSOULA CO
01805
LOLO CREEK
O 1805
LOLO NATIONAL FOREST
CLEARWATER NATIONAL FOREST
BITTERROOT NATIONAL FOREST
Roadless Area Boundary
0
1
2
3
4
miles
C-370

LOLO, BITTERROOT, AND CLEARWATER NATIONAL FORESTS
LOLO CREEK #01805

Acreage:

Forest	Gross Acres	Net Acres
Lolo	16,160	14,660
Bitterroot	587	587
Clearwater	100	100
Total	16,847	15,347

I. Description

A. Location and Access

This roadless unit lies 15 miles southwest of Missoula, 17 miles northwest of Stevensville, and 6 miles west of Lolo. State Highway 12 parallels the northern border at a distance of about 2 miles. From it, logging roads along Mill Creek, Cedar Creek and Dick Creek approach the northern and western margins. A road up Mormon Creek provides vehicle access to the eastern edge. Four system trails totaling 12 miles extend into and across this area. Refer to Table C-4 for proximity information.

The original RARE II inventory included 17,087 gross and 15,587 net acres. Road construction has reduced this area by 240 acres.

B. General Description

The Lolo Creek study area is situated immediately adjacent to the Selway-Bitterroot Wilderness Area on the north. The most prominent feature is the lower valley of the South Fork of Lolo Creek which rises on the east to the summit of Lolo Peak, a difference of about 4,500 vertical feet. Most of the streams flow to the north into Lolo Creek, and the slopes are heavily timbered. Lolo Peak and Rocky Point peaks are not timbered because of rocky, shallow soils.

Most of the area is in the subalpine fir habitat series with a variety of understories. There are also small amounts of the Douglas-fir habitat types. These occur between 4,500 and 7,000 feet elevation. Most of this area is classified as commercial timber land.

The area lies within the border zone along the contact between the Precambrian Belt Supergroup and the granitics of the Idaho Batholith. Granite, mica schists, and gneisses are exposed over most of the area. To the north, altered Belt Group rocks are found.

The Lolo Creek Roadless Area provides habitat for a variety of game and nongame wildlife species commonly found in western Montana including pileated woodpecker, pine marten, mountain goat and hoary marmot and

other fur bearers. Visitors can often view deer and elk herds on summer range in the area.

Currently, popular recreational activities include hiking and trail biking, horseback riding, fishing, big-game hunting; and in winter, cross-country skiing and winter mountaineering sports activities.

II. Analysis of Wilderness Suitability

A. Capability

1. Wilderness Attributes

a. Naturalness - Ecological processes and the natural landscape in parts of the area have been disrupted to a certain extent by past and present domestic grazing. Basically, vegetative communities in the unit are similar to those found in surrounding areas outside the roadless boundary.

The bulk of the area is in the subalpine fir habitat series with understories of smooth woodrush, beargrass, menziesia, beadlily, bedstraw, bluejoint, and twinflower. About 20 percent is in the Douglas-fir habitat series with understories of ninebark, blue huckleberry, twinflower, and pinegrass. The rest of the area is spruce/twinflower and scree.

While most of the animal species native to the area are found in the Lolo Creek Roadless Area, none are particularly dependent on wilderness for survival. Animals on summer range can be susceptible to human activity and the area contains summer range. The area also contains a significant fisheries.

Air and water quality in the area are considered good.

The Lolo Creek Unit is significant because of its proximity to the Selway-Bitterroot Wilderness Area. Possible conflicts include a proposed ski area, potential for electronic site development, and possible mineral development. The Ward Lode Mine is located to the west with several of the claims staked in the roadless area. An irrigation dam is located on Carlton Lake, and the Carlton Ridge Primitive Road provides access to the dam.

A small ski run has been cut cut by users along a portion of Lolo Peak Trail No. 1312. Several clearcuts and logging roads are visible outside the area. Fort Fizzle National Historic Site is located about 3 to 4 miles to the north near Lolo Creek.

b. Inspirational Values - Although viewpoints from within include vistas of Missoula, Lolo, and Florence; there are too many off-site intrusions for the area to provide any real inspirational value.

c. Recreational Values - A major impact is the location of the area and its proximity to population centers. There is not an outstanding opportunity for solitude due to moderate to heavy

visitation, frequent air traffic, and noise from highways. Portions of Highways 93 South and 12, the Ward Lode Mine, lookouts, and ranch buildings impact the appearance of the area. A 500 kV twin powerline under construction by the Bonneville Power Administration will be visible from the area.

Primitive recreation opportunities are very good due tc steepness of terrain, rock cliffs, and proximity to the Selway-Bitterroot Wilderness. Good terrain exists for "expert" skiers.

d. Cultural/Historical Values - A few old miners' cabins exist inside the area. There is an old lookout base on Lantern Ridge. These are not, however, significant historical sites. No prehistoric sites have been identified.

e. Educational/Scientific and Unique Values - A portion of the roadless area was evaluated in a ski area feasibility study made by the Forest Service during the mid and late 1960's. Results of the study suggested the area had some potential and periodically interest is expressed by private individuals.

All but the northeast corner of the 920 acre Carlton Ridge Research Natural Area is located within the roadless area. The principle feature of the area is an extensive grove of alpine larch on well-developed soils. In addition, alpine larch and western larch are found at the same elevation which is uncommon. Studies indicate that hybridization between the two species has occurred on the site. This is one of the few areas known where this occurs.

Grizzly bears occupied the area in the historic past, but no bears have been sighted in many years.

2. Manageability and Boundaries

There are 1,500 acres of private land on the north end which will either have to be excluded or acquired. As currently drawn, the southern boundary follows the existing line of the Selway-Bitterroot Wilderness Area. Most of the western side follows drainage divides and would be easily marked and identified on the ground. However, the entire northern border is arbitrarily drawn to follow property lines which are not well marked or easily identified. Nonconforming uses inlcude the four-wheel drive trail along Carlton Ridge, several miners cabins, and the foundation of an old lookout tower.

B. Other Resources Found in the Area

1. Potential

The area provides habitat for a wide variety of game and nongame wildlife speices (see Appendix B-2, Proposed Lolo Forest Plan, RDEIS). On-site fisheries values exist in the South Fork of Lolo, Mill, and Johnny Creeks. There are 1311 acres of elk summer habitat and 530 riparian acres.

The Lolo Creek area contains all or parts of nine issued oil and gas leases which cover approximately 75 percent of the land. Ten mining claims associated with Ward Lode Mine are located along the southwestern corner. These are in a zone of copper-lead-zinc-silver veins. Some gold values have also been found. The Forest inventory denotes 4,355 acres of high to very high mineral potential.

The Lolo Creek Roadless Area contains 129 acres classed as nonstocked, 1,148 acres of seedlings and saplings, 1,654 acres of poles, 2,202 acres of immature sawtimber, and 8,475 acres of mature sawtimber. Of this, 10,317 acres are clasified as commercial timber lands. The suitable lands presently support a standing timber inventory of 72.3 MMBF with a long-term sustained yield in the area of 1.09 MMBF annually.

Portions of the East Fork/South Fork range allotment fall within this unit. The allotmment is active and is permitted for 215 cow/calf pairs for approximately 292 animal months. Only about one-third of the Lolo Creek Roadless Area is considered to be suitable for grazing. The remaining two thirds of the area is too steep and rocky. A small portion of the Anderson-Miller allotment is included in the area, but the suitable range acreage is not significant.

Significant features include the site for a potential ski area in the Lolo Peak/Carlton Ridge Area (see Management Area 6 description in the Lolo Forest Plan). Lolo Peak is a prominent viewpoint near the city of Missoula which receives moderate to heavy visitation yearround. This area is popular with cross-country skiers and is used for mountaineering winter sports activities. The area provides for a wide variety of recreational acivities, including four-wheel drive use on Carlton Ridge, trail biking, hiking, horseback riding, snowmobiling, and environmental education activities. Fishing and big game hunting are popular in the area. The unit is classed as 35 percent semiprimitive motorized and 65 percent semiprimitive nonmotorized.

2. Resource Summary

01805 - Lolo Creek - Roadless Area

Category		
Gross acres		
Lolo Forest	Acres	16160
Bitterroot Forest	Acres	587
Clearwater Forest	Acres	100
Total	Acres	16847
Net acres		
Lolo Forest	Acres	14660
Bitterroot Forest	Acres	587
Clearwater Forest	Acres	100
Total	Acres	15347
Recreation		
Primitive	RVD's	0
Bald Eagle Hab.	Acres	0
Grey Wolf Hab.	Acres	0
Peregrin Fal Hab	Acres	0
Wildlife - Big Game		
Summer Habitat		
Lolo Forest	Acres	724
Bitterroot For	Acres	587
Clearwater For	Acres	0
Total	Acres	1311
Winter Habitat	Acres	0
Significant Fisheries		
Stream Miles		

Semiprim. Nonmot.		
Lolo Forest	RVD's	14660
Bitterroot Forest	RVD's	487
Clearwater Forest	RVD's	100
Total	RVD's	15247
Semiprim. Motor. (Bitterroot only)		
Total	RVD's	100
Roaded Natural	RVD's	0
Range		
Existing Obligated (Lolo Forest only)		
Suitable	Acres	4880
Allotments	No.	1
AUMs	AUMs	292
Existing Vacant		
Suitable	Acres	0
Allotments	No.	0
AUMs	AUMs	0
Proposed		
Suitable	Acres	0
AUMs	AUMs	0
Timber		
Tenative Suitable	Acres	
Lolo Forest	Acres	10154
Bitterroot Forest	Acres	163
Clearwater Forest	Acres	0
Total	Acres	10317
Standing Volume		
Lolo Forest	MBF	70.6
Bitterroot Forest	MBF	1.7
Clearwater Forest	MBF	0
Total	MBF	72.3
Corridors (Lolo Forest only)		
Exist. & Pot.	No.	1
Wildlife - T&E		
Grizzly Bear		
Habitat Sit. 1	Acres	0
Habitat Sit. 2	Acres	0
Habitat Sit. 3	Acres	0
Lolo Forest	Miles	4.3
Bitterroot For	Miles	1.0
Clearwater For	Miles	0
Total	Miles	5.3
Stream Habitat		
Lolo Forest	Hab. Ac	4.2
Bitterroot For	Hab. Ac	.9
Clearwater For	Hab. Ac	0
Total	Hab. Ac	5.1
Lakes	No.	0
Lake Habitat	Hab. Ac	0
Water Develop.		
Existing	No.	0
Hardrock Potential		
Very High	Acres	0
High(Lolo only)	Acres	3400
Moderate		
Lolo Forest	Acres	11260
Bitterroot For	Acres	587
Clearwater For	Acres	100
Total	Acres	11947
Low	Acres	0
Mining Claims (Lolo only)	No.	10
Oil & Gas Potential		
Very High	Acres	0
High	Acres	0
Moderate	Acres	0
Low		
Lolo Forest	Acres	14660
Bitterroot For	Acres	587
Clearwater For	Acres	100
Total	Acres	15347
Oil & Gas Leases		
Lolo Forest	No.	7
Bitterroot For	No.	2
Clearwater For	No.	0
Total	No.	9
Leased Area		
Lolo Forest	Acres	11000
Bitterroot For	Acres	587
Clearwater For	Acres	0
Total	Acres	11587

3. Management Considerations

There are no management considerations identified within the area.

The management emphasis for the Lolo Creek Roadless Area is a combination of management prescriptions and alternatives from three National Forests, the Clearwater, Lolo, and Bitteroot. Because resources, uses, and land conditions are somewhat different on each Forest, neither the alternatives nor the management emphasis are fully integrated. Because the Lolo Forest is the lead Forest for this roadless area, for purposes of this evaluation, the alternatives and management emphasis from the other two Forests have been integrated into those of the Lolo Forest as close as possible on the basis of goals and objectives common to each Forest's alternatives and management emphasis.

Further information on the specific alternatives and management emphasis for the Clearwater and the Bitterroot National Forest's areas can be found in these Forest's Draft Environmental Impact Statements for the Forest Plans.

The proposed wilderness/nonwilderness designation for area 1805 is made and documented in the Lolo Enviromental Impact Statement. This proposed designation has priority over all other land designations and none of the three Forests can undertake any management activity other than current direction until such time that a record of decision is issued in conjunction with this document.

4. Public Involvement

During public reveiw of the Lolo Forest Plan DEIS, many comments were received in support of including this area in the National Wilderness Preservation System. Many responders indicated support for the Governor's proposal for wilderness designation of the proposed area. Comments were received that opposed any additional wilderness. Few responders oppose wilderness designation for this area.

III. Impacts

Designation: Wilderness
Management Emphasis: Wilderness

Lolo Creek is allocated to wilderness in alternatives d, f, and g. Alternatives f and g allocate the entire portion to wilderness. Alternative d allocates a portion of the area to wilderness.

Wilderness allocation can enhance the area's wilderness attributes since there are existing uses and facilities not usually associated with wilderness allocation. Any existing motorized activities could be eliminated.

The approximately 10,000 acres of land tentatively suitable for timber production would not be available. This would remove about 71 MMBF from the Forest timber base.

Big-game or elk management would not change. The area contains a small amount of summer habitat and cover/forage ratios should not change much over time except as influenced by wildfire control.

Current domestic livestock grazing of 292 AUM's could continue on portions of the area but use of motorized equipment would change.

Social effects under wilderness allocation would be reflected in recreation use which would continue to be dominated by hunting.

The nonpriced effects are:

- Visual quality would be Preserved.
- Wilderness area would increase.
- Diversity would tend toward old growth without wildfire but could be improved depending on the control policy.
- Water quality and fisheries would be maintained at their present natural levels.
- Local emloyment may decrease slightly due to the unavailability of timber.

Economic effects are reflected in the fact that the area represents less than 1 percent of the land base suitable for timber, and other resource values would be retained. The loss in timber volume can be mitigated by practicing intensive forestry elsewhere. Mineral exploration opportunities would be foregone.

Designation: Nonwilderness
Management Emphasis: Timber/Range

All alternatives allocate some of this area to timber management except f and g. Alternatives a, b, d, and e allocate from 2 to 5 percent and Alternative c allocates 60 percent.

Allocation to the timber prescription will forego the possibility of wilderness allocation by sometime after the end of the first decade. The area will be accessed with roads and harvest will be scheduled up to the limit of constraints for this prescription.

The nonpriced effects are:

- Visual quality would be at its lowest level, Maximum Modification.
- Semiprimitive recreation potential would be foregone by sometime after the end of the first decade.
- Wilderness characteristics would be compromised in a short time.
- Diversity would tend toward younger age classes with minimum old growth.
- Water quality and fisheries effects would be mitigated.
- The greatest number of jobs, mainly in the wood products industry, would be provided.

Economic effects are reflected in the fact that the area provides a small percentage of the timber available on the Forest.

Designation: Nonwilderness
Management Emphasis: Wildlife

The main emphasis in this prescription is old growth and summer range for big game. Alternative a allocates 10 percent of the area to wildlife management; Alternatives d and e, 22 percent; the other alternatives do not manage for this emphasis.

Development and vegetative manipulation may be required to achieve the habitat and forage management objectives. Timber harvest would occur if enough timber is available and could be used to achieve these objectives. Manipulation may include prescribed burning. Effects would not differ greatly from those listed in the timber emphasis but wildlife objectives are maintained.

Designation: Nonwilderness
Management Emphasis: Visual

Alternative a allocates 57 percent of the area to visual management. Alternatives b through e allocate from 7 to 10 percent and f and g do not manage for the visual resource.

Visuals are retained in the roadless management emphasis. Visual quality resource will be managed according to the management area classification. Effects are as listed under the timber management emphasis with visual objectives being maintained.

Designation: Nonwilderness
Management Emphasis: Riparian

All alternatives contain inclusions of riparian zones and recognize the need to manage these areas according to policy and guidelines. Alternatives f and g are the wilderness alternatives and would not impact the riparian areas. Effects are basically as listed in the roadless emphasis.

Designation: Nonwilderness
Management Emphasis: Roadless

Alternative a allocates 17 percent; Alternative b, 90 percent; Alternative c, 28 percent; Alternatives d, 32 percent; and Alternative e, 58 percent.

The nonpriced effects are:

- Visual quality will be maintained at a very high level, Retention.
- Semiprimitive and wilderness attributes can be retained for a long period.
- Age class distribution and diversity would be dominated by old growth; young age classes would be minimal.
- Water quality and fisheries would not be affected.
- Few wood products related jobs would be added to the industry.

The economic effects of this emphasis are reflected in the fact that the area represents less than 1 percent of the land base suitable for timber, and other reosurces would be retained.

Designation: Nonwilderness
Management Emphasis: Miscellaneous

Miscellaneous management emphases include non-forest land, administrative sites, historical or cultural sites, mineral extraction sites, transportation and utility corridors, campgrounds, picnic areas, ski areas, and areas with concentrated public use.

Alternative a allocates 11 percent to these sites; Alternatives c, d, and e allocate from 1 to 4 percent and the other alternatives do not include management for these sites.

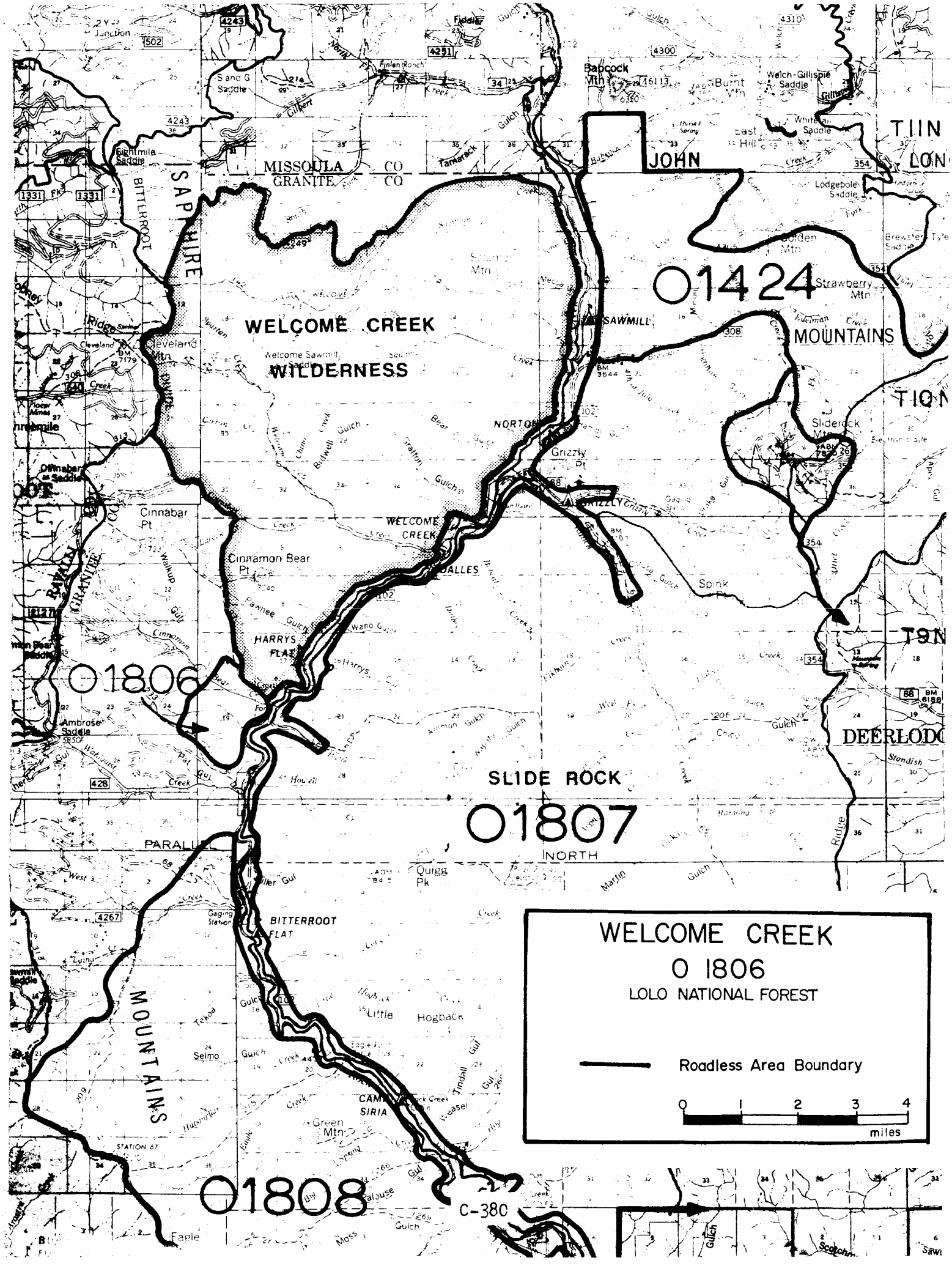
ACRES OF AREA UNDER MANAGEMENT FOR EACH EMPHASIS BY ALTERNATIVE
(Refer to Appendix C Introduction for Management Areas under each emphasis.)

Management Emphasis	Alternatives a	b	c	d	e	f	g
NONWILDERNESS							
Timber/Range	631	337	8866	802	802	-	-
Wildlife							
Grizzly bear	-	-	-	-	-	-	-
Other	1496	-	-	3287	3287	-	-
Visual	8375	1115	1478	1291	1291	-	-
Miscellaneous	1657	-	163	520	520	-	-
Riparian	*	*	*	525	525	-	-
Roadless	3188	13895	4840	4932	8922	-	-
WILDERNESS							
Wilderness	-	-	-	3990	-	15347	15347
Total	15347	15347	15347	15347	15347	15347	15347

* Small inclusions occur in other management emphasis items

SUMMARY OF MANAGEMENT EMPHASIS (acres managed by decade)

Developed							
decade 1	-	-	-	-	-	-	-
decade 5	12159	1452	10507	6425	6425	-	-
Roadless							
decade 1	15347	15347	15347	15347	15347	-	-
decade 5	3188	13895	4840	8922	8922	-	-
Wilderness							
decade 1	-	-	-	-	-	15347	15347
decade 5	-	-	-	-	-	15347	15347



WELCOME CREEK
0 1806
LOLO NATIONAL FOREST

Roadless Area Boundary

0 1 2 3 4 miles

WELCOME CREEK #01806

Acreage:

Gross Acres: 1,100
Net Acres: 1,100

I. Description

A. Location and Access

The Welcome Creek roadless study unit lies 15 miles east of Stevensville and 25 miles south of Missoula. On the east side, access is provided by the Rock Creek Road. From the west, a complex of logging roads drop down from the Sapphire Divide with the Cinnamon Bear Creek Road ending on the northwest boundary, while the Pats Gulch Road stops at the southwest edge. There are two system trails that delineate the northeast and southwest boundaries. Refer to Table C-4 for proximity information.

B. General Description

The last mile of Cinnamon Bear Creek flows through the northern portion of this study area and on into Rock Creek. Other smaller streams also flow a short distance eastward into Rock Creek. A ridge separating the Welcome Creek Wilderness Area from the Welcome Creek Roadless Area forms the northeast boundary, a length of approximately 1-1/2 miles.

This very small roadless study area contains quartzites and argillites of the Mount Shields Formation, a unit in the Precambrian Age Missoula Group. A limited exposure of Cretaceous Age granite is found along the southern margin. Quaternary alluvial deposits lie in Cinnamon Bear Creek.

Welcome Creek Roadless Area is predominately forested with lodgepole pine with Douglas-fir mixtures at the upper elevations and ponderosa pine and Douglas-fir at the lower elevations.

C. Significant Resource Values

About half of this roadless area is classified as wildlife winter range. Almost all is under lease for oil and gas. There is some potential for timber harvesting.

II. Analysis of Wilderness Suitability

A. Capability

1. Wilderness Attributes

a. Naturalness - The natural landscape and ecosystem has not been particularly disrupted within the roadless area. Nevertheless, the vegetative communitites inside the study unit are not different from those outside the boundary. According to the habitat inventory, 58 percent of the land consists of scree slopes. The Douglas-fir/ pinegrass habitat type covering 20 percent of the area comprises the largest single vegetative communtiy. It is found on moderately dry upper slopes of mountain sides. Ponderosa pine, lodgepole pine, and Douglas-fir, occur in varying mixtures. Ridge line stands often have a parklike appearance. Understories are dominated by beargrass with lesser amounts of kinnickinnick, elk sedge, heartleaf arnica, spiraea, and bunchgrasses. Timber productivity is low to moderate. Another 8 percent of the area supports the Douglas fir/ninebark habitat type. Douglas-fir dominates over lodgepole pine, ponderosa pine, and larch. These stands grow on cool, moist north and east slopes at elevations between 4,800 and 5,800 feet. Understories consist of a dense layer of ninebark or ocean spray. Drier slopes are more open and have a lot of bunchgrass and balsam root. Sites are moderately productive for growing timber. Another small percentage of the area contains the subalpine fir/menziesia vegetative type. This grows at the higher elevations (5,300 to 7,200 feet). Menziesia forms most of the understory beneath stands of subalpine fir, lodgepole pine, Douglas-fir, and spruce.

Of the animal species native to this area, none are particularly dependent upon roadless/wilderness management, for half of the unit contains big-game winter range. Some people associate viewing animals such as elk in their native habitat with a wilderness experience.

Air and water quality are considered to be good.

This area has no known intrusions inside the roadless boundary.

b. Inspirational Values - Different things are known to cause inspiration in people. Attractive or unusual landscapes greatly contrasting with the surrounding lands often give a sense of awe or wonder. This unit does not contrast appreciably with the adjacent countryside.

c. Primitive and Unconfined Recreation - The area is contiguous to the Welcome Creek Wilderness Area on the south. This roadless area is rated low for solitude due to the lack of topographic and vegetative screening. Also, the distance from core to perimeter is extremely short in any direction. Access from the east is a

challenge because of the dismantling of the Rock Creek cable crossing.

d. Cultural and Historical Values - There are no inventoried historic/prehistoric sites in the area.

e. Educational and Scientific Values - Some opportunity exists to observe big-game animals in their natural habitat, but there are no known threatened or endangered species. The area has no unique vegetative communities which can be used as benchmarks; neither are there any scarce ecosystems represented in the unit. The ecosystems in this area are well represented in existing wilderness areas.

f. Uniqueness - None of the biological or physical features contained within the Welcome Creek Roadless Area are considered to be unique.

2. Manageability and Boundaries

This is a very small, compact unit bounded on the west by timber harvest units and on the east by private land and Rock Creek. The area is heavily impacted by sights and sounds of the outside logging activities and travel along the Rock Creek Road. No nonconforming uses occur within the borders. The northeastern and eastern boundaries are well marked, but those on the west side would be difficult to locate on the ground.

B. Other Resources Found in the Area

1. Potential

The area contains some potential bighorn sheep habitat but there are no sheep in the area. There are also 49 acres of elk summer habitat, 68 riparian acres, and 612 winter range acres.

Three oil and gas leases have been issued and cover about 85 percent of the area. There are no mining cliams staked inside the subject lands. The study unit contains no acres of high-very high mineral potential lands.

The Welcome Creek Roadless Area contains 246 acres classed as nonstocked, 37 acres of seedlings and saplings, 59 acres of poles, 78 acres of immature sawtimber, and 451 acres of mature sawtimber; of this, 319 acres are classified as commercial timber lands. The suitable lands presently support a standing timber inventory of 2.3 MMBF with a long-term sustained yield in the area of .05 MMBF annually.

There are no range allotments in the unit.

Current Recreation Opportunity System maps show this area as 100 percent roaded natural. The area receives light use from summer through fall. Most of the use occurs during the hunting season, but occasional summer hiking, backpacking, horseback riding, and

berrypicking occurs also. The area can be accessed by fording Rock Creek. (A cable car was removed from Rock Creek accessing the area from the east.)

2. Resource Summary

01806 - Welcome Creek - Roadless Area

Category		
Gross acres	Acres	1100
Net Acres	Acres	1100
Recreation		
Primitive	RVD's	0
Semiprim. Nonmot.	RVD's	0
Semiprim. Motor.	RVD's	0
Roaded Natural	RVD's	1100
Range		
Existing Obligated		
Suitable	Acres	0
Allotments	No.	0
AUMs	AUMs	0
Existing Vacant		
Suitable	Acres	0
Allotments	No.	0
AUMs	AUMs	0
Proposed		
Suitable	Acres	0
AUMs	AUMs	0
Timber		
Tenative Suitable	Acres	319
Standing Volume	MMBF	2.3
Corridors		
Exist. & Pot.	No.	0
Wildlife - T&E		
Grizzly Bear		
Habitat Sit. 1	Acres	0
Habitat Sit. 2	Acres	0
Habitat Sit. 3	Acres	0
Bald Eagle Hab.	Acres	0
Gray Wolf Hab.	Acres	0
Wildlife - Big Game		
Summer Habitat	Acres	49
Winter Habitat	Acres	612
Significant Fisheries		
Stream Miles	Miles	1.0
Stream Habitat	Hab. Ac	1.0
Lakes	No.	0
Lake Habitat	Hab. Ac	0
Water Develop.		
Existing	No.	0
Hardrock Potential		
Very High	Acres	0
High	Acres	0
Moderate	Acres	1100
Low	Acres	0
Mining Claims .	No.	0
Oil & Gas Potential		
Very High	Acres	0
High	Acres	0
Moderate	Acres	1100
Low	Acres	0
Oil & Gas Leases	No.	3
Leased Area	Acres	900

3. Management Considerations

The vegetative resources will be managed so as not to impair the large amount of winter range.

4. Public Involvement

During the public reveiw period for the DEIS, there were few additional comments on the Welcome Creek Area. Several comments favored wilderness designation for all existing roadless areas. Other responders opposed further additions to the wilderness system.

III. Impacts

Designation: Wilderness
Management Emphasis: Wilderness

Welcome Creek is allocated to wilderness in Alternatives f and g but these are the only alternatives that the total area or any portion is allocated to wilderness.

Wilderness allocation would not particularly enhance the attributes since there are no human intrusions within the area. Any existing motorized activities could be eliminated, which is a social impact.

The approximately 319 acres of land tentatively suitable for timber production would not be available. This would remove about 2.3 MMBF from the Forest timber base. This is an economic impact.

Big-game or elk management would not change much since the area contains only small acreages of summer and winter habitat. Cover/forage relationships should not change much over time except as influenced by wildfire control.

Under wilderness allocation, recreation use would continue to be dominated by hunting.

The nonpriced effects are:

- Visual quality would be Preserved.
- Wilderness area would increase.
- Diversity would tend toward old growth without wildfire but could be improved depending on the control policy.
- Water quality and fisheries would be maintained at their present natural levels.

Designation: Nonwilderness
Management Emphasis: Timber/Range

All alternatives except f and g allocate some portion of the area to timber management. Percentages range from 10 percent in alternative a to 63 percent in alternative c.

Allocation to the timber prescription will forego the possibility of wilderness allocation by the end of the first decade. The area will continue to be

accessed with roads and harvest will be scheduled up to the limit of constraints for these prescriptions.

The nonpriced effects are:

- Visual quality would be at its lowest level, maximum modification.
- Semiprimitive recreation potential would be foregone by sometime after the end of the first decade.
- Wilderness characteristics would be compromised in a short time.
- Diversity would tend toward younger age classes with minimum old growth.
- Water quality and fisheries effects would be mitigated.
- The greatest number of jobs, mainly in the wood products industry, would be provided.

Economic effects would be reflected in the volume of timber harvested.

Designation: Nonwilderness
Management Emphasis: Wildlife

The main emphasis in this prescription is big-game winter range. Alternative a allocates 76 percent; Alternative b, a trace; Alternative c 17 percent, and Alternatives d and e, 60 percent each.

Wildlife security and cover requirements include restrictions on human activities and development. Although habitat management activities result in some reductions in wilderness attributes, they are usually short term and limited in scope. Opportunities for solitude and primitive recreation would remain high. Other impacts are reflected under timber management except wildlife objectives are maintained.

Designation: Nonwilderness
Management Emphasis: Visual

Only Alternative b allocates for visual management and then only a trace. Visuals are retained in the roadless management emphasis. Visual quality resource will be managed according to the management area classification. Impacts are not different from those listed under timber management except visual objectives are maintained.

Designation: Nonwilderness
Management Emphasis: Riparian

All alternatives contain inclusions of riparian zones and recognize the need to manage these areas according to policy and guidelines. Alternatives f and g are wilderness alternatives and would not impact the riparian areas.

Designation: Nonwilderness
Management Emphasis: Roadless

Alternative b is the only alternative which manages for roadless emphasis.

Visual quality would be maintained. Semiprimitive and wilderness attributes can be retained for a long period. Age class distribution and diversity would be

dominated by old growth. Water quality and fisheries would not be affected. Few wood products related jobs would be added to the industry.

The economic effects of this emphasis would be reflected in the fact that the area represents less than one percent of the land base suitable for timber, and other resources would be retained.

Designation: Nonwilderness
Management Emphasis: Miscellaneous

All Alternatives except b, f, and g allaocate from 14 to 20 percent of the area to management of these sites.

Miscellaneous management emphases inlcude non-forest land, administrative sites, historical or cultural sites, mineral extraction sites, transportation and utility corridors, campgrounds, picnic areas, ski areas, and areas with concentrated public use.

ACRES OF AREA UNDER MANAGEMENT FOR EACH EMPHASIS BY ALTERNATIVE
(Refer tp Appendix C Introduction for Management Areas under each emphasis.)

Management Emphasis	Alternatives a	b	c	d	e	f	g
NONWILDERNESS							
Timber/Range	110	204	693	193	193	-	-
Wild life							
Grizzly bear	-	-	-	-	-	-	-
Other	831	5	187	662	662	-	-
Visual	-	11	-	-	-	-	-
Miscellaneous	159	-	220	177	177	-	-
Riparian	*	*	*	68	68	-	-
Roadless	-	880	-	-	-	-	-
WILDERNESS							
Wilderness	-	-	-	-	-	1100	1100
Total	1100	1100	1100	1100	1100	1100	1100

* Small inclusions occur in other management emphasis items

SUMMARY OF MANAGEMENT EMPHASIS (acres managed by decade)

Developed							
decade 1	-	-	-	-	-	-	-
decade 5	1100	220	1100	1100	1100	-	-
Roadless							
decade 1	1100	1100	1100	1100	1100	-	-
decade 5	-	880	-	-	-	-	-

Management Emphasis	Alternatives a	b	c	d	e	f	g
Wilderness							
decade 1	-	-	-	-	-	1100	1100
decade 5	-	-	-	-	-	1100	1100

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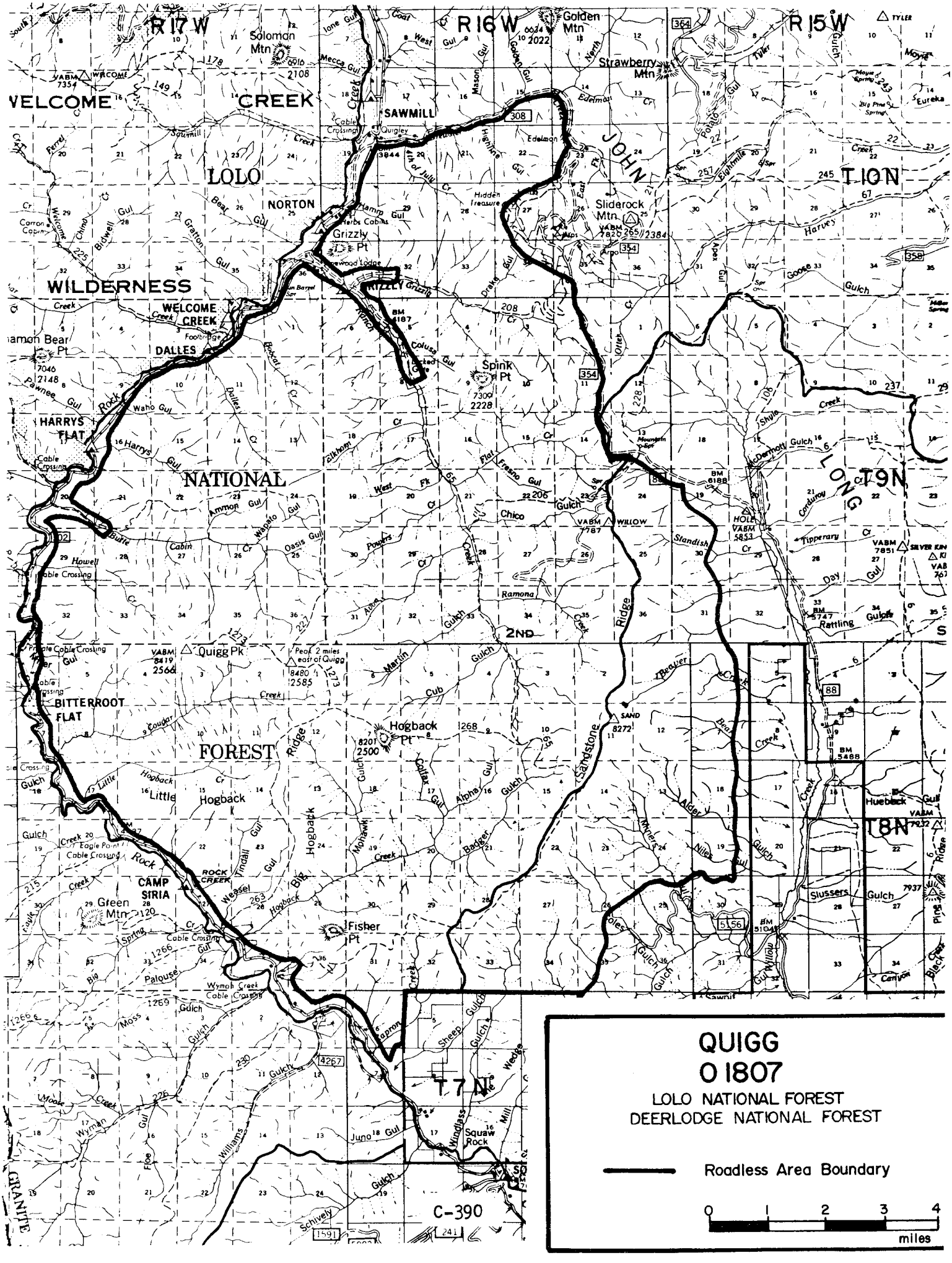

QUIGG
01807

LOLO NATIONAL FOREST
DEERLODGE NATIONAL FOREST

Roadless Area Boundary

0 1 2 3 4
miles

Acreage:

Deer Lodge Total Acres	12,165
Lolo Total Acres	69,820
Total	81,985

I. Description

A. Location and Access

This roadless area was inventoried and evaluated in the 1979 RARE II Environmental Impact Statement. Changes between that inventory and this planning effort, for the Deer Lodge portion, are shown below:

Inventory	Gross Acres	Net Acres	Reason for Change
1979 RARE II	15,360	15,340	
1983 Plan	12,165	12,165	
Change	-3,195	-3,185	Acreage recalculation Road construction

The boundaries are quite manageable. Should the area be designated wilderness, only minor adjustment would be necessary.

Existing contractual agreements and private rights which would need to be addressed if the area were designated wilderness include:

1,600 acres of unpatented mining claims

7,473 acres of oil and gas

The Quigg Roadless unit is located 15 miles east of Stevensville, 15 miles west of Philipsburg, and 25 miles southeast of Missoula. Access to this area is provided by the Rock Creek Road which forms almost all of the northwestern, western, and southwestern border. From the east, a jeep trail comes up from Willow Creek onto Sandstone Ridge. This road runs along the ridge several miles and also extends down into Ramona Gulch. Another road from the north accesses private land in Ranch Creek causing the boundary to be drawn around it. There are five system trails inside this area totaling about 43 miles.

B. General Description

This oval-shaped unit, 13 miles long by 10 miles wide, is defined by Rock Creek on the southwest and northwest, development activities to the east

of Sandstone Ridge, and the Ranch Creek-Grizzly Creek Divide on the north. The relief in this roadless area from the high point at Quigg Peak (8,500 feet) to the Ranch Creek-Rock Creek confluence (4,000 feet) is about 4,500 feet. Ranch Creek on the north, Butte Cabin and Cougar Creeks on the west, Willow Creek on the east, and Hogback Creek to the south, drain almost all of the study unit. Talus slopes are commonly developed in the upper reaches of most drainages and along the ridge lines. These rock-stream slopes characterize the overall area.

Argillites, quartzites, and siltites of the Precambrian Age Missoula Group occur within the Quigg Roadless Area. At higher elevations, glacial moraine deposits occur. In the northern portion of the study unit, thrust faults with northward components of movement have been mapped. A large intrusive body of granite lies adjacent to this area on the southeast. The mineralization responsible for the Philipsburg Mining District is associated with this granite intrusion.

Most of the area is tree covered with Douglas-fir and lodgepole pine, although grassland parks and rock outcrops are interspersed throughout.

II. Analysis of Wilderness Suitability

A. Capability

1. Wilderness Attributes

a. Naturalness - The 4,500 feet of local relief provides the visitor with a variety of vegetative types as they pass from lower elevations to above the timber line at Quigg Peak. Almost half (46 percent) of this study unit consists of unvegetated talus slopes. The most extensive habitat type is the subalpine fir/beargrass community. It grows on steep, dry exposures between 5,200 and 7,000 feet. Lodgepole pine is common with lesser amounts of subalpine fir and Douglas-fir. Understories are dominated by beargrass and huckleberry with varying percentages of grouse whortleberry, elk sedge, and pinegrass. Timber productivity ranges from high to low depending upon the site conditions. This group covers 13 percent of the area. At 9 percent, the next largest habitat type is the Douglas-fir/pinegrass vegetative community which grows on dry hillsides and upper slopes. Ponderosa pine, lodgepole pine, and Douglas-fir are found in differing quantities. Ridge line stands often have a parklike appearance. Understories are dominated by pinegrass with various mixtures of kinnickinnick, heartleaf arnica, elk sedge, and bunchgrasses. The other significant vegetative communities include subalpine fir/menziesia (7 percent), Douglas fir/ninebark (5 percent), and subalpine fir/smooth woodrush. Basically, the habitat groups in the Quigg Roadless Area are similar to those found on the surrounding lands.

While most of the animals native to the region can be found in the Quigg area, none are dependent upon roadless/wilderness management for survival. There are no threatened or endangered species in the study unit.

Both the water and air quality are considered to be good.

There are a number of physical intrusions within the roadless boundary. A small building containing a watershed monitoring station is located on Grizzly Creek, and there are Forest Service pump houses near Harry's Flat and the Dalles. There are lookout foundations on Quigg and Hogback Peaks, borrow pits in Butte Cabin Creek, mineral developments in seven different drainages, unimproved roads in Cougar Creek and Ramona Gulch, fences on lower Fisher Creek, utilization cages on Hogback Creek, two old cabins, and scattered helispots.

b. Inspirational Values - The size of the area offers visitors an excellent opportunity to experience a sense of being alone, a feeling which may contrast with their daily lives. The physical features (peaks, ridges, scree slopes), while not appreciably contrasting with the nearby geography, are somewhat better developed within the unit.

c. Primitive and Unconfined Recreation - Opportunities for primitive recreation and solitude are very good because of the abundant topographic screening and the nonmotorized nature of the area. The distance from the perimeter to the core is 5 to 6 miles. A portion of the northwest boundary lies within 1/2 mile of the Welcome Creek Wilderness Area. The Rock Creek Road separates these two areas.

d. Cultural and Historical Values - The lookout tower foundations and the two old cabins are the only cultural sites inventoried in the Quigg Roadless Area.

e. Educational and Scientific Values - This land contains no scarce or unusual plant or animal communities which have yet to be studied. There is opportunity to observe big game in their natural habitat. Because of a general lack of water, the area offers an excellent opportunity for people practicing survival skills.

f. Uniqueness - This study area does not contain any known unique physical or biological features.

2. Manageability and Boundaries

The Quigg Roadless Area is both relatively large and compact. The existing boundaries have been drawn to exclude private lands and follow well defined topographic features along the north border. The boundary along the Rock Creek Road and the eastern boundary would be more difficult to locate and identify. The mining road along Sandstone Ridge and in Ramona Gulch is the most significant nonconforming use. This road is visible from such interior viewpoints as Quigg and Hogback Peaks. Vehicle traffic along the Rock Creek Road also causes some impacts on the solitude for those areas adjacent to it.

B. Other Resources Found in the Area

1. Potential

The Quigg Roadless Area contains some existing/potential mountain goat and bighorn sheep range. There are approximately 158 riparian acres and 2,347 acres of deer and elk winter range.

Although the entire area has been blanketed by oil and gas lease applications, none have been issued because the unit was recommended for wilderness designation in the RARE II process. This area also contains 152 unpatented mining claims which are clustered in the north (target minerals: placer gold, tungsten, barite); and east-central (target minerals: fissure vein copper, gold, silver, iron). The U.S. Geological Survey has determined that Miner's Gulch in the southeast corner contains a moderate potential for molybdenum deposits. Placer deposits may be contained in the Quaternary alluvium and older terrace gravels. The Forest has inventoried 5,602 acres of high to very high mineral potential lands inside this unit.

The Quigg Roadless Area contains 16,962 acres classed as nonstocked, 1,532 acres of seedlings and saplings, 3,300 acres of poles, 10,356 acres of immature sawtimber, and 37,809 acres of mature sawtimber. Of this, 35,791 acres are classified as commercial timber land. The suitable lands presently support a standing timber inventory of 277.6 MMBF with a long-term sustained yield in the area of 18.52 MMBF annually.

The Ranch Creek allotment is included within the Quigg area but has been inactive since 1968. Nearly the entire allotment of about 250 acres is included in the area. The last permitted use was in 1968 for 25 cows and 83 AM's.

Current Recreation Opportunity maps show the Quigg area as 30 percent primitive and 70 percent semiprimitive nonmotorized. A trail system provides good access to the area but use is generally light. Most recreational use occurs during the hunting season and is rated light to moderate. There is one outfitter guide permit in Ranch Creek. Summer use includes horseback riding and packing, hiking, and backpacking. The area is adjacent to Rock Creek, a blue-ribbon trout stream.

2. Resource Summary

TABLE 1 - ROADLESS RESOURCE DATA

Category	Unit	Number Deerlodge	Number Lolo	Total
Gross Acres	Acres	12,165	69,820	81,985
Net Acres	Acres	12,165	69,820	81,985
Recreation				
Primitive	RVDs	0	10,473	10,473
Semiprim. Nonmotor.	RVDs	400	48,874	49,274
Semiprim. Motor.	RVDs	300	0	300
Roaded Natural	RVDs	0	0	0
Range				
Existing Obligated				
Suitable	Acres	0	0	0
Allotments	No.	0	0	0
AUMs	AUMs	0	0	0
Existing Vacant				
Suitable	Acres	0	565	565
Allotments	No.	0	1	1
AUMs	AUMs	0	200	200
Proposed				
Suitable	Acres	0	0	0
AUMs	AUMs	0	0	0
Timber				
Tentative Suitable	Acres	8,036	27,755	35,791
Standing Volume	MBF	56,950	147,200	204,150
Corridors				
Exist. & Potential	No.		0	0
Wildlife - Big Game				
Summer Habitat	Acres	12,165	0	12,165
Winter Habitat	Acres	0	2,347	2,347
Significant Fisheries				
Stream Miles	Miles	0	6.9	6.9
Stream Habitat	Hab.Ac.	0	6.7	6.7
Lakes	No.	0	0	0
Lake Habitat	Hab.Ac.	0	0	0
Water Developments				
Existing	No.	0	0	0
Minerals				
Hardrock Potential				
Very High	Acres	0	4,646	4,646
High	Acres	956	0	956
Moderate	Acres	11,209	65,174	76,383
Low	Acres	0	0	0
Mining Claims	No.	80	152	232
Oil & Gas Potential				
Very High	Acres	0	0	0
High	Acres	0	0	0
Moderate	Acres	0	69,820	69,820
Low	Acres	12,165	0	12,165
Oil and Gas Leases				
Leases	No.	6	0	6
Leased Area	Acres	7,473	0	7,473

3. Management Considerations

The management emphasis for the Quigg Roadless Area is a combination of management prescriptions and alternatives from two National Forests, the Deerlodge and Lolo. Because resources, uses, and land conditions are somewhat different on each Forest, neither the alternatives nor the management emphasis are fully integrated. Because the Lolo Forest is the lead Forest for this roadless area, for purposes of this evaluation, the alternatives and management emphasis from the other Forest have been integrated into those of the Lolo Forest as close as possible on the basis of goals and objectives common to each Forests alternatives and management emphasis.

Further information on the specific alternatives and management emphasis for the Deerlodge National Forest's areas can be found in that Forest's Draft Environmental Impact Statement for the Forest Plan.

The proposed wilderness/nonwilderness designation for area 1807 is made and documented in the Lolo Enviromental Impact Statement. This proposed designation has priority over all other land designations and none of the two Forests can undertake any management activity other than current direction until such time that a record of decision is issued in conjunction with this document.

4. Public Involvement

During public reveiw of the Lolo Forest Plan DEIS, many comments were received in support of including this area in the National Wilderness Preservation System. Comments were received that opposed any additional wilderness. Few responders oppose wilderness designation for this area.

III. Impacts

Designation: Wilderness
Management Emphasis: Wilderness

At least a portion of the Quigg Roadless Area is allocated to wilderness in all alternatives except Alternative e. Alternatives a through f allocate 74 percent and Alternative g allocates 100 percent.

Wilderness allocation can enhance the area's wilderness attributes since there are existing uses and facilities not usually associated with wilderness allocation. Any existing motorized acitivities could be eliminated.

The approximately 35,800 acres of land tentatively suitable for timber production would not be available. This would remove about 278 MMBF from the Forest timber base tentatively suitable for production.

Big-game and elk management would not change much. The area contains about 2,300 acres of winter habitat. Cover/forage relationships should not change much over time except as influenced by wildfire control.

Under wilderness allocation recreation use would continue to be dominated by a variety of activities.

The nonpriced effects are:

- Visual quality would be preserved.
- Wilderness area would increase.
- Diversity would tend toward old growth without wildfire but could be improved depending on the control policy.
- Water quality and fisheries would be maintained at their present natural levels.
- Local employment may decrease slightly due to the unavailability of timber.

Economic impacts would be reflected in the timber volume lost. This loss of volume could be mitigated by practicing intensive forestry elsewhere on the Forest.

Designation: Nonwilderness
Management Emphasis: Timber/Range

All alternatives except g allocate some portion of the area to timber management. Alternative a provides 4 percent; Alternative c, 16 percent; Alternative d, 13 percent; Alternative e, 31 percent; and Alternative f, 8 percent.

Allocation to the timber prescriptions will forego the possibility of wilderness allocation by sometime after the end of the first decade. The area will be accessed with roads and harvest will be scheduled, probably up to the limit of constraints for this prescription with other resources considered.

The area contains 565 acres of suitable domestic livestock range which is not presently under permit. The area provides for 200 AUM's and timber management will retain or improve this grazing capacity.

The nonpriced effects are:

- Visual quality would be at its lowest level, Maximum Modification.
- Semiprimitive recreation potential would be foregone by the end of the first decade on a portion of the area.
- Wilderness characteristics would be compromised after the area is accessed.
- Diversity would tend toward younger age classes with minimum old growth.
- Water quality and fisheries effects would be mitigated.
- The greatest number of jobs, mainly in the wood products industry, would be provided.

Economic effects would be reflected in the small percentage of the Forest which is affected.

Designation: Nonwilderness
Management Emphasis: Wildlife

The main emphasis in this prescription is big-game winter range and some old growth component. Alternative a allocates 9 percent to this emphasis.

Alternatives b through f allocate 1 to 4 percent and Alternative g does not manage for wildlife.

Development and vegetative manipulation may be required to achieve the habitat and forage management objectives. In areas with commercial timber stands, timber may be a byproduct of achieving or maintaining habitat objectives. Other management activities may include prescribed burning for wildlife or range.

Wildlife security and cover requirements include restrictions on human activities and development. Although habitat management activities result in some reductions in wilderness attributes, they are usually short term and limited in scope. Opportunities for solitude and primitive recreation would remain high. Wildlife effects are basically as stated under the timber management emphasis with wildlife objectives being maintained.

Designation: Nonwilderness
Management Emphasis: Visual

Alternatives a, d, e, and f allocate from a trace to 1 percent of the area to visual management. The other alternatives do not manage for this emphasis.

Visuals are retained in the roadless and wilderness management emphases. Visual quality resource will be managed according to the management area classification. Effects for this emphasis are basically as stated under timber management with visual objectives being maintained.

Designation: Nonwilderness
Management Emphasis: Riparian

All alternatives contain inclusions of riparian zones and recognize the need to manage these areas according to policy and guidelines. Alternative g is the wilderness alternative and would not impact the riparian areas.

Designation: Nonwilderness
Management Emphasis: Roadless

Alternatives a and g do not allocate for roadless management. Alternative e provides 41 percent; Alternative b, 11 percent; Alternative c, 1 percent; and the rest of the alternatives allocate only a trace.

The nonpriced effects are:

- Visual quality will be maintained at a very high level, Retention.
- Semiprimitive and wilderness attributes can be retained for a long period.
- Age class distribution and diversity would be dominated by old growth; young age classes would be minimal.
- Water quality and fisheries would not be affected.
- Few wood product related jobs would be added to the industry.

The economic effects of this emphasis would be reflected in the fact that the area represents less than 1 percent of the land base suitable for timber, and other resources would be retained.

Designation: Nonwilderness
Management Emphasis: Miscellaneous

Miscellaneous management emphases include non-forest land, administrative sites, historical or cultural sites, mineral extraction sites, transportation and utility corridors, campgrounds, picnic areas, ski areas, and areas with concentrated public use.

Alternative a provides 11 percent for this emphasis; Alternative b, 10 percent; Alternative c, 6 percent; Alternative d, 9 percent; Alternative e, 24 percent; Alternative f, 14 percent; and Alternative g does not manage for these sites.

ACRES OF AREA UNDER MANAGEMENT FOR EACH EMPHASIS BY ALTERNATIVE FOR THE LOLO (Refer to Appendix C Introduction for Management Areas under each emphasis.)

Management Emphasis	Alternatives a	b	c	d	e	f	g
NONWILDERNESS							
Timber/Range	1091	-	6302	3900	18837	3900	-
Wild life							
Grizzly bear	-	-	-	-	-	-	-
Other	6358	-	1957	2216	2216	2216	-
Visual	1091	-	-	46	46	46	-
Miscellaneous	450	-	-	2618	14675	2618	-
Riparian	*	*	*	149	149	149	-
Roadless	-	8990	731	61	33897	61	-
WILDERNESS							
Wilderness	60830	60830	60830	60830	-	60830	69820
Total	69820	69820	69820	69820	69820	69820	69820

* Small inclusions occur in other management emphasis items

SUMMARY OF MANAGEMENT EMPHASIS (acres managed by decade)

Developed							
decade 1	-	-	-	-	-	-	-
decade 5	8990	-	8259	8929	35923	8929	-
Roadless							
decade 1	8990	8990	8990	8990	69820	8990	-
decade 5	-	8990	731	61	33897	61	-
Wilderness							
decade 1	60830	60830	60830	60830	-	60830	69820
decade 5	60830	60830	60830	60830	-	60830	69820

Table 2

(Deerlodge Portion)

Management Emphasis	Acres by Alternative A	B	C	D	E	F	G	I	J	K	L	M	N
Wilderness	0	0	0	0	0	0	0	0	12165	0	0	0	0
Nonwilderness													
Timber	2456	5703	6411	2797	6411	6411	6411	2737	0	6411	6411	6411	6510
Range	355	355	355	355	355	355	355	355	0	355	355	355	0
Wildlife	861	861	861	861	861	861	861	861	0	861	861	861	861
Recreation	8493	5246	4538	8152	4538	4538	4538	8212	0	4538	4538	4538	4794
Municipal Watershed	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	12165	12165	12165	12165	12165	12165	12165	12165	12165	12165	12165	12165	12165
Summary of Management Emphasis:													
Developed													
Decade 1	1907	422	1134	644	999	999	999	915	0	1172	1172	2281	2247
Decade 5	3524	2731	3265	1788	2750	2757	2757	1865	0	2219	2219	4361	4543
Roadless													
Decade 1	10258	11743	11031	11521	11166	11166	11166	11250	0	10993	10993	9884	9918
Decade 5	8641	9434	8900	10377	9415	9408	9408	10300	0	9946	9946	7804	7622
Wilderness	0	0	0	0	0	0	0	0	12165	0	0	0	0

1/ Roadless is defined as 5,000 acres or greater in size or any acreage if contiguous to existing wilderness.

Alternative coorelation between Lolo and Deerlodge alternatives:

Lolo alternatives	a	b	c	d	e	f	g

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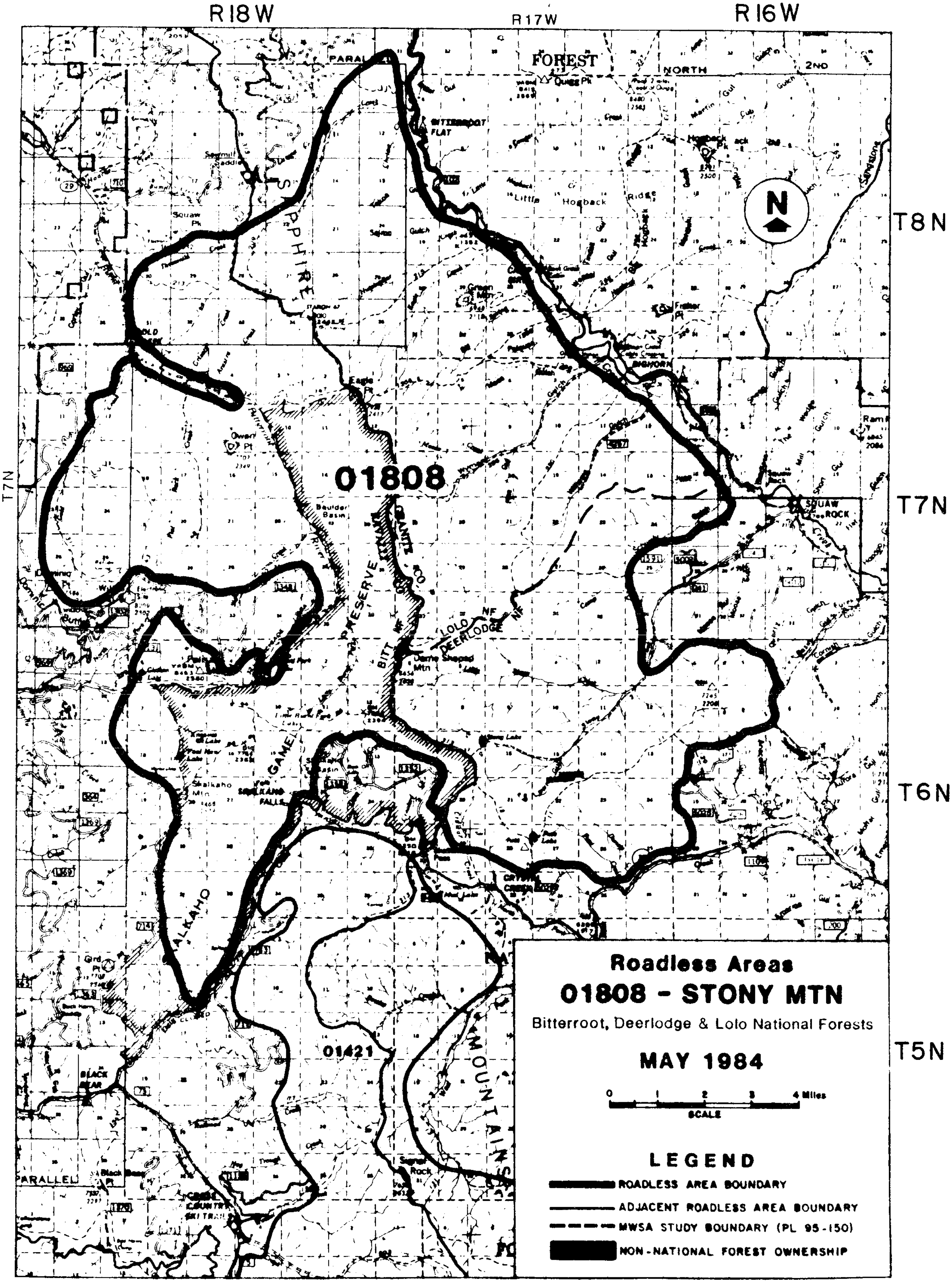

R18W
R17W
R16W
T8N
T7N
T6N
T5N
T7N
N
01808
01421
FOREST
NORTH
SAPPHIRE
PRESERVE
GAME
SKALKAHO
MOUNTAINS
LOLO NF
DEERLODGE NF
GRANITE CO.
SQUAW ROCK
Roadless Areas
01808 - STONY MTN
Bitterroot, Deerlodge & Lolo National Forests
MAY 1984
0 1 2 3 4 Miles
SCALE
LEGEND
ROADLESS AREA BOUNDARY
ADJACENT ROADLESS AREA BOUNDARY
MWSA STUDY BOUNDARY (PL 95-150)
NON-NATIONAL FOREST OWNERSHIP

STONY MOUNTAIN #01808

Acreage:

National Forest	Gross Acres	Net Acres
Bitterroot	43,720	43,720
Lolo	34,930	34,930
Deerlodge	24,696	24,616
Total	103,346	103,266

I. Description

A. Location and Access

The area lies along the crest of the Sapphire Mountains in Ravalli and Granite Counties of west central Montana. Welcome Creek Wilderness lies several miles to the north and the Quigg Peak and Sapphire roadless areas are immediately adjacent to the east and south (see map). Remaining lands adjacent to the boundary have been developed for minerals, timber production, agriculture, or recreation. Refer to Table C-4 for proximity information.

B. General Description

The area is about 25 miles south of Missoula and equidistant between Hamilton and Philipsburg. Access is provided at many points along the boundary by Montana State Highway 38 and from Forest roads in Rock, Burnt Fork, Willow, and Gird Creeks. A network of about 20 trails provides access within the area along most major drainages and ridgetops. The Palisade Mountain and Easthouse National Recreation Trails occur in the area.

The area extends 18 miles along the Sapphire Mountain crest, the area's dominant feature, which bisects the area into about equal parts. Width averages about 10 miles; however, a roaded intrusion in Signal Creek pinches the central section to about 6 miles. About 20 percent of the boundary is topographically well-defined by ridgetops or stream bottoms. The remaining boundary is midslope lying above or below existing roads or timber harvest and minerals development.

Elevations range from 5,000 feet along the boundary to 8,700 feet at Dome Shaped Mountain, with about 40 percent of the area above 7,000 feet. Drainage headwaters adjacent to the crest, break lands above major streams, and most of the northern half of the area are extremely rocky, including the entire Burnt Fork, Flat Rock, Upper Willow drainages, and from Eagle Creek to the north boundary on the Rock Creek side.

Several large natural meadows break the landscape in the Skalkaho Basin near the south boundary. Most of the remaining area is forested with Douglas-fir and lodgepole pine. Higher ridges are predominantly

whitebark pine and stream bottoms contain Englemann spruce. Ground cover is mainly grass on severe south- and west-facing exposures; snowberry, ninebark, and beargrass on drier sites; willow, red-osier dogwood, and menzesia on cool, moist sites; and grouse whortleberry or woodrush on severe sites above 7,000 feet. A diversity of native grasses and forbs comprise the meadow vegetation in Skalkaho Basin and Upper Burnt Fork.

Slopes are steep throughout, with the exception of about 10,000 acres of gently rolling land between Wyman and Eagle Creeks. Geology and soils are complex. Granitic intrusives are found in the Eagle/Wyman Creek area, limestones in Gold/Willow Creek, glacial deposits in upper Burnt Fork, and a variety of more resistant argillites and quartzites elsewhere. Preliminary geologic mapping indicates the presence of numerous faults.

Five small lakes and numerous potholes dot the southern portion of the area. Better known streams are Burnt Fork, Daly, and Willow Creeks all flowing west into the Bitterroot River and Stony, Wyman, Eagle, Hutsinpilar, and Alder Creek flowing east into Rock Creek.

II. Analysis of Wilderness Suitability

A. Capability

1. Wilderness Attributes

a. Naturalness - Activities that have significantly altered natural processes are minimal and generally confined to old minerals prospects. There is exploration and some placer work near the boundary in Gold, Wyman, and Stony Creeks, and Skalkaho Mountain. An old flume, ditches, and deteriorated cabins are associated with placer operations in Stony Creek. The above impacts cover an insignificant acreage, are widely dispersed, historical in nature (50 years or older), with recovery nearly complete. The only significant current impact is a jeep trail leading to a cabin and mineral prospect in the headwaters of Gold Creek. The trail is approximately 2-1/2 miles long. Minor portions have been graded to accommodate jeep travel. There is also a dozer trail along the Sapphire Crest from the north boundary to Eagle Point and then east for about 1 mile.

Most of the old minerals activity would not be apparent to most visitors. The most extensive workings are readily apparent when onsite; however, they are historical and not objectionable. The remainder of the area appears natural.

b. Opportunities for Solitude - The area is moderately well-screened from civilization and development by topography and its relatively large and compact size. However, about 20 percent of the area has boundaries at midslope either above or below existing development where civilization appears close at hand. The core of the area--Hutsinpilar, Eagle, and Wyman Creeks--plus the headwaters of other major drainages such as Stony, Willow, Daly, and the Burnt Fork, are well protected by topography with good opportunities for

solitude. This portion constitutes about 50 percent of the area. Opportunities for solitude are moderate in the rest of the area where roads intrude into the lower portions of drainages such as Williams Gulch and the Burnt Fork.

c. Primitive Recreation Opportunities - These are hiking; horseback riding; big- and small-game hunting; fishing; viewing a moderate diversity of vegetation, wildlife, geology; and historic mining activity. The combination of accessible drainage bottoms, gentle ridges, and open parklike meadows provides opportunities for cross-country travel.

d. Other Features - The 25,000-acre Skalkaho Game Preserve offers visitors the opportunity to view and photograph elk, goats, and other wildlife in their natural environment. Unique features are the massive rock rubble slopes of Boulder Basin; glacial cirques along the Sapphire Mountain crest; historical evidence of mining activity; the large natural meadows in Skalkaho Basin; extensive areas of whitebark pine, alpine larch; and wide panoramas from the major ridges.

2. Manageability and Boundaries

The following adjustment in net acres has taken place since the RARE II inventory.

Total Adjustment	-------National Forest------- Bitterroot	Lolo	Deerlodge	Acres
RARE II Inventory	49,800	32,120	24,400	107,320
Developed or under contract	-8,188	--	--	-8,188
Land added to inventory	+800	--	--	+800
Refined acreage calculation	+1,308	+1,810	+216	+3,334
Current inventory	43,720	34,930	24,616	103,266

B. Availability of Wilderness

1. Resource Potential and Use

Stony Mountain Roadless Area Resource Potential and Use

Category	Unit	----------Forest---------- Bitterroot	Deerlodge	Lolo	Total
Gross area	Acres	43,720	24,696	34,930	103,346
Net area	Acres	43,720	24,616	34,930	103,266
Recreation					
Primitive	RVD's	0	0	0	0
Semiprim. nonmotor.	RVD's	0	1,100	2,800	3,900
Semiprim. motor.	RVD's	2,800	2,000	0	4,800
Roaded natural	RVD's	400	0	0	400

Category	Unit	Forest			Total
		Bitterroot	Deerlodge	Lolo	
Wildlife habitat					
Elk & deer					
Summer range	Acres	40,730	23,506	34,298	98,534
Winter range	Acres	2,990	1,110	632	4,732
Rocky mountain goat	Acres	7,000	1,000	2,000	10,000
Bighorn sheep	Acres	0	0	0	0
Fisheries streams	Miles	35	12	4	51
Lakes	Number	4	1	0	5
Fisheries lakes	Acres	35	10	0	45
Water developments	Number	1	0	0	1
Livestock range					
Current use	AUM's	0	1,027	0	1,027
Suitable rangeland	Acres	0	5,137	0	5,137
Current allotments	Number	0	4	0	4
Other suitable	Acres	0	0	0	0
Timber					
Tentatively suitable	Acres	18,646	16,431	17,198	52,275
Standing volume	MMBF	181.7	103.2	127.3	412.2
Corridors					
Existing/potential	Number	0	0	0	0
Mineral potential					
Very high	Acres	2,300		0	2,300
High	Acres	122	0	0	122
Moderate	Acres	41,298	1,340	12,585	55,223
Low	Acres	0	23,266	22,345	45,611
Mining claims	Number	19	11	9	39
Oil & gas potential					
Very high	Acres	0	0	0	0
High	Acres	0	0	0	0
Moderate	Acres	0	0	0	0
Low	Acres	43,720	24,616	34,930	103,266
Leases	Number	22	11	21	54
Leased area	Acres	42,960	18,170	31,400	92,530

2. Selected Resource Values

a. Recreation - Current light use includes big-game hunting, fishing in the area's major streams and several cirque lakes, hiking, horseback riding, and viewing alpine vistas at higher elevations. Flatter ridge trails receive minor trail bike use. Big-game hunting is the primary use except in the Skalkaho Game Preserve.

b. Wildlife - The Skalkaho Game Preserve contains the best summer/fall elk habitat in the Sapphire Mountains, and a large herd summers in this area. Other common big-game species are moose, mule deer, black bear, and mountain goat. Less common are whitetail deer, mountain lion, and bighorn sheep. A great diversity of small animals and birds ranging from wolverines and golden eagles to

small mice and ruby-crowned kinglets are permanent or seasonal occupants. Larger streams and three lakes support fishable populations of cutthroat and eastern brook trout. Arctic grayling occur in Fuse Lake.

c. Water - Water from streams flowing west into the Bitterroot River are used extensively for irrigation; however, the only water development within the area is Gleason Lake dam and reservoir. Eastward flowing streams are tributaries of the nationally renowned Rock Creek fishery.

d. Livestock - Suitable lands are found in Stony Creek where four allotments provide about 1,027 animal unit months of grazing.

e. Ecology - Varied geology, aspect, elevation, and past alpine glaciation contribute to a diversity of ecosystems.

f. Timber - Standing timber volume is estimated at 412 MMBF and about 51 percent of the area is potentially suitable for timber production. Except for lower elevation fringes and drainage bottoms, timber potential is considered low primarily because of costly access associated with steep slopes and broad expanses of rock. Unsuitable lands are concentrated along the Sapphire Mountain crest, on other lateral ridges in the headwaters of major drainages, and in the northern third of the area which is extremely rocky.

g. Minerals and Energy Resources - Hardrock mineral potential is low to moderate. Gold, Stony, Wyman and Spring Creeks, Williams Gulch, and the Sapphire Crest in the extreme northern portion are rated as moderate potential because of past prospecting and exploration work. About 2,600 acres in the vicinity of Skalkaho Mountain has a high potential. Although 89 percent of the area is leased, traditional theories place the oil and gas potential as low.

h. Cultural - The flume, ditches, and cabins associated with placer operations in Stony Creek are of historic interest; however, little else is known about cultural resources.

i. Land Use Authorizations - There are two outfitter permits and a permit for the maintenance and operation of the Gleason Lake dam and reservoir.

j. Nonfederal Lands

There are 80 acres of private land in Stony Creek.

k. Other Considerations

(1) Fire - Fire occurrence is low to moderate and the potential for large intense fires is moderate due to heavy accumulations of down fuels, particularly in lodgepole pine stands that were decimated by mountain pine beetles in the 1930's.

(2) Insects and Disease - Insects and diseases are generally endemic; however, dwarf mistletoe reduces annual growth in some areas as does spruce budworm, a recurrent pest. There are also areas of high-risk lodgepole pine that will become increasingly susceptible to mountain pine beetle attack.

C. Need

1. Proximity to Existing Wilderness and Population Centers

See Tables C-1 and C-2.

2. Contribution to the Wilderness Preservation System

Classification as wilderness would add ecosystems which are well-represented in existing wilderness. It would add meadows which are lacking or very rare in other nearby wilderness. Climax forest wildlife such as pine marten and pileated woodpecker would benefit, and unroaded security areas for elk, goats, and other big-game animals would be maintained.

3. Public Interest

In the 1983 public involvement on roadless area, there was some public support for wilderness classification primarily because of wildlife and watershed values.

The 1983 Wilderness Coalition's Alternative W supports wilderness for the area. Montana's Governor recommended about 66 percent of the area for wilderness (Schwinden, 1984). No wilderness is proposed in the Montana State Bill (S. 2850).

The following comments from 1983 public involvement portray how the area is valued (Planning Record: Roadless Area Evaluation Public Response Summary):

"The ruggedness and size of the area is a treasure not to lose."

"This area is teeming with wildlife."

"Includes the Game Preserve and a lot of it is dog hair lodgepole pine and alpine fir. It is high elevation country and some of the last that big-game can hide in. Lots of the places are rock slides and shallow soiled rocky areas that are very poor for timber."

". . . ruggedness of much of the area, the large size of the whole which provides ample opportunity for solitude and primitive recreation, the rich variety of wildlife including the large goat population, and its importance as a watershed for the Deerlodge and Bitterroot Valleys."

For these same reasons, there was also support for managing the area for roadless recreation.

Supporters of nonwilderness management cited timber potential as the prime resource: "wilderness reduces the potential timber base and wood products suffers," and "wilderness contributes little to the state's economy."

In RARE II, approximately 64 percent of responses on the DEIS supported wilderness for the area. The majority of local publics supported nonwilderness in the unit planning process, although not necessarily development options. In that process there appeared to be strong local support for unroaded management for a large portion of the area, but with less restrictions than for wilderness.

During public reveiw of the Lolo Forest Plan DEIS, many comments were received in support of including this area in the National Wilderness Preservation System. Many responders indicated support for retaining the area as a roadless area if not designated for wilderness. Others preferred this area be managed as designated in the proposed Forest Plan which is primarily Management Area 11, which is primitive, roadless management. Comments were received that opposed any additional wilderness. Few responders oppose wilderness designation for this area.

D. Alternatives and Environmental Consequences

1. Management Emphasis by Alternative

Management prescriptions requiring roads have been grouped into a roaded management emphasis because roads preclude wilderness classification. The semiprimitive recreation emphasis will maintain the roadless character. Management prescriptions in which roads are permissible but not needed to accomplish management activities have been grouped into an unroaded emphasis. The lands assigned to this emphasis are generally interspersed in the roaded emphasis lands and may be crossed by roads.

Similar alternatives for the Lolo, Deerlodge, and Bitteroot National Forests have been combined. Table C-22 displays total acreage assignment by management emphasis and development by decade for matched Forest alternatives. Tables show suitable timber land and mineral potential acreage by management emphasis and alternative.

Section III uses Bitterroot Forest alternative names but describes the entire roadless area.

III. Impacts

Designation: Wilderness
Management Emphasis: Wilderness

Virtually the entire area is recommended for wilderness in Alternative i with recommendations of 80 and 94 percent in Alternatives g and h. Recommendations would expand the wilderness system as a new wilderness. The area with high wilderness attributes is recommended for wilderness classification in

Alternative g, and h and j include additional land with low to moderate attributes.

Timber production is precluded on all tentatively suitable timberland in Alternative j, 80 percent in g and 93 percent in h. All tentatively suitable timberland is three percent of the total for the Bitterroot National Forest, one percent of the Lolo, and 3 percent of the Deerlodge.

Wilderness classification would preclude semiprimitive recreation emphasis designation in Alternative j and would reduce the acreage available in g and h. Recreation use would continue to be dominated by hunting, fishing, and camping. Mechanized trail bike, snowmobile, and chain saw use would be prohibited.

Mineral and energy exploration and development is foreclosed subject to valid existing rights. All land rated as having a high mineral potential is withdrawn from mineral entry in Alternative j and 58 and 81 percent in g and h respectively.

Nonpriced benefits and costs include:

- A natural level of visual quality is Maintained.
- The wilderness system expands.
- A natural level of big-game forage and cover is maintained. Cover/forage ratios would be determined by natural events such as wildfire.
- Vegetative diversity tends toward old growth as modified by wildfire.
- Old-growth dependent wildlife species are favored.
- Natural levels of watershed and fisheries are maintained.
- Local wood products employment decreases in Alternatives h and j and should remain stable in g.

Economic and social effects vary depending on the amount of tentatively suitable timberland recommended for wilderness. The wood products and mining industry would not be supported by this emphasis. Wilderness designation could attract more tourism and enhance outfitter activities. Publics interested in wilderness and primitive recreation opportunities would be supported, whereas those favoring mechanized use in a natural setting would not.

Designation: Nonwilderness
Management Emphasis: Roaded

Timber, range, winter range, partial retention, retention, and riparian prescriptions are in this management emphasis on the Bitterroot. The Lolo has included timber/range, wildlife (other), visual, miscellaneous, and riparian prescriptions. Deerlodge prescriptions include timber, timber/wildlife, and timber/wildlife/range. Some land is included in this emphasis in all alternatives except j. The highest level is in a and b where about 55 percent of the roadless area is in this emphasis. The lowest is in alternative h at 4 percent.

Eighty-eight percent of tentatively suitable timber land is assigned the roaded emphasis in Alternatives a and b; 77 percent in c; about 45 percent in e and f; and 6 percent in h. High value old growth is scheduled for early removal; however, due to long rotations, old growth will be retained above the minimum level in partial retention, retention, and riparian prescriptions. Early

harvest is also scheduled in lodgepole pine stands which occupy much of the area.

Roads and timber harvest will foreclose future consideration for wilderness by the end of the fifth decade; however, between 72 and 86 percent of the land will remain unroaded and undeveloped at the end of decade one. Roads would reduce the naturalness and solitude of the area. Semiprimitive recreation use would be disrupted as the recreation setting changes to roaded natural.

Access for mineral and energy exploration is enhanced as the road system expands. All land of high mineral potential would be accessible in Alternatives a and b, about 25 percent in c, f, and h, and 42 percent in g.

Transitory forage for livestock and wildlife would be created by timber harvest.

Nonpriced benefits and costs include:

- Visual quality will be at the lowest level (Maximum Modification) in Alternatives a, b, and h and the highest level in g.
- Characteristics for future consideration as wilderness or semiprimitive recreation are foregone by the end of the fifth decade.
- Security cover for elk and other game will be greatly reduced in alternatives a, b, c, and h; however, road closures will mitigate this effect.
- Vegetative diversity tends toward younger age classes in Alternatives a, b, c, e, and h, but retains a sizeable range in g.
- Water quality is reduced, but mitigated by high road construction and maintenance standards.
- Local wood products employment increases significantly in Alternatives a, b, and c; remains at current levels in e and f; and declines in g and h.

Economic effects vary by the amount of land developed for timber production and the degree of constraints imposed for visual, wildlife, and watershed values. The greatest positive effects occur in Alternatives a, b, and c where most tentatively suitable lands are retained in the timber base with few constraints to protect other values. Publics favoring roadless or wilderness characteristics would not be supported; however, much of the area would remain like it is for another 10 years. Those publics using the area for semiprimitive recreation would have to adjust to a roaded setting or shift use elsewhere. Outfitters could continue operations although the hunting experience would be altered.

Designation: Nonwilderness
Management Emphasis: Semiprimitive Recreation

The semiprimitive recreation prescription is in this emphasis on the Bitterroot and Lolo and the recreation prescription on the Deerlodge. Some land is included in this emphasis in all alternatives except j. About 50 percent of the area is assigned this emphasis in Alternatives c, e, and f. In a and b, the emphasis includes a relatively large, high elevation area not suitable for timber production, or in the case of the Deerlodge, not efficient for timber production.

Roadless characteristics for a core area in Alternatives c, e, f, and g will be retained and the land will remain available for future consideration as wilderness. The wilderness attributes of naturalness and solitude will also be maintained. The current mix of recreation use will continue. Trail bike, snowmobile, and chain saw use are compatible with this emphasis.

Current levels of livestock use would continue.

Cover/forage relationships for wildlife will basically be determined by natural events such as wildfire but can be modified by prescribed fire or direct habitat improvement.

Roads are not needed for surface management purposes but will be permitted for mineral activities where construction is justified on the basis of mineral showings or data, and where it is the next logical step in development of the mineral resource. Fifty percent of those lands having high mineral potential are assigned this emphasis in Alternatives a and b, 73 percent in c and f, and 100 percent in e.

Timber production is precluded on 20, 55, and 47 percent of the tentatively suitable timber land in Alternatives c, e, and f, respectively. A minimal amount of tentatively suitable land is in this emphasis in Alternatives a and b. In c, assigned lands are primarily of low site quality. Less accessible lands of higher site quality are assigned in Alternatives e and f.

Nonpriced benefits and costs include:

- A nearly natural level of visual quality is maintained.
- The wilderness option is retained for future consideration.
- Nearly natural cover/forage ratios for big game are retained but may be modified by prescribed fire or other direct habitat improvement.
- Vegetative diversity tends toward old growth, but may be modified by prescribed fire.
- Old-growth dependent wildlife are favored.
- Natural levels of watershed and fisheries are retained.
- The current mix of recreation use is retained.
- Local wood products employment should be retained in Alternatives e and g and would increase in a, b, and c.

Economic and social effects vary by the amount of tentatively suitable timberland in this emphasis. The effect is greatest in Alternatives e and f with no effect in a and b and little in c. The wood products industry is not supported by this emphasis. Miners could continue to operate; however, costs would be higher without road access. Land would remain much like it is and current recreation use, livestock grazing, and outfitter use would continue.

Designation: Nonwilderness
Management Emphasis: Unroaded

The Deerlodge Forest wildlife, range/wildlife, and range prescriptions are included in this emphasis.

About 2,000 acres is included in this emphasis in Alternatives a, b, c, and f. Roads are permissible but not needed for management of surface resources.

Although much of this emphasis will remain unroaded, the overall effects are similar to roaded.

Naturalness will be reduced by range improvements such as drift fences and water developments.

Since these are mostly grasslands, the effect on timber production is insignificant.

Consideration for wilderness is foreclosed by the end of the fifth decade due to developoment in the surrounding roaded emphasis.

Forage for livestock and wildlife is maintained or enhanced by management.

Mineral exploration and development is an appropriate use but would be more expensive due to the lack of roads.

Nonpriced benefits and costs include:

- A high level of visual quality is maintained.
- The current mix of recreation use is retained.
- Water quality would be maintained.
- Future consideration for wilderness depends on the development within the surrounding roaded emphasis.
- Existing big-game security is retained.

From a social/economic standpoint, the range resource is maintained or improved, mining is compatible but with increased costs to the miner due to lack of roads, and the roadless character would be retained, thus supporting current semiprimitive uses. The recreation experience would be modified due to the proximity of roaded lands.

Management Emphasis for Stony Mountain Roadless Area

Management Emphasis		Alternative								
	Bitterroot	A	B	C	E	E1	F	G	H	J
	Lolo	c	c	c	d	d	a	f	g	g
	Deerlodge	C	C	C	M	N	A	Y	K	J
		Thousand Acres								
Nonwilderness designation		103.1	103.1	103.1	103.2	103.2	103.1	20.4	6.5	0
Roaded Emphasis		57.0	57.0	49.9	28.5	28.1	37.1	18.7	4.6	0
Bitterroot Forest		27.2	27.2	20.1	14.3	14.3	18.4	18.7	4.6	0
Lolo Forest		19.5	19.5	19.5	4.0	4.0	14.2	0	0	0
Deerlodge Forest		10.3	10.3	10.3	10.2	7.8	4.5	0	0	0
Unroaded Emphasis		1.9	1.9	1.9	2.2	2.2	2.2	0	0	0
Bitterroot Forest		0	0	0	0	0	0	0	0	0
Lolo Forest		0	0	0	0	0	0	0	0	0
Deerlodge Forest		1.9	1.9	1.9	2.2	2.2	2.2	0	0	0
Semiprimitive recreation Emphasis		44.2	44.2	51.3	72.5	74.9	63.8	1.7	1.9	0
Bitterroot Forest		16.5	16.5	23.6	29.4	29.4	25.3	1.7	1.9	0
Lolo Forest		15.4	15.4	15.4	30.9	30.9	20.7	0	0	0
Deerlodge Forest		12.3	12.3	12.3	12.2	14.6	17.8	0	0	0
Wilderness designation		0	0	0	0	0	0	82.8	96.7	102.8
Bitterroot Forest		0	0	0	0	0	0	23.3	37.2	43.3
Lolo Forest		0	0	0	0	0	0	34.9	34.9	34.9
Deerlodge Forest		0	0	0	0	0	0	24.6	24.6	24.6
Area developed by										
Decade 1		16.0	15.7	7.1	8.7	8.7	10.2	3.7	0	0
Bitterroot Forest		13.9	13.6	5.0	7.1	7.1	9.2	3.7	0	0
Lolo Forest		0	0	0	0	0	0	0	0	0
Deerlodge Forest		2.1	2.1	2.1	1.6	1.6	1.0	0	0	0
Decade 5		60.3	60.3	46.6	21.8	21.8	37.1	18.7	4.6	0
Bitterroot Forest		33.8	33.8	20.1	14.3	14.3	18.4	18.7	4.6	0
Lolo Forest		19.5	19.5	19.5	4.0	4.0	14.2	0	0	0
Deerlodge Forest		7.0	7.0	7.0	3.5	3.5	4.5	0	0	0
Area roadless in *										
Decade 1		87.2	87.5	96.1	94.5	94.5	93.0	16.7	6.5	0
Bitterroot Forest		29.8	30.1	38.7	36.6	36.6	34.5	16.7	6.5	0
Lolo Forest		34.9	34.9	34.9	34.9	34.9	34.9	0	0	0
Deerlodge Forest		22.5	22.5	22.5	23.0	23.0	23.6	0	0	0
Decade 5		43.0	43.0	56.7	81.4	81.5	76.1	1.7	1.9	0
Bitterroot Forest		9.9	9.9	23.6	29.4	29.4	35.3	1.7	1.9	0
Lolo Forest		15.4	15.4	15.4	30.9	30.9	20.7	0	0	0
Deerlodge Forest		17.7	17.7	17.7	21.1	21.2	20.1	0	0	0
Current roadless acres		103.2	103.2	103.2	103.2	103.2	103.2	103.2	103.2	103.2
Bitterroot Forest		43.7	43.7	43.7	43.7	43.7	43.7	43.7	43.7	43.7
Lolo Forest		34.9	34.9	34.9	34.9	34.9	34.9	34.9	34.9	34.9
Deerlodge Forest		24.6	24.6	24.6	24.6	24.6	24.6	24.6	24.6	24.6

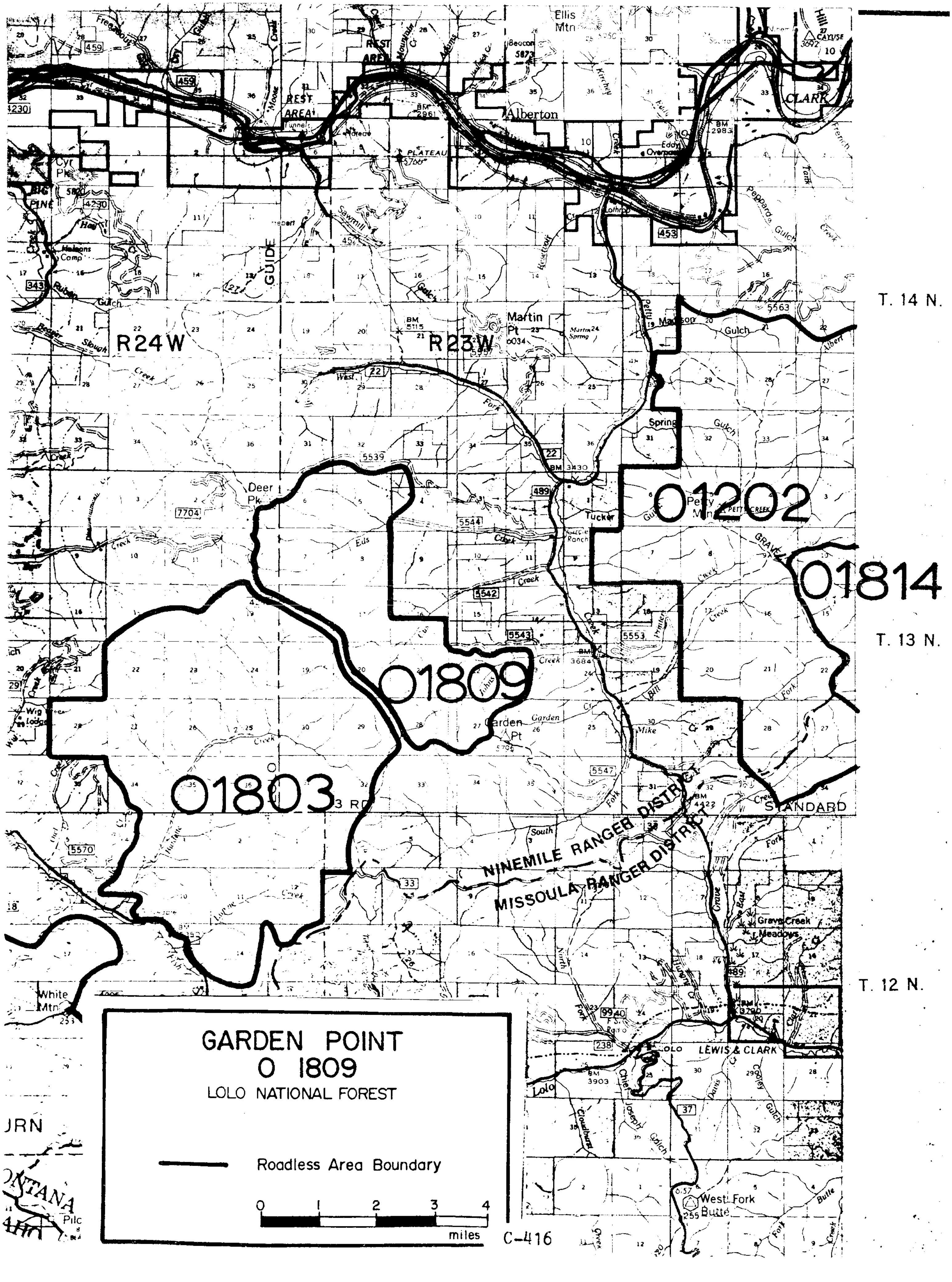
*Does not include wilderness designations.

Suitable Timberland and Mineral Potential by Management Emphasis for Stony Mountain Roadless Area

Management Emphasis	Forest	Alternative								
	Bitterroot	A	B	C	E	E1	F	G	H	J
	Lolo	c	c	c	d	d	a	f	g	g
	Deerlodge	C	C	C	M		A	I	K	J
		Thousand Acres								
Tentatively suitable land										
Roaded emphasis		46.1	46.1	41.4	23.4	21.0	27.4	10.2	3.0	0
Bitterroot Forest		18.6	18.6	13.9	9.6	9.6	12.2	10.2	3.0	0
Lolo Forest		17.2	17.2	17.2	3.6	3.6	10.7	0	0	0
Deerlodge Forest		10.3	10.3	10.3	10.2	7.8	4.5	0	0	0
Unroaded emphasis		.2	.2	.2	.2	.2	.2	0	0	0
Bitterroot Forest		0	0	0	0	0	0	0	0	0
Lolo Forest		0	0	0	0	0	0	0	0	0
Deerlodge Forest		.2	.2	.2	.2	.2	.2	0	0	0
Semiprimitive recreation emphasis		5.9	8.9	10.7	28.6	31.0	24.6	0	.6	0
Bitterroot Forest		0	0	4.8	9.0	9.0	6.4	0	.6	0
Lolo Forest		0	0	0	13.6	13.6	6.5	0	0	0
Deerlodge Forest		5.9	5.9	5.9	6.0	8.4	11.7	0	0	0
Wilderness emphasis		0	0	0	0	0	0	42.0	48.6	51.8
Bitterroot Forest		0	0	0	0	0	0	8.4	15.0	18.2
Lolo Forest		0	0	0	0	0	0	17.2	17.2	17.2
Deerlodge Forest		0	0	0	0	0	0	16.4	16.4	16.4
High mineral potential										
Roaded emphasis		1.2	1.4	.7	0	0	.7	1.1	.5	0
Bitterroot Forest		1.2	1.4	.7	0	0	.7	1.1	.5	0
Lolo Forest		0	0	0	0	0	0	0	0	0
Deerlodge Forest		0	0	0	0	0	0	0	0	0
Unroaded emphasis		0	0	0	0	0	0	0	0	0
Bitterroot Forest		0	0	0	0	0	0	0	0	0
Lolo Forest		0	0	0	0	0	0	0	0	0
Deerlodge Forest		0	0	0	0	0	0	0	0	0
Semiprimitive recreation emphasis		1.1	1.2	1.9	2.6	2.6	1.9	0	0	0
Bitterroot Forest		1.1	1.2	1.9	2.6	2.6	1.9	0	0	0
Lolo Forest		0	0	0	0	0	0	0	0	0
Deerlodge Forest		0	0	0	0	0	0	0	0	0
Wilderness emphasis		0	0	0	0	0	0	1.5	2.1	2.6
Bitterroot Forest		0	0	0	0	0	0	1.5	2.1	2.6
Lolo Forest		0	0	0	0	0	0	0	0	0
Deerlodge Forest		0	0	0	0	0	0	0	0	0

Alternative coorelation between Lolo, Deerlodge, and Bitterroot alternatives:

Lolo alternatives	a	b	c	d	e	f	g
Deerlodge alternatives	A	I	C	L	E	I	J
Bitterroot alternatives	F	H	A,B,C	F	E	G	E,J


GARDEN POINT
O 1809
LOLO NATIONAL FOREST
Roadless Area Boundary
0 1 2 3 4
miles
01202
01814
01809
01803
NINEMILE RANGER DISTRICT
MISSOULA RANGER DISTRICT
R24W
R23W
T. 14 N.
T. 13 N.
T. 12 N.
Alberton
Martin Pt
Deer Pk
Garden Pt
STANDARD
LEWIS & CLARK
West Fork Butte
White Mtn
Ellis Mtn
Grave Creek Meadows
C-416

GARDEN POINT #01809

Acreage:

Gross Acres: 6,900
Net Acres: 6,500

I. Description

A. Location and Access

The Garden Point study area lies 23 miles west of Missoula and 10 miles south of the town of Alberton. It is situated adjacent to the Burdette Roadless Area on the east side of the Fish Creek-Petty Creek Divide. The Deer Creek Road originating in Fish Creek accesses the west side and forms part of the boundary. From the Petty Creek side, Forest System Roads in Eds, Gus, and Johns Creeks end at the eastern roadless margin. There are no system trails in the area. Refer to Table C-4 for proximity information.

B. General Descripton

This roadless unit occupies a portion of the Fish Creek-Petty Creek Divide between Eds Creek to the north and Johns Creek to the south. All of the land lies on the Petty Creek side of the hill. Eds, Gus, and Johns Creeks head along the divide and flow eastward into Petty Creek. Only the upper reaches of these drainages, containing moderately steep east-west trending ridges and valleys, are included in the Garden Point Roadless Area.

Most of the area is heavily timbered. The most common habitat types include Douglas-fir/ninebark, Douglas-fir/blue huckleberry, subalpine fir/beargrass, and subalpine fir/menziesia. There are five other types which occur in small amounts.

Small-scale mapping and geologic inference indicate that the Precambrian Age Missoula Group rocks, the youngest subdivision of the Belt Supergroup, underlie the Garden Point Roadless unit. Lithologies consist of gray, green, and red argillites, quartzites, and siltites containing mudcracks, ripple marks, and cross-bedding. Northwest- to southeast-oriented faults cut diagonally across the area.

The unit provides habitat for a variety of game and nongame wildlife common to western Montana. Visitors can view deer and elk on winter range found in the area.

The area receives heavy use by hunters during big game hunting season and some snowmobiling during winter months.

II. Analysis of Wilderness Suitability

A. Capability

1. Wilderness Attributes

a. Naturalness - Ecological processes and the natural landscape in parts of the area have been disrupted to a certain extent by past domestic grazing; however, no range improvements are visible. Basically, vegetative communities in the unit are similar to those found in surrounding areas outside the roadless boundary. The three main habitat types in the area, Douglas-fir/ninebark, Douglas-fir/blue huckleberry, and subalpine fir/beargrass comprise 60 percent of the area and occur in the higher elevations. The remaining habitat types are Douglas-fir/rough fescue, Douglas-fir/pinegrass, grand fir/beargrass, western red cedar/beadlily, subalpine fir/beadlily, subalpine fir/bedstraw, and subalpine fir/menzesia.

While most of the animal species native to the area are found in the Garden Point Roadless Area, none is particularly dependent on wilderness for viablilty or survival. Animals on winter ranges can be susceptible to human activity and the area contains winter range acreage. Viewing animals such as elk in their native habitat may be closely associated with a wilderness experience in some visitors' minds.

Air and water quality are considered excellent in the area.

There are no known developments or intrusions in the area.

b. Inspirational Values - The area does not offer significant inspirational values.

c. Recreations Values - The Garden Point Roadless Area rates low for solitude due to its small size and moderate screening.

Opportunities for primitive recreation are moderate due to some screening, rare challenges, and small size of the area.

During big-game hunting season, the area receives a lot of visitor use. This area combined with the surrounding drainages are extremely popular with hunters on foot, riding horseback, and driving. There is a jeep road that forms the south, west, and north boundaries of the area.

d. Cultural/Historical Values - There are no historical or prehistoric sites identified in the area.

e. Educational/Scientific/Unique Values - Some opportunity exists to observe and study big-game animals in their natural habitat, but there are no known endangered species of animals

or plants in the area. Nor is the area recognized as having unique vegetative communities to be used as benchmarks or unusual or scarce ecosystem representatives. Gene pools in the unit do not differ appreciably from the surrounding area. The ecosystems in this area are well represented in existing wilderness areas.

2. Manageability and Boundaries

This area is not particularly compact and is about 5 miles long and 2 miles wide. The distance from the core to the perimeter is no more than a mile, and there is a road within 2 miles of any point within the unit. It is adversely affected by the sights and sounds associated with the timber harvesting activities adjacent to the north and east. The north, west, and south boundaries are a topographic divide and easily located on the ground. Some 400 acres of private land lie inside the unit; the borders can be drawn to exclude it.

B. Other Resources Found in the Area

1. Potential

The area provides habitat for a wide variety of game and nongame wildlife species commonly found in western Montana (see Appendix B-2, Proposed Lolo Forest Plan, RDEIS). The area has 40 acres of deer and elk winter range and about 215 riparian acres.

This region appears to be unmineralized; there are neither oil and gas lease applications or mining claims recorded for the area. No acres of high to very high mineral potential are known to occur in the area.

The Garden Point Roadless Area contains 39 acres classed as nonstocked, 45 acres of seedlings and saplings, 316 acres of poles, 1,260 acres of immature sawtimber, 4,812 acres of mature sawtimber. Of this, 6,469 acres are classified as commercial timber land. The suitable lands presently support a standing timber inventory of 52.7 MMBF with a long-term sustained yield in the area of 1.17 MMBF annually.

About 30 percent (6,900 acres) of the Petty Creek range allotment is included within the Garden Point Area. The last permitted use was in 1982 for 19 cows on National Forest System lands for 76 AM's. This permit has been cancelled and is inactive at this time.

Hunting is the major recreation activity. There is some amount of snowmobile activity in the winter. The area is classed 100 percent semiprimitive motorized.

2. Resource Summary

01809 - Garden Point - Roadless Area

Category		
Gross acres	Acres	6900
Net Acres	Acres	6500
Recreation		
Primitive	RVD's	0
Semiprim. Nonmot.	RVD's	6500
Semiprim. Motor.	RVD's	0
Roaded Natural	RVD's	0
Range		
Existing Obligated		
Suitable	Acres	0
Allotments	No.	0
AUMs	AUMs	0
Existing Vacant		
Suitable	Acres	370
Allotments	No.	1
AUMs	AUMs	30
Proposed		
Suitable	Acres	0
AUMs	AUMs	0
Timber		
Tenative Suitable	Acres	6469
Standing Volume	MMBF	52.7
Corridors		
Exist. & Pot.	No.	0
Wildlife - T&E		
Grizzly Bear		
Habitat Sit. 1	Acres	0
Habitat Sit. 2	Acres	0
Habitat Sit. 3	Acres	0
Bald Eagle Hab.	Acres	0
Gray Wolf Hab.	Acres	0
Peregrin Fal. Hab.	Acres	0
Wildlife - Big Game		
Summer Habitat	Acres	0
Winter Habitat	Acres	40
Significant Fisheries		
Stream Miles	Miles	0
Stream Habitat	Hab. Ac	0
Lakes	No.	0
Lake Habitat	Hab. Ac	0
Water Develop.		
Existing	No.	0
Hardrock Potential		
Very High	Acres	0
High	Acres	4894
Moderate	Acres	1606
Low	Acres	0
Mining Claims .	No.	0
Oil & Gas Potential		
Very High	Acres	0
High	Acres	0
Moderate	Acres	0
Low	Acres	6500
Oil & Gas Leases	No.	0
Leased Area	Acres	0

3. Management Considerations

The area contains 400 acres of non-federal lands.

4. Public Involvement

During the public reveiw period for the DEIS, there were few additional comments on the Garden Point Area. Several comments favored wilderness designation for all existing roadless areas. Other responders opposed further additions to the wilderness system.

III. Impacts

Designation: Wilderness
Management Emphasis: Wilderness

Garden Point Roadless Area is allocated to wilderness in Alternative g but this is the only alternative that the total or any portion of the area is allocated to wilderness.

The approximately 6,500 acres of land tentatively suitable for timber production would not be available. This would remove about 53 MMBF from the Forest timber base.

Big-game or elk management would not change much since the area does not contain a significant amount of big-game winter range. Cover/ forage relationships should not change much over time except as influenced by wildlife control.

Social impacts under wilderness allocation are reflected in the fact that recreation use would continue to be dominated by hunting. Motorized use could be eliminated.

The nonpriced effects are:

- Visual quality would be preserved.
- Wilderness area would increase.
- Diversity would tend toward old growth without wildfire but could be improved depending on the control policy.
- Water quality and fisheries would be maintained at their present natural levels.
- Local employment may decrease slightly due to the unavailability of timber.

Economic impacts would be reflected in the timber volume lost which is less than 1 percent of the land base suitable for timber, and other resource values would be retained. The loss in timber volume can be mitigated by practicing intensive forestry elsewhere. Mineral exploration opportunities would be foregone.

Designation: Nonwilderness
Management Emphasis: Timber/Range

All alternatives except g provide for some percentage of timber management. Alternatives a through f allocate from 72 to 100 percent of the area to this emphasis.

Allocation to the timber prescription will forego the possibility of wilderness allocation by the end of the first decade. The area will be accessed with roads and harvest will be scheduled up to the limit of constraints for these prescriptions.

Visual quality would be at its lowest level, Maximum Modification.

Social effects include semiprimitive recreation potential which would be foregone by the end of the first decade. Wilderness characteristics would be compromised in a short time.

Diversity would tend toward younger age classes with minimum old growth. Water quality and fisheries effects would be mitigated. The greatest number of jobs, mainly in the wood products industry, would be provided.

Some economic effects are reflected in the volume available for harvest from this area. Mineral opportunities are available.

Designation: Nonwilderness
Management Emphasis: Wildlife

The main emphasis in this prescription is big game winter habitat however only Alternatives a, d, e, and f manage for this emphasis and only Alternative a manages more than a trace percentage (23 percent).

Development and vegetative manipulation may be required to achieve the habitat and forage management objectives. Other effects do not differ appreciably from those listed under timber management except wildlife objectives would be maintained.

Designation: Nonwilderness
Management Emphasis: Visual

Alternatives a and b allocate from 5 to 8 percent to visual management. Alternatives d, e, and f allocate a trace and the remaining alternatives do not manage for this emphasis for a variety of reasons.

Visuals are retained in the roadless management emphasis. Visual quality resource will be managed according to the management area classification. Impacts are listed under timber management except visual objectives would be maintained.

Designation: Nonwilderness
Management Emphasis: Riparian

All alternatives contain inclusions of riparian zones and recognize the need to manage these areas according to policy and guidelines. Alternative g is the wilderness alternative and would not impact the riparian areas.

Designation: Nonwilderness
Management Emphasis: Roadless

None of the alternatives allocate for roadless management.

Designation: Nonwilderness
Management Emphasis: Miscellaneous

None of the alternatives allocate for roadless management.

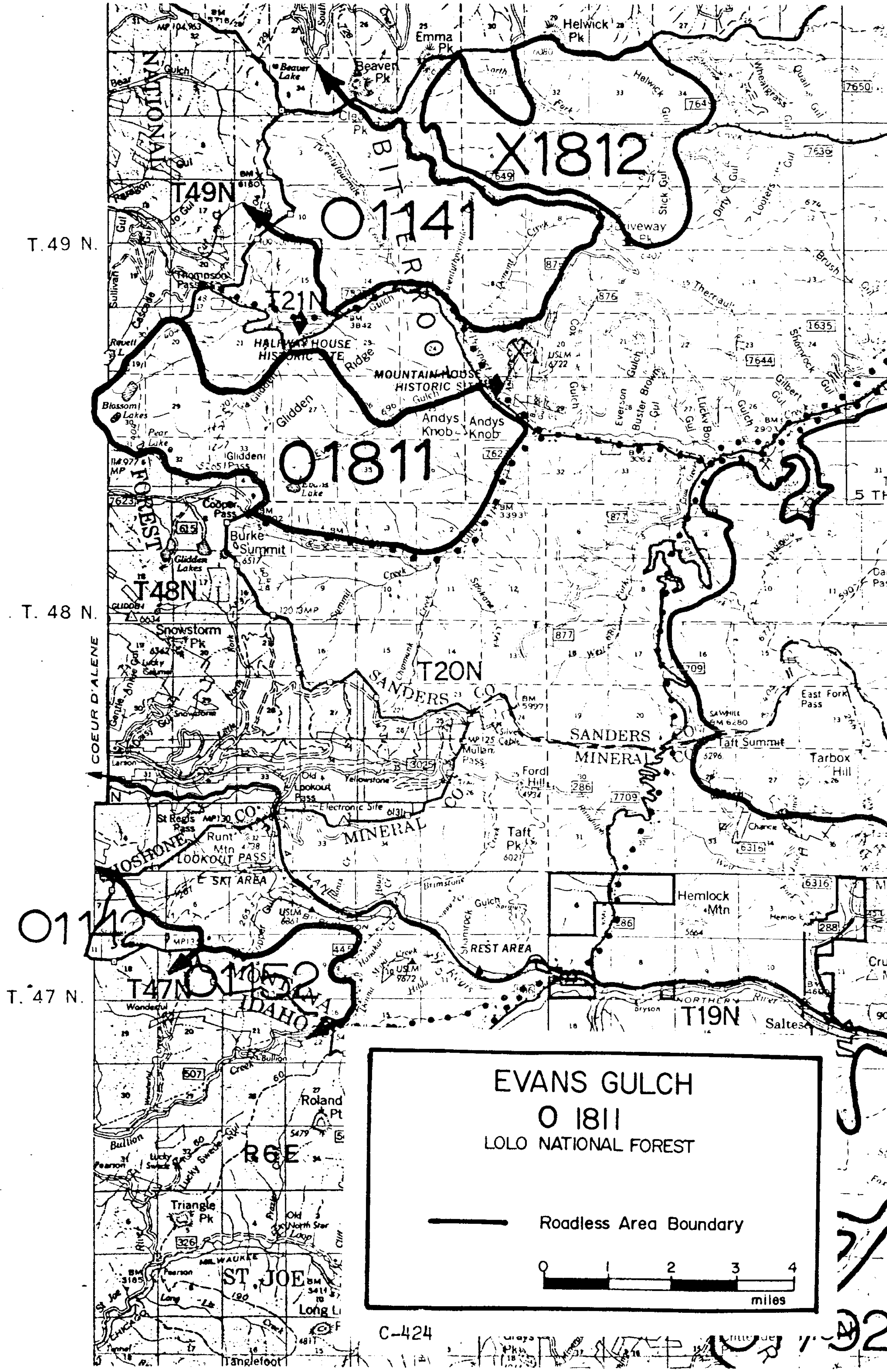
ACRES OF AREA UNDER MANAGEMENT FOR EACH EMPHASIS BY ALTERNATIVE
(Refer to Appendix C Introduction for Management Areas under each emphasis.)

Management Emphasis	Alternatives a	b	c	d	e	f	g
NONWILDERNESS							
Timber/Range	4680	5980	6500	6234	6234	6234	-
Wild life							
Grizzly bear	-	-	-	-	-	-	-
Other	1495	-	-	40	40	40	-
Visual	325	520	-	11	11	11	-
Miscellaneous	-	-	-	-	-	-	-
Riparian	*	*	*	215	215	215	-
Roadless	-	-	-	-	-	-	-
WILDERNESS							
Wilderness	-	-	-	-	-	-	6500
Total	6500	6500	6500	6500	6500	6500	6500

* Small inclusions occur in other management emphasis items

SUMMARY OF MANAGEMENT EMPHASIS (acres managed by decade)

Developed							
decade 1	6500	6500	6500	6500	6500	6500	-
decade 5	6500	6500	6500	6500	6500	6500	-
Roadless							
decade 1	-	-	-	-	-	-	-
decade 5	-	-	-	-	-	-	-
Wilderness							
decade 1	-	-	-	-	-	-	6500
decade 5	-	-	-	-	-	-	6500


EVANS GULCH
O 1811
LOLO NATIONAL FOREST
Roadless Area Boundary
0 1 2 3 4
miles
X1812
O1141
O1811
O1142
O1152
T.49 N.
T. 48 N.
T. 47 N.
T49N
T48N
T47N
T21N
T20N
T19N
R6E
HALFWAY HOUSE HISTORIC SITE
MOUNTAIN HOUSE HISTORIC SITE
SANDERS CO
MINERAL CO
SHOSHONE CO
IDAHO
MONTANA
ST JOE
COEUR D'ALENE
Helwick Pk
Emma Pk
Beaver Pk
Andys Knob
Burke Summit
Cooper Pass
Snowstorm Pk
Lookout Pass
Taft Summit
Tarbox Hill
Hemlock Mtn
Taft Pk
Ford Hill
Roland Pt
Triangle Pk
REST AREA
C-424

EVANS GULCH #X1811

Acreage:

Gross Acres: 8,830
Net Acres: 8,830

I. Description

A. Location and Access

The Evans Gulch Roadless Area is located in the head of Prospect Creek some 15 miles west of Thompson Falls and 10 miles northeast of Mullan, Idaho. The north and northeastern boundary is marked by the Prospect Creek Road. The Cooper Gulch Road forms the southern and southeastern margin. The Idaho-Montana State line, a drainage divide, makes up the western boundary. Vehicle access to the roadless unit comes primarily from the Cooper Gulch and Prospect Creek Roads. Parts of three Forest System Trails aggregating about 8 miles run through the area. Refer to Table C-4 for proximity information.

B. General Description

A series of parallel ridges and valleys oriented NE-SW dominate the unit. The State line ridge has undergone some alpine glaciation which resulted in the formation of five ice scoured lakes. These lakes vary in size from a pothole to 24 acres. Prospect, Glidden, and Evans Creeks head at the State line and flow northeastward. Relief is on the order of 3,500 feet.

The majority of the soils were formed in place while stringers and pockets of glaciated and alluvial soils are found in the basins and along the stream bottoms.

The central portion of this area contains quartzites and argillites of the Precambrian Age Prichard Formation while the rest of the unit exposes Revett Formation strata. A large transform fault cuts across the Evans Gulch Roadless Area in a west-northwest direction.

The area is generally forested; the State Line Divide contains a preponderance of the rockland and subalpine habitat groups.

All of the Evans Gulch Roadless Area has high to very high potential for the occurrence of hardrock minerals. Most of it is considered valuable for commercial timber land. Recreational use along the State line ridge is significant.

II. Analysis of Wilderness Suitability

A. Capability

1. Wilderness Attributes

a. Naturalness - The ecological processes and landscape within this unit have not been especially altered by man. Major fires which occurred in the early 1900's are considered part of the natural process. The largest habitat type (18 percent) found in the area is the subalpine fir/menziesia type. Major tree species besides subalpine fir include lodgepole pine, Douglas-fir, and spruce. This type is found on moist slopes on elevations between 5,300 and 7,000 feet. Understories are dominated by menziesia, and timber production is moderate to high. Almost as common is the subalpine fir/beadlily habitat type. The major species consist of subalpine fir, Douglas-fir, larch, and lodgepole pine. Understories are diverse and include beadlily, goldthread, bunchberry, twisted stalk, and bedstraw. These plants occupy moist, warm slopes between 3,200 and 5,500 feet. Other habitat types found here are Douglas-fir/ninebark, Douglas-fir/blue huckleberry, grand fir/beargrass, and subalpine fir-white bark pine/grouse whortleberry.

Many of the animal species native to western Montana can be found in the Evans Gulch Roadless Area. None are especially dependent on roadless management for survival. Animals on summer and winter ranges can be susceptible to human activities; however, there are almost no such lands contained in this unit.

Air and water quallity are considered good.

Due to its small size, outside impacts are major factors. Most intrusions come from logging activities near and in Glidden Gulch. The Prospect Creek Road is a paved road on the Montana side. A new road for timber management has been built near the State line Trail #404 at Thompson Pass extending parallel to the trail for about 1 mile. A dam has been constructed on Blossom Lake. Prospect diggings and old mining equipment are located in the area. A primitive road snakes along Glidden Creek.

b. Inspirational Values - The vegetative screening offers some visitors the opportunity to experience a sense of being alone which may contrast with their daily lives.

c. Primitive and Unconfined Recreation - Good screening provides for primitive recreation possibilities. The area offers the visitor challenges in the form of cross-country travel on the subalpine ridges.

d. Cultural and Historical Values - Early Chinese workers built an irrigation ditch from Blosson Lake in the western portion of the area to Prospect Creek.

e. Educational Scientific and Unique Values - The Evans Gulch unit contains minor amounts of the subalpine fir/devil's club habitat type which is uncommon in most of the Lolo National Forest. It is more common in northwestern Montana and northern Idaho and is represented in existing wilderness system lands.

2. Manageability and Boundaries

The Evans Gulch Roadless Area is a small and compact unit with its boundaries following topographic features or easily recognizable on-the-ground locations. Portions of the area are remote and relatively free from external influences. Road development in association with timber harvesting has recently taken place in the northwest corner. Mineral exploration and possible future development has the potential to degrade the pristine characteristics. Even though there are a number of access points around the perimeter, almost all the recreational use is concentrated around the lakes. Overuse of these areas will also destroy the wilderness features. No boundary adjustments need to be made to exclude non-Federal lands.

B. Other Resources Found in the Area

1. Potential

The area provides habitat for a variety of game and nongame wildlife species commonly found in western Montana (see Appendix B-2, Proposed Lolo Forest Plan, RDEIS), including cougar, grouse, and beaver. There are approximately 330 acres of deer and elk winter range and 552 acres of riparian area.

Part of four different oil and gas leases lap across the boundary and cover about 25 percent of the unit. There are also 14 mining claims recorded inside the study area. Most of the claims are for possible copper/silver mineralization. An operating antimony mine is situated immediately adjacent to the area on the northeast edge. Mineral inventories have found 8,830 acres of high-very high mineral potential in the subject area.

The Evans Gulch Roadless Area contains 43 acres classed as nonstocked, 153 acres of seedlings and saplings, 493 acres of poles, 2,006 acres of immature sawtimber, and 4,851 acres of mature sawtimber. Of this, 6,681 acres are classified as commercial timber land. The suitable lands presently support a standing timber inventory of 58.5 MMBF with a long-term sustained yield in the area of 1.34 MMBF annually.

There are no range allotments in this roadless unit.

Current Recreation Opportunity maps show the area as 60 percent semiprimitive motorized and 40 percent roaded natural. The area receives moderate to heavy use in the summer and during the hunting season. Blossom Lakes are a popular destination for fishing and other recreation activities.

2. Resource Summary

X1811 - Evans Gulch - Roadless Area

Category		
Gross acres	Acres	8830
Net Acres	Acres	8830
Recreation		
Primitive	RVD's	0
Semiprim. Nonmot.	RVD's	0
Semiprim. Motor.	RVD's	26490
Roaded Natural	RVD's	35320
Range		
Existing Obligated		
Suitable	Acres	0
Allotments	No.	0
AUMs	AUMs	0
Existing Vacant		
Suitable	Acres	0
Allotments	No.	0
AUMs	AUMs	0
Proposed		
Suitable	Acres	0
AUMs	AUMs	0
Timber		
Tenative Suitable	Acres	6681
Standing Volume	MMBF	58.5
Corridors		
Exist. & Pot.	No.	1
Wildlife - T&E		
Grizzly Bear		
Habitat Sit. 1	Acres	0
Habitat Sit. 2	Acres	0
Habitat Sit. 3	Acres	0
Bald Eagle Hab.	Acres	0
Gray Wolf Hab.	Acres	0
Peregrin Fal. Hab.	Acres	0
Wildlife - Big Game		
Summer Habitat	Acres	0
Winter Habitat	Acres	330
Significant Fisheries		
Stream Miles	Miles	2.0
Stream Habitat	Hab. Ac	1.9
Lakes	No.	4
Lake Habitat	Hab. Ac	344
Water Develop.		
Existing	No.	0
Hardrock Potential		
Very High	Acres	0
High	Acres	8830
Moderate	Acres	0
Low	Acres	0
Mining Claims .	No.	14
Oil & Gas Potential		
Very High	Acres	0
High	Acres	0
Moderate	Acres	8830
Low	Acres	0
Oil & Gas Leases	No.	4
Leased Area	Acres	2200

3. Management Considerations

Present lodgepole pine stands will become susceptible to infestation by the mountain pine beetle as they mature.

4. Public Involvement

During the public reveiw period for the DEIS, there were few additional comments on the Evans Gulch Area. Several comments favored wilderness designation for all existing roadless areas. Other responders opposed further additions to the wilderness system.

III. Impacts

Designation: Wilderness
Management Emphasis: Wilderness

Evans Gulch is allocated to wilderness in Alternative g but this is the only alternative that the total area or any portion is allocated to wilderness.

Wilderness allocation would not necessarily enhance the wilderness attributes due to the utility corridor in the area. There are other existing uses and facilities not usually associated with wilderness allocation. Any existing motorized activities could be eliminated as well as the utility corridor. These are social impacts.

The approximately 6,700 acres of land tentatively suitable for timber production would not be available. This would remove about 59 MMBF including a significant area of lodgepole pine which may become infested by mountain pine beetle.

Management of the big-game winter range in the area would not change much. Cover/forage relationships should not change much over time except as influenced by wildfire control.

Under wilderness allocation, recreation use would continue to be dominated by hunting and fishing.

The nonpriced effects are:

- Visual quality would be preserved.
- Wilderness area would increase.
- Diversity would tend toward old growth without wildfire but could be improved depending on the control policy.
- Water quality and fisheries would be maintained at their present natural levels.
- Local emloyment may decrease slightly due to the unavailability of timber.

Economic effects would be reflected in the timber volume which is less than 1 percent of the land base suitable for timber. Other resource values would be retained. The loss in timber volume can be mitigated by practicing intensive forestry elsewhere. Mineral exploration opportunities would be foregone.

Designation: Nonwilderness
Management Emphasis: Timber/Range

All alternatives except g allocate some of this area to timber prescriptions. Alternative c allocates 66 percent. The remaining alternatives allocate from 6 to 9 percent to timber management.

Allocation to the timber prescription will forego the possibility of wilderness allocation by sometime after the end of the first decade. The possiblity of infested lodgeple pine stands will necessitate that the area be accessed with roads and harvest will be scheduled up to the limit of constraints for these prescriptions.

The nonpriced effects are:

- Visual quality would be at its lowest level, Maximum Modification.
- Semiprimitive recreation potential would be foregone by the end of the first decade.
- Wilderness characteristics would be compromised in a short time.
- Diversity would tend toward younger age classes with minimum old growth.
- Water quality and fisheries effects would be mitigated.
- The greatest number of jobs, mainly in the wood products industry, would be provided.

Social effects include the loss of the semiprimitive recreation value. Salvaging the infested lodgepole pine is probably the most significant economic factor.

Designation: Nonwilderness
Management Emphasis: Wildlife

The main emphasis in this prescription is big game winter habitat and old growth. Alternatives a through f allocate from 4 to 6 percent of the area to wildlife management.

Development and vegetataive manipulation may be required to achieve the habitat and forage management objectives.

Old-growth preservation in this area would be difficult in view of the possibility of a mountain pine beetle infestation. Whether or not the area is entered for salvage harvesting, the stands will deteriorate as a result of the beetle kill. Effects are listed under timber management except wildlife objectives would be maintained.

Designation: Nonwilderness
Management Emphasis: Visual

Alternative a allocates 20 percent; Alternative b, 15 percent; Alternative c, 4 percent; Alternatives d, e, and f, 29 percent. Alternative g is the wilderness alternative. Visuals are retained in the roadless management emphasis. Visual quality resource will be managed according to the management area classification. Impacts do not differ appreciably from those listed under timber management except visual objectives would be maintained.

Designation: Nonwilderness
Management Emphasis: Riparian

All alternatives contain inclusions of riparian zones and recognize the need to manage these areas according to policy and guidelines. Alternative g is the wilderness alternative and would not impact the riparian areas.

Designation: Nonwilderness
Management Emphasis: Roadless

Alternatives a and b allocate from 69 to 71 percent of the area to roadless management. Alternatives d, e, and f allocate 37 percent and the remaining alternatives do not manage for this emphasis.

The nonpriced effects are:

- Visual quality will be maintained at a very high level, Retention.
- Semiprimitive and wilderness attributes can be retained for a long period.
- Age class distribution and diversity would be dominated by old growth; young age classes would be minimal.
- Water quality and fisheries would not be affected.
- Few wood products related jobs would be added to the industry.

Economic impacts would be reflected in the timber volume lost. This loss of volume could be mitigated by practicing intensive forestry elsewhere. Other resources would be retained.

Designation: Nonwilderness
Management Emphasis: Miscellaneous

Miscellaneous management emphases include non-forest land, administrative sites, historical or cultural sites, mineral extraction sites, transportation and utility corridors, campgrounds, picnic areas, ski areas, and areas with concentrated public use.

Alternatives c, d, e, and f allocate from 12 to 27 percent to manage these sites. None of the remaining alternatives allocate for these sites.

ACRES OF AREA UNDER MANAGEMENT FOR EACH EMPHASIS BY ALTERNATIVE
(Refer to Appendix C Introduction for Management Areas under each emphasis.)

Management Emphasis	Alternatives a	b	c	d	e	f	g
NONWILDERNESS							
Timber/Range	556	636	5802	817	817	817	-
Wild life							
Grizzly bear	-	-	-	-	-	-	-
Other	397	556	326	573	573	573	-
Visual	1767	1360	318	2596	2596	2596	-
Miscellaneous	-	-	2384	1017	1017	1017	-
Riparian	*	*	*	558	558	558	-
Roadless	6110	6278	-	3269	3269	3269	-
WILDERNESS							
Wilderness	-	-	-	-	-	-	8830
Total	8830	8830	8830	8830	8830	8830	8830

* Small inclusions occur in other management emphasis items

SUMMARY OF MANAGEMENT EMPHASIS (acres managed by decade)

Developed							
decade 1	-	-	-	-	-	-	-
decade 5	2720	2552	8830	5561	5561	5561	-
Roadless							
decade 1	8830	8830	8830	8830	8830	8830	-
decade 5	6110	6278	-	3269	3269	3269	-
Wilderness							
decade 1	-	-	-	-	-	-	8830
decade 5	-	-	-	-	-	-	8830

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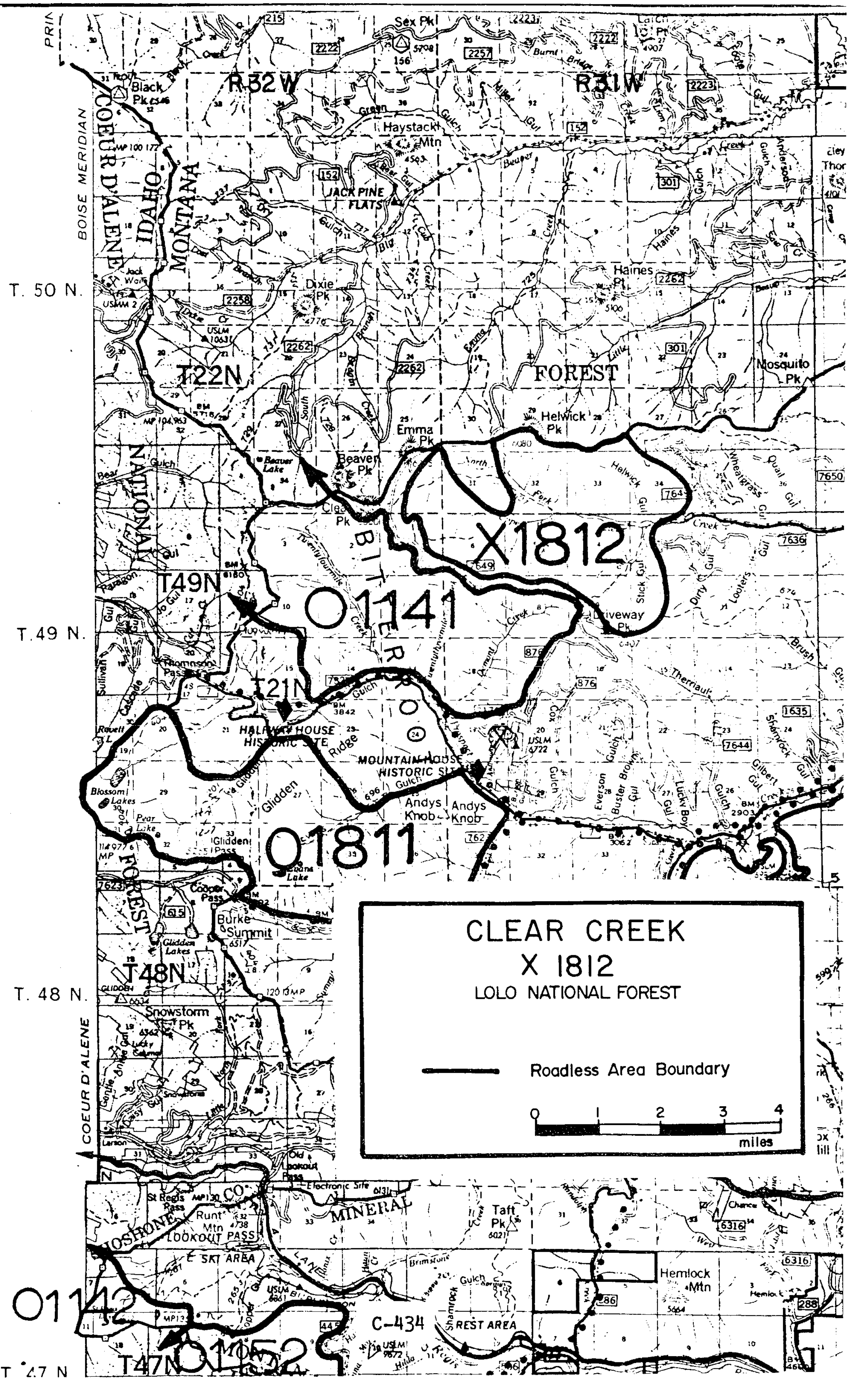
CLEAR CREEK
X 1812
LOLO NATIONAL FOREST
Roadless Area Boundary
0 1 2 3 4
miles
X1812
O1141
O1811
O1142
O1152
C-434
T. 50 N.
T. 49 N.
T. 48 N.
T. 47 N.
R32W
R31W
T22N
T49N
T21N
T48N
T47N
BOISE MERIDIAN
COEUR D'ALENE
IDAHO
MONTANA
NATIONAL
FOREST
BITTERROOT
MINERAL
SHOSHONE CO
Sex Pk
Black Pk
Haystack Mtn
JACK PINE FLATS
Dixie Pk
Haines Pt
Mosquito Pk
Helwick Pk
Emma Pk
Beaver Pk
Driveway Pk
Thomson Pass
HALFWAY HOUSE HISTORIC SITE
MOUNTAIN HOUSE HISTORIC SITE
Andys Knob
Blossom Lakes
Glidden Pass
Cooper Pass
Burke Summit
Glidden Lakes
Snowstorm Pk
Old Lookout Pass
Electronic Site
Taft Pk
Runt Mtn
LOOKOUT PASS
SKI AREA
Hemlock Mtn
REST AREA

CLEAR CREEK #X1812

Acreage:

Gross Acres: 5,470
Net Acres: 5,470

I. Description

A. Location and Access

The Clear Creek Roadless Area lies in the headwaters of Clear Creek some 10 miles due west of Thompson Falls. The southern and western boundaries are defined by Forest Service Road No. 7649 which extends from Driveway Peak to Emma Peak. A complex of logging roads forms the eastern edge, while the Beaver Creek-Clear Creek Divide comprises the northern border. In addition to 8 miles of foot trail, these boundary roads provide ample access to the Clear Creek study unit.

This area was not included in the original RARE II inventory as it was part of a completed unit plan. The original area was 5,940 gross and net acres. Road construction has reduced the area by 470 acres.

B. General Description

This roadless study unit conists of the upper portion of Clear Creek, an east-west trending valley bounded on both sides by a parallel ridge line. These ridges merge to form the western edge. A series of rills and creeks flow down from the hillsides and intersect Clear Creek at perpendicular angles.

The area contains Precambrian Age Revett Formation quartzites in the north and western portions and Prichard Formation argillites in the southeast. A large thrust fault with an eastward component of movement lies along the eastern boundary. In 1982, a geophysical line was run through this region.

The unit is well forested. The upper reaches of Clear Creek contain primarily the subalpine habitat group. The drainage divides are predominantly high ridge, rockland, and subalpine habitats.

All of the Clear Creek Roadlesss Area contains high or very high potential for hard rock minerals. The Revett Formations is host for copper and silver deposits in the Kootenai Forest to the north, and this area is being actively evaluated for similar values. Also, almost all of the unit is classified as being suitable for timber management. A timber sale in the upper drainage is planned for Fiscal Year 1985. Roads for this proposed sale were preconstructed in 1984.

II. Analysis of Wilderness Suitability

A. Capability

1. Wilderness Attributes

a. Naturalness - The natural ecological process and the landscape has been somewhat disturbed by grazing and timber harvesting. Part of the original area has been deleted because of roading. About 20 percent of this study unit is composed of subalpine fir/menziesia habitat type which grows on moist, higher elevations and cool exposures between 5,300 and 7,000 feet. One finds lodgepole pine, Douglas-fir, and spruce along with subalpine fir. Menziesia comprises the bulk of the understory. Timber productivity is moderate to high. Almost as common at 19 percent is the subalpine fir/beargrass habitat type. This grows mostly on the higher elevations between 5,200 and 7,000 feet. Slopes are steep and dry. Lodgepole pine is common along with varying amounts of Douglas-fir, spruce, and white bark pine. Understories are limited mostly to huckleberry and beargrass with lesser amounts of grouse whortleberry, pinegrass, elk sedge, and heartleaf arnica. Timber productivity ranges from low to high depending on site conditions. The balance of the Clear Creek Roadless Area consists of the Douglas-fir/ dwarf huckleberry, grand fir/beargrass, and the subalpine fir/beadlily habitat types. Scree and talus account for 8 percent of the unit.

Most of the animals native to this region can also be found in the Clear Creek area. None are particularly dependent on roadless management for viability or survival. There are no threatened or endangered species. Only a trace of the unit contains big-game summer/winter range.

Air and water quality are considered good in this area.

There are no known structures or facilities in the area.

b. Inspirational Values - The small unit size plus the proposed timber sale in the basin preclude much chance for the visitor to experience solitude. There is little contrast in vegetation which would provide viewing interest for the visitor.

c. Primitive and Unconfined Recreation - This is minimal due to the small size of the area, the existing developments, and the short distance from the perimeter to the core.

d. Cultural and Historcial Values - There are no inventoried cultural or historical sites in the area.

e. Educational and Scientific Values - Some limited opportunity exists for visitors to observe and study big-game animals in their natural habitat. Gene pools within the area do not differ noticeably from the surrounding lands. The ecosystems in this area are well represented in existing wilderness areas.

f. Uniqueness - There are no threatened or endangered species in this study unit. Neither are the physical or biological features of the area considered to be unique.

2. Manageability and Boundaries

This area is both small and compact. Most of the north, west, and south boundaries follow ridge lines. However, a "thumb" of a developed timber harvest unit extends down into the basin between Emma and Helwick Peaks. This and the east side boundaries do not follow natural topographic breaks and would be difficult to locate on the ground. The Clear Creek Roadless Area is neither remote nor free from external or internal influences. Timber harvesting is taking place just outside the eastern boundary. Yearly mineral exploration activities, which include drilling, add to the commotion. There are no non-Federal lands contained within this study unit.

B. Other Resources Found in the Area

1. Potential

The area provides habitat for a wide variety of game and nongame wildlife species commonly found in western Montana (see Appendix B-2, Proposed Lolo Forest Plan, RDEIS), including cougar, furbearers, and bobcat. The area contains about 116 acres of deer and elk winter range and approximately 155 riparian acres.

Seventy-five percent of the area is leased for oil and gas. All or part of four leases are involved. The area also contains 29 mining claims located for stratabound copper and silver. There are 5,470 acres of high-very high mineral potential inventoried within the area.

The Clear Creek Roadless Area contains 49 acres classed as nonstocked, 146 acres of seedlings and saplings, 470 acres of poles, 1,417 acres of immature sawtimber, and 3,138 acres of mature sawtimber. Of this, 5,107 acres are classified as commercial timber land. The suitable lands presently support a standing timber inventory of 43.8 MMBF with a long-term sustained yield in the area of 1.09 MMBF annually.

The Clear Creek Allotment is included within the area. It was active through 1983 and was for 28 cows on 72 AM's. About 75 acres of the 860 net National Forest grazing allotment acres are within the area. The acreage is mostly valley bottom because the adjacent hillsides are too steep to graze.

The current Recreation Opportunity map shows the area as 100 percent roaded natural. The unit itself is not roaded, but it is surrounded by roads on every side except the southeast corner and northern boundary. Recreation opportunities include trail biking, hiking, berrypicking, hunting, and scenic viewing.

2. Resource Summary

X1812 - Clear Creek - Roadless Area

Category		
Gross acres	Acres	5470
Net Acres	Acres	5470
Recreation		
Primitive	RVD's	0
Semiprim. Nonmot.	RVD's	0
Semiprim. Motor.	RVD's	54700
Roaded Natural	RVD's	0
Range		
Existing Obligated		
Suitable	Acres	75
Allotments	No.	1
AUMs	AUMs	9
Existing Vacant		
Suitable	Acres	0
Allotments	No.	0
AUMs	AUMs	0
Proposed		
Suitable	Acres	0
AUMs	AUMs	0
Timber		
Tenative Suitable	Acres	5017
Standing Volume	MMBF	43.8
Corridors		
Exist. & Pot.	No.	1
Wildlife - T&E		
Grizzly Bear		
Habitat Sit. 1	Acres	0
Habitat Sit. 2	Acres	0
Habitat Sit. 3	Acres	0
Bald Eagle Hab.	Acres	0
Gray Wolf Hab.	Acres	0
Peregrin Fal. Hab.	Acres	0
Wildlife - Big Game		
Summer Habitat	Acres	0
Winter Habitat	Acres	116
Significant Fisheries		
Stream Miles	Miles	2.0
Stream Habitat	Hab. Ac	1.9
Lakes	No.	0
Lake Habitat	Hab. Ac	0
Water Develop.		
Existing	No.	0
Hardrock Potential		
Very High	Acres	0
High	Acres	5470
Moderate	Acres	0
Low	Acres	0
Mining Claims .	No.	29
Oil & Gas Potential		
Very High	Acres	0
High	Acres	0
Moderate	Acres	5470
Low	Acres	0
Oil & Gas Leases	No.	4
Leased Area	Acres	4100

3. Management Considerations

Because of the large component of lodgepole pine, infestation by the mountain pine beetle could become a problem in the future.

4. Public Involvement

During the public reveiw period for the DEIS, there were few additional comments on the Clear Creek Area. Several comments favored wilderness designation for all existing roadless areas. Other responders opposed further additions to the wilderness system.

III. Impacts

Designation: Wilderness
Management Emphasis: Wilderness

Clear Creek is allocated to wilderness in Alternative g but this is the only alternative that the total area or any portion is allocated to wilderness.

There are no identified human intrusions within the boundaries; therefore, wilderness allocation would not particularly enhance the area's attributes. Any existing motorized activities could be eliminated. These are social effects.

The approximately 5,000 acres of land tentatively suitable for timber production would not be available. This would remove about 44 MMBF including a significant area of lodgepole pine which may become infested by mountain pine beetle.

Big-game or elk management would not change much since the area contains only a small amount of big-game winter range. Cover/forage ratios should not change much over time except as influenced by wildfire control.

Current livestock grazing of 9 AUM's could continue on portions of the area but use of motorized equipment would change.

Under wilderness allocation, recreation use will continue to be a variety of both summer and winter activities.

The nonpriced effects are:

- Visual quality would be preserved.
- Wilderness area would increase.
- Diversity would tend toward old growth without wildfire but could be improved depending on the control policy.
- Water quality and fisheries would be maintained at their present natural levels.
- Local employment may decrease slightly due to the unavailability of timber.

Economic effects would be reflected in the timber volume loss which is less than one percent of the land base suitable for timber, and other resource values would be retained. The loss in timber volume can be mitigated by practicing intensive forestry elsewhere. Mineral opportunities would be foregone.

Designation: Nonwilderness
Management Emphasis: Timber/Range

All alternatives except g allocate some portion of the area to timber management. Alternatives a and b allocate 1 percent, Alternatives d through f allocate from 89 to 91 percent.

Allocation to the timber prescription will forego the possibility of wilderness allocation by the end of the first decade. The possibility of infested lodgepole pine stands will continue the need for the area to be accessed with roads and harvest will be scheduled up to the limit of constraints for these prescriptions. These facts will cause social impacts in recreation.

The nonpriced effects are:

- Visual quality would be at its lowest level, Maximum Modification.
- Semiprimitive recreation potential would be foregone by the end of the first decade.
- Wilderness characteristics would be compromised in a short time.
- Diversity would tend toward younger age classes with minimum old growth.
- Water quality and fisheries effects would be mitigated.
- The greatest number of jobs, mainly in the wood products industry, would be provided.

Salvaging the infested lodgepole pine is probably the most significant economic factor. Mineral exploration opportunities would remain.

Designation: Nonwilderness
Management Emphasis: Wildlife

The main emphasis in the prescription is big-game winter range. Alternative a allocates 62 percent, Alternatives b through f allocate 2 percent each to this emphasis.

Development and vegetative manipulation may be required to achieve the habitat and forage management objectives. Timber harvest would occur if enough timber is available and could be used to achieve habitat objectives. Other management activities may include prescribed burning.

Wildlife security and cover requirements include restrictions on human activities and development. Although habitat managment activities result in some reductions in wilderness attributes, they are ususally short term and limited in scope. Effects do not differ appreciably from those listed under timber management except wildlife objectives would be maintained.

Designation: Nonwilderness
Management Emphasis: Visual

Alternative a allocates 20 percent and Alternative b allocates 91 percent of the area to visual management. None of the other alternatives manage for this emphasis.

Visuals are retained in the roadless management emphasis. Visual quality resource will be managed according to the management area classification. Impacts are basically as those listed under timber management except visual quality objectives would be maintained.

Designation: Nonwilderness
Management Emphasis: Riparian

All alternatives contain inclusions of riparina zones and recognize the need to manage these areas according to policy and guidelines. Alternative g is the wilderness alternative and would not impact the riparian areas.

Designation: Nonwilderness
Management Emphasis: Roadless

Alternatives a and b are the only alternatives which allocate for roadless management. Alternative a is 15 percent and Alternative b is 3 percent.

Visual quality will be maintained at a high level. Semiprimitive and wilderness attributes can be retained for a long period. Age class distribution and diversity would be dominated by old growth; young age classes would be minimal. Water quality and fisheries would not be affected. Few wood products related jobs would be added to the industry.

The economis impacts would be reflected in the timber volume lost. This loss could be mitigated by intensive forestry elsewhere.

Designation: Nonwilderness
Management Emphasis: Miscellaneous

Alternatives a through f allocate from 2 to 7 percent to management of miscellaneous sites. These sites include non-forest land, administrative sites, historical or cultural sites, mineral extraction sites, transportation and utility corridors, campgrounds, picnic areas, ski areas, and areas with concentrated public use.

ACRES OF AREA UNDER MANAGEMENT FOR EACH EMPHASIS BY ALTERNATIVE
(Refer to Appendix C Introduction for Management Areas under each emphasis.)

Management Emphasis	Alternatives a	b	c	d	e	f	g
NONWILDERNESS							
Timber/Range	55	82	4951	4864	4864	4864	-
Wild life							
Grizzly bear	-	-	-	-	-	-	-
Other	3402	109	120	115	115	115	-
Visual	1116	4978	-	-	-	-	-
Miscellaneous	98	164	399	341	341	341	-
Riparian	*	*	*	150	150	150	-
Roadless	799	137	-	-	-	-	-
WILDERNESS							
Wilderness	-	-	-	-	-	-	5470
Total	5470	5470	5470	5470	5470	5470	5470

* Small inclusions occur in other management emphasis items.

Management Emphasis	Alternatives a	b	c	d	e	f	g
SUMMARY OF MANAGEMENT EMPHASIS (acres managed by decade)							
Developed							
decade 1	4671	5333	5470	5470	5470	5470	-
decade 5	4671	5333	5470	5470	5470	5470	-
Roadless							
decade 1	799	137	-	-	-	-	-
decade 5	799	137	-	-	-	-	-
Wilderness							
decade 1	-	-	-	-	-	-	5470
decade 5	-	-	-	-	-	-	5470

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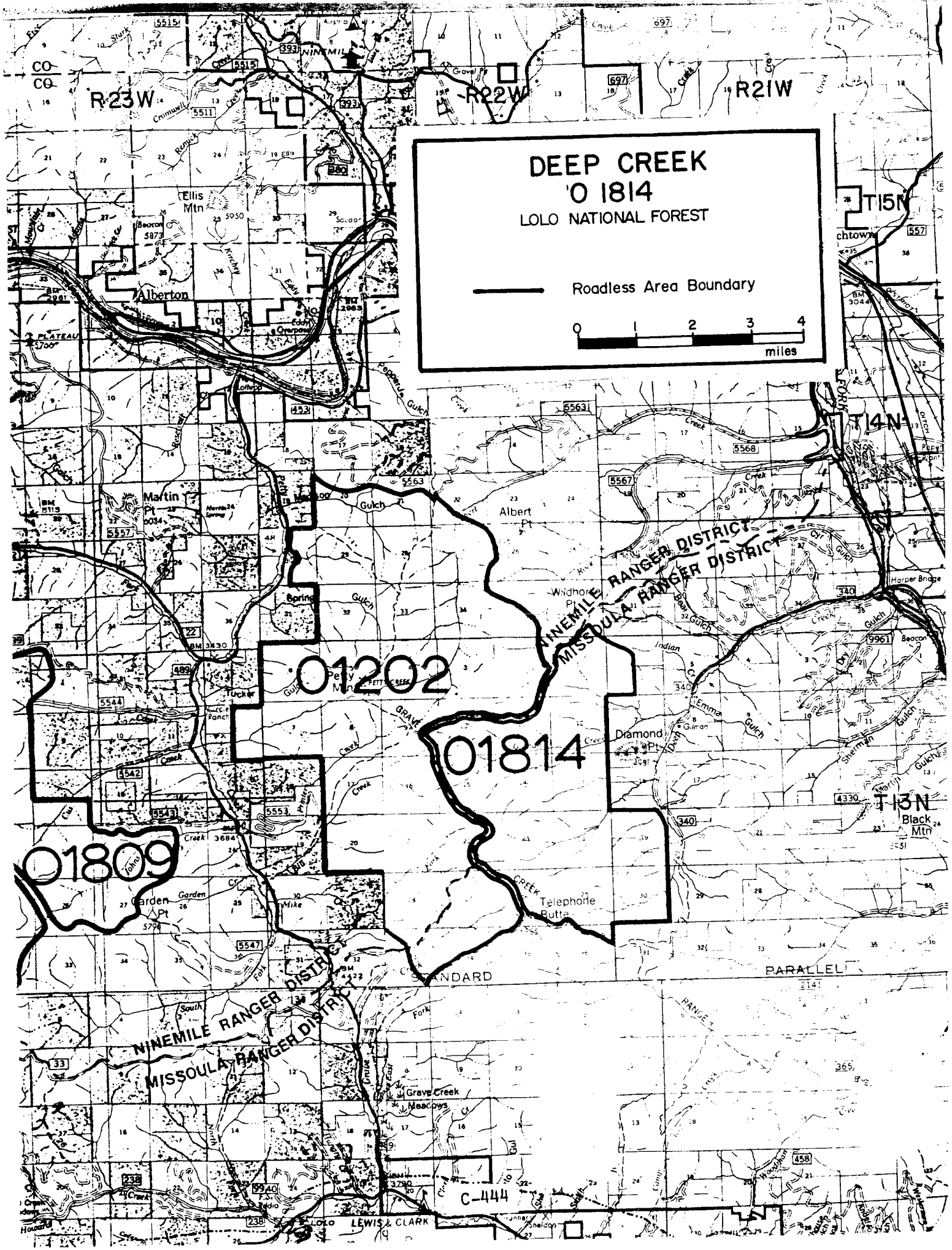
DEEP CREEK
'O 1814
LOLO NATIONAL FOREST
Roadless Area Boundary
0 1 2 3 4
miles
01202
01814
01809
NINEMILE RANGER DISTRICT
MISSOULA RANGER DISTRICT
NINEMILE RANGER DISTRICT
MISSOULA RANGER DISTRICT
R23W
R22W
R21W
T15N
T14N
T13N
Alberton
Martin Pt
Albert Pt
Diamond Pt
Black Mtn
Ellis Mtn
Garden Pt
Telephone Butte
Grave Creek Meadows
C-444
LOLO
LEWIS & CLARK
STANDARD
PARALLEL

DEEP CREEK #X1814

Acreage:

Gross Acres: 8,170
Net Acres: 7,970

I. Description

A. Location and Access

The Deep Creek Roadless Area lies 13 miles due west of Missoula. The major access to this study unit is provided by the Deep Creek Road (No. 340) which parallels Deep Creek, skirts below Diamond Peak, and extends along the eastern border. Forest Road No. 5567 which runs up Rock Creek accesses the northern portion of the area. From the south, new roading in support of timber harvesting comes within 9 miles of the boundary. A jeep trail has developed along the Telephone Butte-Wildhorse Point Divide and provides access from the west. There are no Forest System Trails in this unit. Refer to Table C-4 for proximity information.

B. General Description

The ridge connecting Telephone Butte-Wildhorse Point forms the entire northern, western, and southern boundaries. From it, Deep Creek and its tributaries flow down the slope to the east and into the Clark Fork River. The slopes are not especially steep, and the Deep Creek unit is basically a low, broad basin. The area is generally timbered with few bedrock exposures.

The Bonner Quartzite and McNamara Formation underlie virtually all of the Deep Creek portion of the study area. In the southeast corner, a fault exposes beds of the Miller Peak Formation. All of these rocks belong to the Precambrian Age Missoula Group. The Diamond Point Fault slices across the eastern edge of the roadless area.

This area receives moderate use for four--wheel drive and trail bike recreation. It is several miles west of the Blue Mountain Recreation Area and within a short distance of Missoula and Lolo. Scenic vistas can be viewed from along the Telephone Butte-Wildhorse Point ridgeline.

II. Analysis of Wilderness Suitability

A. Capability

1. Wilderness Attributes

a. Naturalness - This area retains its natural appearance; no improvements are located inside the roadless area boundary. The vegetative communities in this unit are similar to those found in the adjacent lands. Almost 32 percent of the study area contains

the Douglas-fir/blue huckleberry habitat type. Primary vegetation consists of Douglas-fir, lodgepole pine, larch, and huckleberry. Lesser amounts of ponderosa pine, pinegrass, elk sedge, and beargrass grow in this type. It is generally found on cold, well-drained slopes between 4,300 and 6,800 feet. Timber productivity is low to moderate. Another 25 percent of the area has the Douglas-fir/ninebark habitat type. Douglas-fir dominates the type with lesser amounts of ponderosa pine, larch, and lodgepole. Understories are normally a dense, shrub layer of ninebark and ocean spray. Stands grow on cool and moist north and east slopes from 4,800 to 5,800 feet in elevation. Sites are moderately productive. Other habitat types found in the Deep Creek Roadless Area include subalpine fir/beargrass, subalpine fir/bedstraw, Douglas-fir/ pinegrass, and Douglas-fir/elk sedge. Scree and talus slopes account for 5 percent of the unit.

All of the animal species found in the study area are native to western Montana. None are particularly dependent upon roadless management for viability or survival. About 10 percent of the area is classified as elk and deer winter range. Viewing animals such as deer and elk in their native habitat may be construed as a wilderness experience in the minds of some people.

Water quality is considered good.

There are no known structures or facilities within the area. Evidence of man's activities along the margins or near to the boundary include Forest Service and four-wheel drive trails, footing of the Grave Range Lookout at the head of Bear Creek along the Grave Creek Range Divide, and footings of the Wildhorse Point Lookout. Four-wheel drive vehicle trails include the Grave Creek Range Divide Trail from Blue Mountain to a point along the divide about 2 miles south of Petty Mountain; Wildhorse Point Trail from Wildhorse Point to the Grave Creek Range Divide Trail; Grave Creek Trail from Grave Creek Range Divide Trail; and a Camp Creek trail from Camp Creek to the Grave Creek Divide Trail.

b. Inspirational Values - There is little physical contrast in the relatively broad, flat basin to catch the eye and the imagination. No awe-inspiring topography resides herein. The size of the unit is too small and the screening inadequate to allow one to feel isolated and away from civilization.

c. Primitive and Unconfined Recreation - Opportunities are low to moderate because the trail bike and four-wheel drive traffic and inadequate topographic screening to block out the sights and sounds of timber harvesting activities occurring off the unit. There are few challenges in the area for people looking for difficult terrain for hiking or climbing. The distance from the core to the edge is about 1.5 miles. Use levels in this unit are higher than what one would expect because of the proximity to Missoula.

d. Cultural and Historic Values - There are no inventoried cultural or historic sites.

e. Educational and Scientific Values - There is some opportunity to observe and study big-game animals in their natural habitat. No threatened or endangered species are known to inhabit the study area. Gene pools do not differ appreciably from those on the surrounding lands. The ecosystems in this area are well represented in existing wilderness areas.

f. Uniqueness - This study area contains no known unique physical or biological features.

2. Manageability and Boundaries

The Deep Creek study area is fairly compact and contains only 200 acres of privately owned land. It could either be excluded by a boundary adjustment or possibly through a land exchange. The northern, western, and southern boundaries follow drainage divides and would be relatively easy to locate and monument on the ground. The eastern border cuts across topography and would be very difficult to establish the exact location. External impacts from timber harvesting in the basin influence much of the area. Most of the major communities and transportation routes can be seen from the boundary ridge.

B. Other Resources Found In The Area

1. Potential

The area provides habitat for a wide variety of game and nongame wildlife species commonly found in western Montana (see Appendix B-2, Proposed Lolo Forest Plan, RDEIS). There are approximately 284 riparian acres. The area contains 847 acres of deer and elk winter range.

In the Deep Creek portion of the area, Diamond Point Fault slices across the eastern edge of the roadless area. Parts of three oil and gas leases cover the eastern 30 percent of the unit. No mining claims are recorded in the study area. At this time there are no acres of high to very high mineral potential lands known to exist in the area.

This unit contains 261 acres classed as nonstocked, 94 acres of seedlings and sapplings, 465 acres of poles, 1,685 acres of immature sawtimber, and 5,301 acres of mature sawtimber. Of this, 7,255 acres are classified as commercial timber land. The suitable lands presently support a standing timber inventory of 57.15 MMBF with a long-term sustained yield in the area of 1.24 MMBF annually.

On current Recreation Opportunity maps, this unit is shown as 100 percent semiprimitive nonmotorized. Most of the recreational use occurs during the hunting season. In addition to berrypicking, hiking, and trail biking, numerous creeks provide fishing opportunities.

2. Resource Summary

X1814 - Deep Creek - Roadless Area

Category		
Gross acres	Acres	8170
Net Acres	Acres	7970
Recreation		
Primitive	RVD's	0
Semiprim. Nonmot.	RVD's	7970
Semiprim. Motor.	RVD's	0
Roaded Natural	RVD's	0
Range		
Existing Obligated		
Suitable	Acres	0
Allotments	No.	0
AUMs	AUMs	0
Existing Vacant		
Suitable	Acres	0
Allotments	No.	0
AUMs	AUMs	0
Proposed		
Suitable	Acres	0
AUMs	AUMs	0
Timber		
Tenative Suitable	Acres	7255
Standing Volume	MMBF	57.1
Corridors		
Exist. & Pot.	No.	0
Wildlife - T&E		
Grizzly Bear		
Habitat Sit. 1	Acres	0
Habitat Sit. 2	Acres	0
Habitat Sit. 3	Acres	0
Bald Eagle Hab.	Acres	0
Gray Wolf Hab.	Acres	0
Peregrin Fal. Hab.	Acres	0
Wildlife - Big Game		
Summer Habitat	Acres	0
Winter Habitat	Acres	847
Significant Fisheries		
Stream Miles	Miles	0
Stream Habitat	Hab. Ac	0
Lakes	No.	0
Lake Habitat	Hab. Ac	0
Water Develop.		
Existing	No.	0
Hardrock Potential		
Very High	Acres	0
High	Acres	0
Moderate	Acres	2793
Low	Acres	5177
Mining Claims .	No.	0
Oil & Gas Potential		
Very High	Acres	0
High	Acres	0
Moderate	Acres	0
Low	Acres	7970
Oil & Gas Leases	No.	3
Leased Area	Acres	2400

3. Management Considerations

This study area contains 200 acres of non-Federal land.

4. Public Involvement

During the public reveiw period for the DEIS, there were few additional comments on the Deep Creek Area. Several comments favored wilderness designation for all existing roadless areas. Other responders opposed further additions to the wilderness system.

III. Impacts

Designation: Wilderness
Management Emphasis: Wilderness

Deep Creek is allocated to wilderness in Alternative g but this is the only alternative that the total area or any portion is allocated to wilderness.

Wilderness allocation will not enhance the area's attributes, there are no known structures or facilities within the boundaries. Any existing motorized activities could be eliminated.

Economic impacts include the approximately 7,300 acres of land tentatively suitable for timber production which would not be available. This would remove about 57 MMBF from the Forest timber base.

Big-game or elk management would not change much. Cover/forage relationships should not change over time except as influenced by wildfire control or encroachment.

The nonpriced effects are:

- Visual quality would be Preserved.
- Wilderness area would increase.
- Diversity would tend toward old growth without wildfire but could be improved depending on the control policy.
- Water quality and fisheries would be maintained at their present natural levels.
- Local employment may decrease slightly due to the unavailibility of timber.

Social impacts would include recreation use which would not change from the present use. The area would remain nonmotorized.

Designation: Nonwilderness
Management Emphasis: Timber/Range

All alternatives except g allocate some of this area to timber prescriptions. Alternative a allocates 4 percent; Alternative b, 24 percent; Alternative c, 89 percent; Alternatives d, e and f, 35 percent.

Allocation to the timber prescription will forego the possibility of wilderness allocation on 35 to 51 percent of the area by the end of the first decade. The area will be accessed with roads and harvest will be scheduled up to the limit of constraints for these presscriptions. This would have some social impacts on the recreation use of the area.

The nonpriced effects are:

- isual quality would be at its lowest level, Maximum Modification.
- Semiprimitive recreation potential would be foregone on portions of the area by the end of the first decade.
- Wilderness characteristics would be compromised in a short time.
- Diversity would tend toward younger age classes with minimum old growth.
- Water quality and fisheries effects would be mitigated.
- The greatest number of jobs, mainly in the wood products industry, would be provided.

Economic effects would be reflected in the timber volume available for harvest which is a small percentage of that available over the Forest.

Designation: Nonwilderness
Management Emphasis: Wildlife

The main emphasis in this prescription is big-game winter habitat. Alternative a allocates 21 percent of the area to wildlife management; Alternatives b through f allocate from 2 to 11 percent.

Development and vegetative manipulation may be required to achieve the habitat and forage management objectives. Timber harvest would occur if enough timber is available and could be used to achieve habitat objectives. Other management activities may include prescribed burning.

Wildlife security and cover requirements include restrictions on human activities and development. Although habitat management activities result in some reductions in wilderness attributes, they are usually short term and limited in scope. Opportunities for solitude and primitive recreation would remain high. Effects do not differ appreciably from those listed under timber management except wildlife objectives would be maintained.

Designation: Nonwilderness
Management Emphasis: Visual

Alternatives a, b, d, e, and f allocate from 2 to 12 percent of the area to visual management. Alternatives c and g do not manage for this emphasis. Visuals are retained in the roadless management emphasis. Visual quality resource will be managed according to the management area classification. Effects are as those listed under timber management but visual objectives are maintained.

Designation: Nonwilderness
Management Emphasis: Riparian

All alternatives contain inclusions of riparian zones and recognize the need to manage these areas according to policy and guidelines. Alternative g is the wilderness alternative and would not impact the riparian areas.

Designation: Nonwilderness
Management Emphasis: Roadless

Alternatives a, b, d, e, and f allocate from 49 to 65 percent of the area to roadless management. The remaining alternatives do not manage for this emphasis.

The nonpriced effects are:

- Visual quality will be maintained at a very high level, Retention.
- Semiprimitive and wilderness attributes can be retained for a long period.
- Age class distribution and diversity would be dominated by old growth; young age classes would be minimal.
- Water quality and fisheries would not be affected.
- Few wood products related jobs would be added to the industry.

The economic impacts could be reflected in the timber volume lost. This loss in volume would be mitigated by practicing intensive forestry elsewhere. Other resources would be retained.

Designation: Nonwilderness
Management Emphasis: Miscellaneous

Alternative c is the only alternative that manages for miscellaneous emphasis, and that is only 8 percent of the area.

ACRES OF AREA UNDER MANAGEMENT FOR EACH EMPHASIS BY ALTERNATIVE
(Refer to Appendix C Introduction for Management Areas under each emphasis)

Management Emphasis	Alternatives a	b	c	d	e	f	g
NONWILDERNESS							
Timber/Range	343	1913	7077	2804	2804	2804	-
Wild life							
Grizzly bear	-	-	-	-	-	-	-
Other	1681	159	295	848	848	848	-
Visual	797	956	-	165	165	165	-
Miscellaneous	-	-	598	-	-	-	-
Riparian	*	*	*	284	284	284	-
Roadless	5149	4942	-	3869	3869	3869	-
WILDERNESS							
Wilderness	-	-	-	-	-	-	7970
Total	7970	7970	7970	7970	7970	7970	7970

* Small inclusions occur in other management emphasis items

SUMMARY OF MANAGEMENT EMPHASIS (acres managed by decade)

Developed							
decade 1	2821	3028	4101	4101	4101	4101	-
decade 5	2821	3028	7970	4101	4101	4101	-
Roadless							
decade 1	5149	4942	3869	3869	3869	3869	-
decade 5	5149	4942	-	3869	3869	3869	-
Wilderness							
decade 1	-	-	-	-	-	-	7970
decade 5	-	-	-	-	-	-	7970

Table C-1: Wilderness Allocation for Roadless Areas

Roadless Area	Alternatives a	b	c	d	e	f	g	Benchmarks h MAX PNV	k Wilderness	l MIN LEV
McGregor-Thpson	-	-	-	-	-	-	27850	-	27850	-
L1LAQ							100%		100%	
%										
Maple Peak	-	-	-	-	-	-	16294	-	16294	-
01141										
Idaho Pan.	-	-	-	-	-	-	8434	-	8434	-
Kootenai	-	-	-	-	-	-	900	-	900	-
Lolo	-	-	-	-	-	-	6960	-	6960	-
%							100%		100%	
Stevens Peak	-	-	-	-	-	-	4970	-	4970	-
01142										
Idaho Pan.	-	-	-	-	-	-	4370	-	4370	-
Lolo	-	-	-	-	-	-	600	-	600	-
%							100%		100%	
Wonderful Peak	-	-	-	-	-	-	6670	-	6670	-
01152										
Idaho Pan.	-	-	-	-	-	-	5070	-	5070	-
Lolo	-	-	-	-	-	-	1600	-	1600	-
%							100%		100%	
Petty Mountain	-	-	-	-	-	-	16980	-	16980	-
X1202							100%		100%	
%										
Rattlesnake	-	-	-	-	-	-	2700	-	2700	-
X1204							100%		100%	
%										
Reservation De.	-	-	-	-	-	-	16300	-	16300	-
X1205							100%		100%	
%										
Baldy Mtn.	-	-	-	-	-	-	6680	-	6680	-
X1209							100%		100%	
%										
Ward Eagle	-	-	-	-	-	-	8570	-	8570	-
X1220							100%		100%	
%										

Table C-1: Wilderness Allocation for Roadless Areas (con't)

Roadless Area	Alternatives a	b	c	d	e	f	g	Benchmarks h MAX PNV	k Wilderness	l MIN LEV
Hoodoo	181950	219450	145750	181950	-	230300	247647	-	247647	-
01301										
Clearwater	100100	137600	63900	100100	-	131800	149147	-	149147	-
Lolo	81850	81850	81850	89530	-	98500	98500	-	98500	-
%	73%	89%	59%	77%		93%	100%	-	100%	-
Med Ck Up N.	-	-	-	-	-	6100	54002	-	54002	-
01302										
Clearwater	-	-	-	-	-	-	40702	-	40702	-
Idaho Pan.	-	-	-	-	-	6100	6100	-	6100	-
Lolo	-	-	-	-	-	-	7200	-	7200	-
%						11%	100%		100%	
Silver King	-	-	-	-	-	-	54287	-	54287	-
01424										
Deerlodge	-	-	-	-	-	-	41447	-	41447	-
Lolo	-	-	-	-	-	-	12840	-	12840	-
%							100%		100%	
Bear-Mar-S-Sw	139769	367012	266561	164948	29505	583149	717156	-	865178	-
01485										
Flathead										
Midd. Fk.	-	-	-	-	-	34746	42450	-	42450	-
East Side	-	-	-	5187	-	57640	57640	-	57640	-
Swan Crest	-	60826	60826	-	-	60826	106870	-	106870	-
Swan Front	-	82417	82426	43667	-	111412	141990	-	141990	-
Helena										
Stone. Mtn.	-	-	-	-	-	51485	51485	-	51485	-
Silver King	7215	7215	7215	-	7215	7215	7215	-	7215	-
Lewis&Clark										
Badg./Two Med.	-	-	-	-	-	-	-	-	102100	-
Teton	-	39845	5040	5040	-	63133	63133	-	63133	-
Deep Ck.	-	-	-	-	-	-	-	-	45922	-
Renshaw	31304	45864	19144	19144	21880	57591	57591	-	57591	-
Benchmark	-	26027	3630	3630	-	32314	32314	-	32314	-
Silver K.	32000	35568	19030	19030	410	35568	35568	-	35568	-
Lolo										
Swan Front	3690	3690	3690	3690	-	3690	20840	-	20840	-
Monture	65560	65560	65560	65560	-	67529	100060	-	100060	-
%	16%	42%	31%	19%	3%	67%	83%		100%	
Cataract	-	17700	-	-	-	12300	27600	-	27600	-
01665										
Kootenai	-	17700	-	-	-	12300	17700	-	17700	-
Lolo	-	-	-	-	-	-	9900	-	9900	-
%		64%				45%	100%		100%	

Table C-1: Wilderness Allocation for Roadless Areas (con't)

Roadless Area	Alternatives a	b	c	d	e	f	g	Benchmarks hx MAX PNV	k Wilderness	l MIN LEV
Marshall Pk. 01781	-	-	-	-	-	4000	9400	-	9400	-
%						43%	100%		100%	
Cube-Iron 01784	-	-	-	-	-	38100	38100	-	38100	-
Kootenai	-	-	-	-	-	400	400	-	400	-
Lolo	-	-	-	-	-	37700	37700	-	37700	-
%						100%	100%	-	100%	
Sundance Rdg. 01785	-	-	-	-	-	-	7220	-	7220	-
%							100%	-	100%	
Tepee-Sp. Ck. X1786	-	-	-	-	-	-	14890	-	14890	-
%							100%		100%	
Mount Bushnell 01790	-	-	-	-	-	-	43070	-	43070	-
%							100%		100%	
Cherry Peak 01791	-	-	-	-	-	39640	39640	-	39640	-
%						100%	100%		100%	
Gilt-Edge S. Ck. 01792	-	-	-	-	-	-	11500	-	11500	-
Idaho Pan.	-	-	-	-	-	-	300	-	300	-
Lolo	-	-	-	-	-	-	11200	-	11200	-
%							100%		100%	
Pat. Knob-S. C. 01794	-	-	-	-	-	-	17200	-	17200	-
%							100%		100%	
S.Siegel-S. C. 01795	-	-	-	-	-	-	14800	-	14800	-
%							100%		100%	
North Siegel 01796	-	-	-	-	-	-	10000	-	10000	-
%							100%		100%	

Table C-1: Wilderness Allocation for Roadless Areas (con't)

Roadless Area	Alternatives a	b	c	d	e	f	g	Benchmarks h MAX PNV	k Wilderness	l MIN LEV
Marble Point 01798	-	-	-	-	-	-	13210	-	13210	-
%							100%		100%	
Sheep Mtn.-S. L. 01799	-	-	-	-	-	62820	67479	-	67479	-
Idaho Pan.	-	25700	-	-	-	25700	26979		26979	-
Lolo	-	-	-	-	-	37120	40500	-	40500	-
%		38%				93%	100%		100%	
Stark Mtn. 01800	-	-	-	-	-	-	14140	-	14140	-
%							100%		100%	
Burdette 01803	-	-	-	-	-	-	16360	-	16360	-
%							100%		100%	
Lolo Creek 01805	-	-	-	15347	-	15347	15347	-	15347	-
Bitterroot	-	-	-	-	-	-	587	-	587	-
Clearwater	-	-	-	-	-	-	100	-	100	-
Lolo				3990		14660	14660	-	14660	
%				26%		96%	100%	-	100%	-
Welcome Ck. 01806	-	-	-	-	-	1100	1100	-	1100	-
%						100%	100%		100%	
Quigg 01807	60830	60830	60830	60830	-	60830	81985	-	81985	-
Deerlodge	-	-	-	-	-	-	12165	-	12165	-
Lolo	60830	60830	60830	60830	-	60830	69820	-	69820	-
%	74%	74%	74%	74%		74%	100%		100%	
Stony Mtn. 01808	-	61816	-	-	-	82827	102846	-	102846	-
Bitterroot	-	37200	-	-	-	23281	43300	-	43300	-
Deerlodge	-	24616	-	-	-	24616	24616	-	24616	-
Lolo	-	-	-	-	-	34930	34930	-	34930	-
%		60%				81%	100%		100%	
Garden Point 01809	-	-	-	-	-	-	6500	-	6500	-
%							100%		100%	

Table C-1: Wilderness Allocation for Roadless Areas (con't)

Roadless Area	Alternatives a	b	c	d	e	f	g	Benchmarks h MAX PNV	k Wilderness	l MIN LEV
Evans Gulch X1811	-	-	-	-	-	-	8830	-	8830	-
%							100%		100%	
Clear Ck. X1812	-	-	-	-	-	-	5470	-	5470	-
%							100%		100%	
Deep Ck. X1814	-	-	-	-	-	-	7970	-	7970	-
%							100%		100%	
TOTAL Lolo Forest	211930	211930	211930	223600	-	399699	776190	-	776190	-
Contiguous	170619	540578	261211	195798	29505	736814	978573	-	1126595	-
GRAND TOTAL	382549	752508	473141	419398	29505	1136513	1754763	-	1902785	-
%	20%	40%	25%	22%	2%	60%	92%		100%	

Table C-2: Adjustments to the Roadless Inventory

Area Code	Roadless Name	Gross Acres	Net Acres	Change in Gross	Change in Net	Reason	Revised Gross	Revised Net
L1LAQ	McGregor-Thompson	76000	54000	-45700	-26150	Roads and Timber Sales	30300	27850
01141	Maple Peak	0	0	+6960	+6960	Addition of Roadless	6960	6960
01142	Stevens Peak	700	600	0	0		700	600
01152	Wonderful Peak	1600	1600	0	0		1600	1600
X1202	Petty Mountain	0	0	+16980	+16980	Addn of Rdless/Unit Plans	16980	16980
X1204	Rattlesnake	0	0	+3310	+2700	Addn of Rdless/Unit Plans	3310	2700
X1205	Reservation Divide	0	0	+16300	+16300	Addn of Rdless/Unit Plans	16300	16300
X1209	Baldy Mtn.	0	0	+6680	+6680	Addn of Rdless/Unit Plans	6680	6680
X1220	Ward Eagle	0	0	+8570	+8570	Addn of Rdless/Unit Plans	8570	8570
01301	Hoodoo	105560	105300	-6880	-6800	Ac. Recal.& Bdy.Correction	98680	98500
01302	Meadow Ck.- U.N.	7200	7200	0	0		7200	7200
31424	Silver King	13500	13100	-350	-260	Ac. Recal. & EPA	13150	12840
01485	Bear-Ma-Sc-Swan	123075	122175	-1135	-1275	Acre Recalculation	121940	120900
01665	Cataract	9900	9900	0	0		9900	9900
01781	Marshall Peak	9400	9400	0	0		9400	9400
01784	Cube-Iron	40400	38900	-1200	-1200	Roads and Timber Sales	39200	37700
01785	Sundance Ridge	11800	9100	-2510	-2490	Rds, Tim Sale & Ac Recal	9440	7220
X1786	Teepee-Spring Ck.	0	0	+15250	+14890	Addn of Rdless/Unit Plans	15250	14890
01790	Mount Bushnell	44330	44330	-1260	-1260	Rds, Tim Sale & EPA	43070	43070
01791	Cherry Peak	49120	48960	-9320	-9320	Rds, Tim Sale & Ac Recal	39800	39640
01792	Gilt Edge-Silver Ck	11200	11200	0	0		11200	11200
01794	Pat Knob-N Cutoff	25800	24200	-7000	-7000	Roads and Timber Sale	18800	17200
01795	S Siegel-S Cutoff	19100	17600	-3500	-2800	EPA	15600	14800
01796	North Siegel	10200	10000	0	0		10200	10000
01798	Marble Point	15000	15000	-1790	-1790	Existing Road	13210	13210
01799	Sheep Mtn-State Li	40700	40500	0	0		40700	40500
01800	Stark Mtn.	22380	22380	-8240	-8240	Rds,Tim Sa,EPA & Ac Recal	14140	14140
01803	Burdette	15500	15400	+880	+960	Acre Recalculation	16380	16360
01805	Lolo Creek	16400	14900	-240	-240	Roads and Timber Sale	16160	14660
01806	Welcome Creek	1100	1100	0	0		1100	1100
01807	Quigg	68200	68200	+1620	+1620	Acre Recalculation	69820	69820
01808	Story Mtn.	33120	33120	+1810	+1810	Acre Recalculation	34930	34930
01809	Garden Point	6900	6500	0	0		6900	6500
X1811	Evans Gulch	0	0	+8830	+8830	Addn of Rdless/Unit Plans	8830	8830
X1812	Clear Creek	0	0	+5470	+5470	Addn of Rdless/Unit Plans	5470	5470
X1814	Deep Creek	0	0	+8170	+7970	Addn of Rdless/Unit Plans	8170	7970
	TOTAL	778,185	744,665	11,705	30,915		790040	776190

Table C-3: Management Emphasis by Alternative for Lolo Roadless Areas

Management Emphasis	Alternatives a	b	c	d	e	f	g
NONWILDERNESS							
Contiguous Rdless area							
Idaho Panhandle	51253	25553	51253	51253	25553	18174	-- --
Kootenai	19000	1300	19000	19000	19000	6700	-- --
Clearwater	89800	52300	126000	89800	189900	58000	
Flathead	348950	205707	205698	300096	348950	84326	-- --
Helena	51485	51485	51485	51485	51485	-- --	-- --
Lewis & Clark	243324	189324	289784	289784	314338	148022	148022
Bitterroot	43900	6700	43900	43900	43900	20000	-- --
Deerlodge	78228	53612	78228	78228	78228	53532	-- --
Lolo							
Timber/Range	61981	45497	307187	152908	213375	126447	-- --
Wild life							
Grizzly Bear	26445	27267	34325	23928	29451	11922	-- --
Other	119073	17318	43846	93712	94315	77384	-- --
Visual	152301	72206	15515	38217	38217	26706	-- --
Riparian	#	#	#	19711	19711	11090	-- --
Roadless*	168947	391313	113210	159578	295203	63568	-- --
Miscellaneous	35513	10660	50177	64536	85918	59374	-- --
WILDERNESS							
Lolo	211930	211930	211930	223600	-- --	399699	776190
Idaho Panhandle	-- --	25700	-- --	-- --	25700	33079	51253
Kootenai	-- --	17700	-- --	-- --	-- --	12300	19000
Clearwater	100100	137600	63900	100100	-- --	131900	189900
Flathead	-- --	143243	143252	48854	-- --	264624	348950
Helena	7215	7215	7215	-- --	7215	58700	58700
Lewis & Clark	63304	147304	46844	46844	22290	188606	188606
Bitterroot	-- --	37200	-- --	-- --	-- --	23900	43900
Deerlodge	-- --	24616	-- --	-- --	-- --	24616	78228

Table C-3: Management Emphasis by Alternative for Lolo Roadless Areas (continued)

Management Emphasis	Alternatives a	b	c	d	e	f	g
Summary of Management Emphasis							
Nonwilderness - Lolo Forest							
Developed							
Decade 1	121484	89386	143321	142864	142864	126500	-- --
Decade 5	395314	172947	451050	393012	480987	312923	-- --
Roadless							
Decade 1	442776	474874	420939	421696	633626	250291	-- --
Decade 5	168947	391313	113210	171248	295203	63568	-- --
Nonwilderness - Contiguous roadless area							
Idaho Panhandle	51253	25553	51253	51253	25553	18174	-- --
Kootenai	19000	1300	19000	19000	19000	6700	-- --
Clearwater	89800	52300	12600	89800	189900	58000	-- --
Flathead	348950	205707	205698	300096	348950	84326	-- --
Helena	51485	51485	51485	58700	51485	-- --	-- --
Lewis & Clark	273324	189324	289784	289784	314338	148022	148022
Bitterroot	43900	6700	43900	43900	43900	20000	-- --
Deerlodge	78228	53612	78228	78228	78228	53532	-- --
Wilderness							
Lolo	211930	211930	211930	223600	-- --	399699	776190
Idaho Panhandle	-- --	25700	-- --	-- --	25700	33079	51253
Kootenai	-- --	17700	-- --	-- --	-- --	12300	19000
Clearwater	100100	137600	63900	100100	-- --	131900	189900
Flathead	-- --	143243	143252	48854	-- --	264624	348950
Helena	7215	7215	7215	-- --	7215	58700	58700
Lewis & Clark	63304	147304	46884	46844	22290	188606	188606
Bitterroot	-- --	37200	-- --	-- --	-- --	23900	43900
Deerlodge	-- --	24616	-- --	-- --	-- --	24616	78228
TOTAL ACRES LOLO FOREST	776190	776190	776190	776190	776190	776190	776190

Table C-3: Management Emphasis by Alternative for Lolo Roadless Areas. (continued)

Management Emphasis	Alternatives a	b	c	d	e	f	g
TOTAL ACRES CONTIGUOUS AREAS							
Idaho Panhandle	51253	51253	51253	51253	51253	51253	51253
Kootenai	19000	19000	19000	19000	19000	19000	19000
Clearwater	189900	189900	189900	189900	189900	189900	189900
Flathead	348950	348950	348950	348950	348950	348950	348950
Helena	58700	58700	58700	58700	58700	58700	58700
Lewis & Clark	336628	336628	336628	336628	336628	336628	336628
Bitterroot	43900	43900	43900	43900	43900	43900	43900
Deerlodge	78228	78228	78228	78228	78228	78228	78228
GRAND TOTAL	1902749	1902749	1902749	1902749	1902749	1902749	1902749

#Riparian areas included in other management emphases in these alternatives

*Does not include newly acquired land in the Rattlesnake National Recreation Area

Table C-4: Regional Wilderness Opportunities and Proximity to Roadless Lands on the Lolo National Forest

Wilderness	General Location	Wilderness Acres Less than 50 Miles
Anaconda-Pintler	W. Montana	158,516
Bob Marshall	W. Montana	1,009,356
Cabinet Mountains	N. W. Montana	94,272
Great Bear	W. Montana	286,700
Mission Mountains	W. Montana	73,877
Rattlesnake	W. Montana	33,000
Selway-Bitterroot	W. Montana	251,443
Scapegoat	W. Montana	239,936
Welcome Creek	W. Montana	28,135
	TOTAL	2,175,235

Wilderness	General Location	Wilderness Acres 50-100 Miles
Anaconda-Pintler	W. Montana	158,516
Gates of the Mts.	W. Central Montana	28,562
Gospel Hump	Central Idaho	206,000
River of No Return	Central Idaho	2,239,000
Selway-Bitterroot	Central Idaho	1,089,238
	TOTAL	3,721,316

Wilderness	General Location	Wilderness Acres 100-200 Miles
Absaroka-Beartooth	S.W. Central Montana	921,584
Hells Canyon	W. Central Montana	84,100
Lee Metcalf	S.W. Central Montana	259,000
Red Rock Lakes	S.W. Montana	32,350
Sawtooth	Central Idaho	217,088
	TOTAL	1,514,122

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